2017 ANNUAL GROUNDWATER REPORT

James F. Bell #1E
NMOCD Case#: 3RP-196-0
Meter Code: 94715
T30N, R13W, Sec10, Unit P

SITE DETAILS

Site Location: Latitude: 36.822568 N, Longitude: -108.187110 W
Land Type: Federal
Operator: XTO Energy, Inc.

SITE BACKGROUND

Environmental Remediation activities at the James F. Bell #1E (Site) are being 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 (NMOCD) in correspondence dated November 30, 1995; and the NMOCD approval conditions were adopted into El Paso CGP Company, LLC's (EPCGP's) program methods. Currently, the Site is operated by XTO Energy, Inc. and is active.

The Site is located on Federal land. An initial site assessment was completed in March 1994. Various site investigations have occurred since 1994. Monitoring wells were installed in 1995 (MW-1 through MW-4 and soil borings, 1997 (temporary monitoring wells PZ-01 through PZ-05), 1999 (soil borings), and 2016 (MW-5 through MW-12, and SB-1). Free product is present at the site, and recovery has been performed periodically since 1997. Mobile dual-phase extraction (MDPE) events to enhance free product recovery were initiated in 2016. In 2017, free product was encountered in MW-1 and MW-8. Groundwater sampling is being conducted on a semi-annual basis.

MONITORING WELL INSTALLATION ACTIVITIES

In October 2017, new monitoring well locations were staked for permitting and utility locating purposes. The monitoring well advancement and installation activities were completed in accordance with the October 5, 2017, Monitoring Well Installation Work Plan, subsequently approved by the NMOCD. The NMOCD was notified of the start of the monitoring well installation activities on October 6, 2017.

Six monitoring wells (MW-13, MW-14, MW-15, MW-16, MW-17, and MW-18) were advanced and installed in October 2017, to further characterize the extent of the dissolved-phase hydrocarbons at the Site. Ground surface and casing elevations of the new monitoring wells were subsequently surveyed 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. Monitoring wells MW-13 and MW-14 were installed with well screens from 5 to 25 feet below ground surface (bgs), and monitoring wells MW-15 through MW-18 were installed with well screens from 15 feet bgs to 40 feet bgs. The monitoring well screens were installed at

depths that bisected the field-observed or expected water table. A 3-foot seal of bentonite chips was placed above the sandpack and hydrated, and the remaining annular space filled with bentonite grout. At the request of the operator, monitoring well MW-16 was completed as an at-grade completion with a locking water-tight compression cap and a traffic-rated bolt-down manhole centered in a concrete pad. The remaining monitoring 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 finished with a stick-up completion. Borehole logs and well construction diagrams are provided in Appendix A. The soil boring log and well construction diagram for MW-12, inadvertently left out of the 2016 annual report, is also included in Appendix A.

During advancement of each monitoring well completed in October 2017, one soil sample was retained from above the field-interpreted water table and placed in a 4-ounce jar for laboratory analysis. Retained sample jars were stored in an ice-filled cooler and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida (TestAmerica). The soil samples were analyzed for the presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX) according to United States Environmental Protection Agency (EPA) Method SW846 8021B, total petroleum hydrocarbons (TPH), gasoline range organics, diesel range organics, and motor oil range organics using EPA Method 8015B; and chloride according to EPA Method 300. The soil sample analytical report is provided in Appendix B.

Monitoring well development was performed using a well swab and down-hole pump until visibly clear groundwater was observed. Purged groundwater was containerized and transported to Basin Disposal, Inc. in Bloomfield, NM for disposal. Soil drums were staged on site for later disposal at Envirotech, Inc. (Envirotech), located south of Bloomfield, NM. Disposal documentation is contained in Appendix C.

GROUNDWATER MONITORING ACTIVITIES

Pursuant to the Remediation Plan, Stantec provided field work notifications via email to the NMOCD on May 30, 2017 and November 6, 2017, prior to initiating groundwater sampling activities at the Site. Copies of the 2017 NMOCD notifications are provided in Appendix D. On June 10 and November 10, water levels were gauged at MW-1 through MW-12 and groundwater samples were collected from each well that did not contain free product using HydraSleeve™ (HydraSleeve) no-purge groundwater sampling devices. New monitoring wells MW-13 through MW-17 were also gauged and sampled during the November 2017 sampling event. Monitoring well MW-18 contained an insufficient amount of water to sample. The HydraSleeves were set during the previous sampling event, or following well development for newly-installed wells, approximately 0.5 foot above the termination depth. The HydraSleeves were set using a suspension tether and stainless steel weights to collect a sample from the screened interval.

Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida where they were analyzed for BTEX. As requested by the NMOCD on November 13, 2018, BTEX constituents were analyzed using United States Environmental Protection Agency (EPA) Method 8260 during the November sampling event. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal. Waste disposal documentation is included as Appendix C.

FREE PRODUCT RECOVERY

Free product was observed and recovered from MW-1 and MW-8 during the June 2017 sampling event. Approximately 20 milliliters (mL) of free product was manually recovered from MW-1, and approximately 10 mL of free product were recovered from MW-8 during the in June 2017 sampling event. The recovered product was disposed of with excess wastewater generated during groundwater sampling activities.

MDPE events were completed on July 11 through 14, 2017, by AcuVac Remediation, LLC, of Houston, Texas (AcuVac). The purpose of the MDPE events was to enhance free product recovery from monitoring wells MW-1 and MW-8. MDPE is a process combining soil vapor extraction (SVE) with groundwater depression to enhance the removal of liquid and vapor phase hydrocarbons. A submersible pump is used to simultaneously remove groundwater, inducing a hydraulic gradient toward the extraction well, and creating groundwater depression to expose the hydrocarbon smear zone to SVE. Recovered liquids were transferred to a portable storage tank for off-site disposal. Recovered vapors were used as fuel and burned in the MDPE internal combustion engine (ICE), resulting in little to no emissions. Power generated by the ICE is used to create the induced vacuum for SVE.

Two, 72-hour MDPE events were completed, one using MW-1 as an extraction well, and a second using MW-8 as an extraction well. Based on field data collected by AcuVac, approximately 82.3 gallons of hydrocarbons were recovered from MW-1, and approximately 40.1 gallons of hydrocarbons were recovered from MW-8. AcuVac's report summarizing the MDPE events at the Site is presented as Appendix E. Recovered fluids from the MDPE event where transported to Basin Disposal Inc. for disposal. Waste disposal documentation is included as Appendix C.

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1 and Table 2, respectively. When free product was present, static water level elevations were corrected for measurable thicknesses of free product (specific gravity of 0.79). Soil analytical results are summarized in Table 3.

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SITE MAPS

Groundwater analytical maps (Figures 1 and 3) and groundwater elevation contour maps (Figures 2 and 4) summarize results of the 2017 groundwater sampling and gauging events. The soil analytical map (Figure 5) summarizes the results of the soil sampling activities.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix F.

GROUND WATER RESULTS

- The groundwater flow direction is generally to the north-northwest at the Site (see Figures 2 and 4).
- Free product was observed in MW-1 and MW-8 in June 2017. No samples were collected from these monitoring wells.
- Monitoring well MW-18 was dry in November 2017, and therefore was not sampled.
- Groundwater samples collected in 2017 from MW-1, MW-3, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, MW-15, and MW-17 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Benzene was not detected in monitoring wells MW-2, MW-4, MW-12, MW-14, and MW-16.
- Groundwater samples collected in 2017 from MW-1, MW-6, MW-7, MW-8, MW-10, and MW-11 exceeded the NMWQCC standard (750 micrograms per liter [µg/L]) for toluene in groundwater. Toluene was either below the NMWQCC standard or not detected in monitoring wells MW-2, MW-3, MW-4, MW-5, MW-9, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17.
- Groundwater samples collected in 2017 from MW-1, MW-3, MW-6, MW-7, MW-8, MW-10, and MW-11 exceeded the NMWQCC standard (750 micrograms per liter [µg/L]) for ethylbenzene in groundwater. Ethylbenzene was either below the NMWQCC standard or not detected in monitoring wells MW-2, MW-4, MW-5, MW-9, MW-12, MW-13, MW-14, MW-15, MW-16, and MW-17.
- Groundwater samples collected in 2017 from MW-1, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11 and MW-15 exceeded the NMWQCC standard (620 micrograms per liter [µg/L]) for total xylenes in groundwater. Total xylenes were not detected in monitoring wells MW-2, MW-3, MW-4, MW-9, MW-12, MW-13, MW-14, MW-16, and MW-17.

SOIL RESULTS

- Soil samples were collected from the borings for monitoring wells MW-14 through MW-18. Concentrations of benzene, toluene, ethylbenzene, total xylenes, and total BTEX were not detected in any of the soil samples submitted for laboratory analysis.

- Concentrations of TPH were not detected in soil samples collected from MW-13 through MW-17, and detected at a concentration below the 2013 Pit Rule Guidance (100 mg/kg) at MW-18.

- Concentrations of chloride were not detected in any of the 2017 soil samples submitted for laboratory analysis from MW-14 through MW-18. Chloride was detected at a concentration of 57 milligrams per kilogram (mg/kg) at MW-13, below the NMWQCC standard.

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis. Periodic free product recovery activities are also to continue in 2018. Groundwater samples will be collected from monitoring wells not containing free product and analyzed for BTEX constituents using EPA Method 8260.

The recovery of measurable free product will continue by completion of one or more MDPE events in 2018. A work plan to complete the MDPE activities will be submitted under separate cover for NMOCD approval.

Soil vapor extraction (SVE) feasibility testing, including the installation of one SVE well, is planned in 2018. A work plan to complete the well installation and feasibility testing activities will be submitted under separate cover for NMOCD approval.

The activities completed in 2018 and their results will be summarized in the 2018 Annual Report, completed for submittal in early 2019.

TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-1	10/17/95	11200	26400	1540	16500
MW-1	12/11/95	10800	15400	1870	18400
MW-1	12/04/96	10300	33200	1400	15200
MW-1	03/05/97	9850	33400	1370	15200
MW-1	06/11/07	<1	<1	1360	<2
MW-1	06/12/08	10000	29700	1550	16800
MW-1	06/03/09	7120	25200	1270	13800
MW-1	05/26/10	8100	26100	1300	14300
MW-1	05/10/11	5630	22600	1630	17600
MW-1	05/08/12	7490	25400	1390	15000
MW-1	06/07/13	8200	31000	1100	15000
MW-1	11/12/17	4400	14000	880	16000
MW-2	12/11/95	94.7	1.4	11.3	31.1
MW-2	12/04/96	2.52	<1	<1	<3
MW-2	03/05/97	1.49	<1	<1	<3
MW-2	10/11/00	200	<0.5	81	28
MW-2	06/25/01	160	<0.5	77	22
MW-2	06/05/02	53	<0.5	50	9.7
MW-2	06/19/03	6.5	<1	17.8	1.7
MW-2	06/09/04	<0.5	<0.5	<0.5	<1
MW-2	06/23/05	<1	<1	<1	<2
MW-2	06/14/06	<1	<1	<1	<2
MW-2	06/11/07	<1	<1	<1	<2
MW-2	06/12/08	<1	<1	<1	<2
MW-2	06/03/09	0.3 J	2.1	<1	0.84 J
MW-2	06/07/13	<0.14	<0.30	<0.20	<0.23
MW-2	09/12/13	<0.14	<0.30	<0.20	<0.23
MW-2	12/13/13	<0.20	<0.38	<0.20	<0.65
MW-2	04/05/14	<0.20	<0.38	<0.20	<0.65
MW-2	10/21/14	<0.38	<0.70	<0.50	<1.6
MW-2	05/27/15	<1.0	<5.0	<1.0	<5.0
MW-2	11/18/15	<1.0	<1.0	<1.0	<3.0
MW-2	04/15/16	<1.0	<5.0	<1.0	<5.0
MW-2	10/11/16	<1.0	<5.0	<1.0	<5.0
MW-2	06/10/17	<1.0	<5.0	<1.0	<5.0
MW-2	11/10/17	<1.0	<1.0	<1.0	<10

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-3	12/11/95	1790	10400	1010	8070
MW-3	12/04/96	4210	19200	1140	11700
MW-3	03/05/97	4000	19200	1280	13600
MW-3	06/09/04	1590	4520	966	1830
MW-3	06/23/05	2260	1090	1920	24800
MW-3	06/14/06	795	<50	818	10900
MW-3	06/11/07	868	<10	1490	13900
MW-3	06/12/08	876	<50	1030	10700
MW-3	06/03/09	549	<25	750	7320
MW-3	05/26/10	517	<50	971	9680
MW-3	05/10/11	402	<10	922	11100
MW-3	05/08/12	482	10.2 J	1200	9060
MW-3	06/07/13	99	<6.0	250	3900
MW-3	09/12/13	90	<6.0	380	3400
MW-3	12/13/13	89	<6.0	460	4500
MW-3	04/05/14	79	<3.8	400	2900
MW-3	10/21/14	93	<3.5	650	1400
MW-3	05/27/15	56	<50	400	530
MW-3	11/18/15	290	5.5	570	490
MW-3	04/15/16	36	<25	290	89
MW-3	10/11/16	82	<50	910	1400
MW-3	06/10/17	30	<10	400	91
MW-3	11/10/17	60	<5.0	780	<50
MW-4	12/11/95	<2.5	<2.5	<2.5	<7.5
MW-4	12/04/96	<1	<1	<1	<3
MW-4	03/05/97	<1	<1	<1	<3
MW-4	10/11/00	<0.5	<0.5	<0.5	<0.5
MW-4	06/25/01	<0.5	<0.5	<0.5	<0.5
MW-4	06/05/02	<0.5	<0.5	<0.5	<1
MW-4	06/07/13	<0.14	<0.30	<0.20	0.24 J
MW-4	09/12/13	<0.14	<0.30	<0.20	<0.23
MW-4	12/13/13	<0.14	<0.30	<0.20	0.36 J
MW-4	04/05/14	<0.20	<0.38	<0.20	1.3 J
MW-4	10/21/14	<0.38	<0.70	<0.50	<1.6
MW-4	05/27/15	<1.0	<5.0	<1.0	<5.0
MW-4	11/18/15	<1.0	<1.0	<1.0	<3.0
MW-4	04/15/16	<1.0	<5.0	<1.0	<5.0
MW-4	10/11/16	<1.0	<5.0	<1.0	<5.0
MW-4	06/10/17	<1.0	<5.0	<1.0	<5.0
MW-4	11/12/17	<1.0	<1.0	<1.0	<10

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-5	10/11/16	1400	3300	120	2600
MW-5	06/10/17	220	260	22	2300
MW-5	11/10/17	1100	670	60	4400
MW-6	10/11/16	1200	4100	750	6200
MW-6	06/10/17	1100	4500	1200	10000
MW-6	11/10/17	980	2900	930	8300
MW-7	10/11/16	1200	2000	1300	8000
MW-7	06/10/17	920	1300	1600	10000
MW-7	11/10/17	1300	770	1000	8200
MW-8	11/12/17	2100	7900	1200	14000
MW-9	10/11/16	84	82	140	750
MW-9	06/10/17	150	<5.0	130	66
MW-9	11/10/17	130	1.4	85	11
MW-10	06/10/17	1600	4900	1800	17000
MW-10	11/10/17	1200	3000	860	9900
MW-11	10/11/16	3200	8200	950	10000
MW-11	06/10/17	4000	12000	1400	13000
MW-11	11/10/17	3100	2400	940	8900
MW-12	10/11/16	<1.0	<5.0	<1.0	<5.0
MW-12	06/10/17	<1.0	<5.0	<1.0	<5.0
MW-12	11/10/17	<1.0	<1.0	<1.0	<10
MW-13	11/10/17	160	<2.0	110	430
MW-14	11/10/17	<1.0	<1.0	<1.0	<10
MW-15	11/10/17	69	44	610	2300

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Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-16	11/10/17	<1.0	<1.0	3.1	<10
MW-17	11/10/17	290	2.2	22	150

Notes:
The groundwater monitoring dates for each monitoring well where no groundwater samples were collected and analyzed have been omitted.
"µg/L" = micrograms per liter
Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission (NMWQCC) standards.
"J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result in an approximate value.
"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	10/17/95	5810.88	26.67	NR		5784.21
MW-1	12/11/95	5810.88	26.23	NR		5784.65
MW-1	12/04/96	5810.88	28.00	26.16	1.84	5784.33
MW-1	03/05/97	5810.88	28.47	26.47	2.00	5783.99
MW-1	09/29/00	5810.88	29.09	27.29	1.80	5783.21
MW-1	02/26/01	5810.88	29.06	27.61	1.45	5782.96
MW-1	03/14/01	5810.88	29.60	27.49	2.11	5782.94
MW-1	04/06/01	5810.88	29.08	27.67	1.41	5782.91
MW-1	06/22/01	5810.88	29.57	28.10	1.47	5782.47
MW-1	07/11/01	5810.88	28.95	27.95	1.00	5782.72
MW-1	07/26/01	5810.88	29.51	28.21	1.30	5782.39
MW-1	08/16/01	5810.88	28.49	28.40	0.09	5782.46
MW-1	09/06/01	5810.88	28.46	28.41	0.05	5782.45
MW-1	09/17/01	5810.88	28.46	28.19	0.27	5782.63
MW-1	12/13/01	5810.88	28.50	28.20	0.30	5782.61
MW-1	01/08/02	5810.88	28.54	28.25	0.29	5782.56
MW-1	02/28/02	5810.88	28.62	28.31	0.31	5782.50
MW-1	03/28/02	5810.88	28.64	28.51	0.13	5782.34
MW-1	09/13/02	5810.88	31.17	29.20	1.97	5781.26
MW-1	09/19/02	5810.88	30.82	28.45	2.37	5781.93
MW-1	12/04/02	5810.88	29.07	28.37	0.70	5782.36
MW-1	04/18/03	5810.88	29.29	28.44	0.85	5782.26
MW-1	06/19/03	5810.88	29.41	29.19	0.22	5781.64
MW-1	09/22/03	5810.88	28.64	28.31	0.33	5782.50
MW-1	12/15/03	5810.88	28.24	28.04	0.20	5782.79
MW-1	02/27/04	5810.88	28.21	28.19	0.02	5782.68
MW-1	03/16/04	5810.88	28.13	28.08	0.05	5782.78
MW-1	06/09/04	5810.88	28.27	28.03	0.24	5782.79
MW-1	07/26/04	5810.88	28.48	27.95	0.53	5782.81
MW-1	09/10/04	5810.88	27.89	27.82	0.07	5783.04
MW-1	12/14/04	5810.88	27.68	27.68	0.00	5783.20
MW-1	12/18/04	5810.88	27.71	27.67	0.04	5783.20
MW-1	03/17/05	5810.88	27.83	27.65	0.18	5783.19
MW-1	04/15/05	5810.88	28.03	27.72	0.31	5783.09
MW-1	05/17/05	5810.88	27.78	27.35	0.43	5783.43
MW-1	06/23/05	5810.88	27.23	27.21	0.02	5783.66
MW-1	09/12/05	5810.88	26.56	26.52	0.04	5784.35
MW-1	09/13/05	5810.88	26.56	ND		5784.32
MW-1	10/28/05	5810.88	26.27	ND		5784.61
MW-1	11/18/05	5810.88	26.26	ND		5784.62
MW-1	12/22/05	5810.88	26.09	ND		5784.79

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	01/18/06	5810.88	26.02	ND		5784.86
MW-1	02/21/06	5810.88	26.14	ND		5784.74
MW-1	03/25/06	5810.88	26.20	ND		5784.68
MW-1	04/28/06	5810.88	26.34	ND		5784.54
MW-1	05/23/06	5810.88	26.39	ND		5784.49
MW-1	06/14/06	5810.88	26.33	ND		5784.55
MW-1	07/21/06	5810.88	26.38	ND		5784.50
MW-1	08/24/06	5810.88	26.29	ND		5784.59
MW-1	09/25/06	5810.88	26.30	ND		5784.58
MW-1	12/27/06	5810.88	26.08	ND		5784.80
MW-1	03/26/07	5810.88	27.28	ND		5783.60
MW-1	06/11/07	5810.88	26.47	ND		5784.41
MW-1	09/18/07	5810.88	26.38	ND		5784.50
MW-1	03/04/08	5810.88	26.66	ND		5784.22
MW-1	06/12/08	5810.88	26.60	ND		5784.28
MW-1	09/08/08	5810.88	26.29	ND		5784.59
MW-1	12/03/08	5810.88	26.31	ND		5784.57
MW-1	03/02/09	5810.88	26.58	ND		5784.30
MW-1	06/03/09	5810.88	26.86	ND		5784.02
MW-1	08/27/09	5810.88	27.03	ND		5783.85
MW-1	11/02/09	5810.88	26.92	ND		5783.96
MW-1	02/11/10	5810.88	27.15	ND		5783.73
MW-1	05/26/10	5810.88	27.07	26.95	0.12	5783.90
MW-1	09/30/10	5810.88	26.40	ND		5784.48
MW-1	11/01/10	5810.88	26.14	ND		5784.74
MW-1	02/02/11	5810.88	26.18	ND		5784.70
MW-1	05/10/11	5810.88	26.22	ND		5784.66
MW-1	09/26/11	5810.88	25.39	ND		5785.49
MW-1	11/01/11	5810.88	26.26	ND		5784.62
MW-1	02/16/12	5810.88	26.70	ND		5784.18
MW-1	05/08/12	5810.88	26.80	ND		5784.08
MW-1	06/07/13	5810.88	28.77	27.36	1.41	5783.22
MW-1	09/12/13	5810.88	28.95	27.41	1.54	5783.14
MW-1	12/13/13	5810.88	28.62	27.29	1.33	5783.31
MW-1	04/05/14	5810.88	28.98	27.42	1.56	5783.13
MW-1	10/21/14	5810.88	28.50	27.40	1.10	5783.24
MW-1	05/27/15	5810.88	29.29	27.58	1.71	5782.94
MW-1	11/18/15	5810.88	27.22	26.92	0.30	5783.89
MW-1	04/15/16	5810.88	27.51	27.09	0.42	5783.70
MW-1	10/11/16	5810.88	26.90	26.82	0.08	5784.04
MW-1	06/10/17	5810.88	26.50	26.46	0.04	5784.41
MW-1	11/12/17	5810.88	25.89	ND		5784.99

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	12/11/95	5809.46	25.32	NR		5784.14
MW-2	12/04/96	5809.46	26.09	NR		5783.37
MW-2	03/05/97	5809.46	26.30	NR		5783.16
MW-2	10/11/00	5809.46	26.41	NR		5783.05
MW-2	04/06/01	5809.46	26.64	NR		5782.82
MW-2	06/05/01	5809.46	26.81	NR		5782.65
MW-2	06/25/01	5809.46	26.79	NR		5782.67
MW-2	12/21/01	5809.46	26.79	NR		5782.67
MW-2	05/15/02	5809.46	27.02	NR		5782.44
MW-2	06/05/02	5809.46	27.06	NR		5782.40
MW-2	09/06/02	5809.46	27.09	NR		5782.37
MW-2	09/13/02	5809.46	27.07	NR		5782.39
MW-2	12/18/02	5809.46	27.09	NR		5782.37
MW-2	06/19/03	5809.46	27.04	ND		5782.42
MW-2	09/22/03	5809.46	26.82	ND		5782.64
MW-2	12/15/03	5809.46	26.42	ND		5783.04
MW-2	03/16/04	5809.46	26.33	ND		5783.13
MW-2	06/09/04	5809.46	26.34	ND		5783.12
MW-2	09/10/04	5809.46	26.17	ND		5783.29
MW-2	12/14/04	5809.46	26.13	ND		5783.33
MW-2	03/17/05	5809.46	26.14	ND		5783.32
MW-2	06/23/05	5809.46	25.81	ND		5783.65
MW-2	09/13/05	5809.46	25.54	ND		5783.92
MW-2	10/28/05	5809.46	26.43	ND		5783.03
MW-2	12/22/05	5809.46	25.35	ND		5784.11
MW-2	03/25/06	5809.46	25.53	ND		5783.93
MW-2	06/14/06	5809.46	25.66	ND		5783.80
MW-2	09/25/06	5809.46	25.59	ND		5783.87
MW-2	12/27/06	5809.46	25.17	ND		5784.29
MW-2	03/26/07	5809.46	25.40	ND		5784.06
MW-2	06/11/07	5809.46	25.48	ND		5783.98
MW-2	09/18/07	5809.46	25.47	ND		5783.99
MW-2	03/04/08	5809.46	26.72	ND		5782.74
MW-2	06/12/08	5809.46	25.62	ND		5783.84
MW-2	09/08/08	5809.46	26.35	ND		5783.11
MW-2	12/03/08	5809.46	25.45	ND		5784.01
MW-2	03/02/09	5809.46	25.70	ND		5783.76
MW-2	06/03/09	5809.46	25.95	ND		5783.51
MW-2	08/27/09	5809.46	25.97	ND		5783.49
MW-2	11/02/09	5809.46	25.99	ND		5783.47
MW-2	02/11/10	5809.46	26.17	ND		5783.29
MW-2	05/26/10	5809.46	26.07	ND		5783.39

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-2	09/30/10	5809.46	25.42	ND		5784.04
MW-2	11/01/10	5809.46	25.28	ND		5784.18
MW-2	02/02/11	5809.46	24.32	ND		5785.14
MW-2	05/10/11	5809.46	25.43	ND		5784.03
MW-2	09/26/11	5809.46	25.52	ND		5783.94
MW-2	11/01/11	5809.46	25.56	ND		5783.90
MW-2	02/16/12	5809.46	25.82	ND		5783.64
MW-2	05/08/12	5809.46	26.02	ND		5783.44
MW-2	06/07/13	5809.46	26.53	ND		5782.93
MW-2	09/12/13	5809.46	26.68	ND		5782.78
MW-2	12/13/13	5809.46	26.38	ND		5783.08
MW-2	04/05/14	5809.46	26.37	ND		5783.09
MW-2	10/21/14	5809.46	26.45	ND		5783.01
MW-2	05/27/15	5809.46	26.57	ND		5782.89
MW-2	11/18/15	5809.46	25.90	ND		5783.56
MW-2	04/15/16	5809.46	26.23	ND		5783.23
MW-2	10/11/16	5809.46	26.06	ND		5783.40
MW-2	06/10/17	5809.46	25.75	ND		5783.71
MW-2	11/10/17	5809.46	25.48	ND		5783.98

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	12/11/95	5810.13	26.52	NR		5783.61
MW-3	12/04/96	5810.13	27.72	27.16	0.56	5782.85
MW-3	03/05/97	5810.13	28.87	27.09	1.78	5782.66
MW-3	03/12/01	5810.13	29.18	27.84	1.34	5782.00
MW-3	04/06/01	5810.13	29.27	27.86	1.41	5781.97
MW-3	06/05/01	5810.13	29.48	28.06	1.42	5781.77
MW-3	06/14/01	5810.13	29.41	27.98	1.43	5781.84
MW-3	06/28/01	5810.13	29.57	28.15	1.42	5781.68
MW-3	07/06/01	5810.13	29.41	28.06	1.35	5781.78
MW-3	07/11/01	5810.13	29.61	28.26	1.35	5781.58
MW-3	07/20/01	5810.13	29.43	28.13	1.30	5781.72
MW-3	08/02/01	5810.13	29.50	28.22	1.28	5781.64
MW-3	08/08/01	5810.13	29.40	28.16	1.24	5781.70
MW-3	08/16/01	5810.13	29.46	28.21	1.25	5781.65
MW-3	08/20/01	5810.13	29.61	28.31	1.30	5781.54
MW-3	08/31/01	5810.13	29.47	28.17	1.30	5781.68
MW-3	09/06/01	5810.13	29.62	28.31	1.31	5781.54
MW-3	09/17/01	5810.13	29.62	28.34	1.28	5781.52
MW-3	09/25/01	5810.13	29.48	28.22	1.26	5781.64
MW-3	10/03/01	5810.13	29.47	28.25	1.22	5781.62
MW-3	10/11/01	5810.13	29.50	28.23	1.27	5781.63
MW-3	12/04/01	5810.13	29.89	28.55	1.34	5781.29
MW-3	12/13/01	5810.13	29.89	28.54	1.35	5781.30
MW-3	12/21/01	5810.13	29.63	28.36	1.27	5781.50
MW-3	12/28/01	5810.13	29.68	28.43	1.25	5781.43
MW-3	01/04/02	5810.13	29.63	28.39	1.24	5781.47
MW-3	01/08/02	5810.13	29.59	28.41	1.18	5781.47
MW-3	01/17/02	5810.13	30.00	28.70	1.30	5781.15
MW-3	01/23/02	5810.13	28.71	28.70	0.01	5781.42
MW-3	01/31/02	5810.13	28.70	28.68	0.02	5781.44
MW-3	02/07/02	5810.13	30.00	28.70	1.30	5781.15
MW-3	02/14/02	5810.13	28.80	27.80	1.00	5782.12
MW-3	02/20/02	5810.13	28.76	28.74	0.02	5781.38
MW-3	02/28/02	5810.13	29.82	28.64	1.18	5781.24
MW-3	03/06/02	5810.13	29.72	28.55	1.17	5781.33
MW-3	03/11/02	5810.13	29.90	28.72	1.18	5781.16
MW-3	03/21/02	5810.13	29.82	28.61	1.21	5781.26
MW-3	03/28/02	5810.13	29.74	28.57	1.17	5781.31
MW-3	04/04/02	5810.13	29.84	28.66	1.18	5781.22
MW-3	04/12/02	5810.13	30.28	28.93	1.35	5780.91
MW-3	04/19/02	5810.13	30.25	28.93	1.32	5780.92
MW-3	04/25/02	5810.13	30.24	28.93	1.31	5780.92

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	05/03/02	5810.13	28.96	NR	0.00	5781.17
MW-3	05/15/02	5810.13	29.86	28.69	1.17	5781.19
MW-3	05/24/02	5810.13	29.53	28.53	1.00	5781.39
MW-3	05/31/02	5810.13	29.96	28.72	1.24	5781.14
MW-3	06/07/02	5810.13	29.91	28.72	1.19	5781.16
MW-3	06/14/02	5810.13	30.31	28.97	1.34	5780.87
MW-3	06/21/02	5810.13	30.54	29.32	1.22	5780.55
MW-3	06/27/02	5810.13	30.65	29.30	1.35	5780.54
MW-3	07/02/02	5810.13	30.56	29.25	1.31	5780.60
MW-3	07/11/02	5810.13	30.66	29.31	1.35	5780.53
MW-3	07/22/02	5810.13	30.54	29.17	1.37	5780.67
MW-3	07/25/02	5810.13	30.40	29.25	1.15	5780.64
MW-3	07/31/02	5810.13	30.38	29.04	1.34	5780.80
MW-3	08/08/02	5810.13	30.15	29.13	1.03	5780.78
MW-3	08/16/02	5810.13	35.25	29.30	5.95	5779.58
MW-3	08/22/02	5810.13	30.07	28.74	1.33	5781.11
MW-3	08/28/02	5810.13	29.75	28.78	0.97	5781.14
MW-3	09/06/02	5810.13	30.03	28.98	1.06	5780.93
MW-3	09/13/02	5810.13	29.29	28.63	0.66	5781.36
MW-3	09/19/02	5810.13	30.43	29.42	1.02	5780.50
MW-3	09/25/02	5810.13	30.28	29.40	0.88	5780.54
MW-3	10/04/02	5810.13	30.19	29.35	0.85	5780.60
MW-3	10/10/02	5810.13	30.32	29.46	0.86	5780.49
MW-3	10/15/02	5810.13	30.29	29.50	0.79	5780.46
MW-3	10/23/02	5810.13	30.32	29.66	0.66	5780.33
MW-3	10/30/02	5810.13	30.58	29.32	1.26	5780.54
MW-3	11/08/02	5810.13	30.58	29.36	1.22	5780.51
MW-3	11/21/02	5810.13	30.45	29.45	1.00	5780.47
MW-3	12/04/02	5810.13	30.47	29.48	0.99	5780.44
MW-3	12/10/02	5810.13	30.23	29.48	0.75	5780.49
MW-3	12/18/02	5810.13	30.28	29.38	0.90	5780.56
MW-3	12/27/02	5810.13	30.21	29.45	0.76	5780.52
MW-3	01/07/03	5810.13	30.26	29.45	0.81	5780.50
MW-3	01/22/03	5810.13	29.46	28.75	0.71	5781.23
MW-3	01/29/03	5810.13	29.34	28.76	0.58	5781.24
MW-3	02/05/03	5810.13	28.77	28.29	0.48	5781.73
MW-3	02/12/03	5810.13	29.33	28.78	0.55	5781.23
MW-3	02/20/03	5810.13	29.33	28.77	0.56	5781.24
MW-3	02/28/03	5810.13	29.31	28.80	0.51	5781.22
MW-3	03/02/03	5810.13	29.27	28.81	0.46	5781.22
MW-3	03/06/03	5810.13	29.31	28.79	0.52	5781.23
MW-3	03/19/03	5810.13	29.30	28.82	0.48	5781.20

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	03/26/03	5810.13	29.33	28.82	0.51	5781.20
MW-3	04/02/03	5810.13	29.33	28.80	0.53	5781.21
MW-3	04/10/03	5810.13	29.32	28.84	0.48	5781.18
MW-3	04/18/03	5810.13	29.29	28.85	0.44	5781.18
MW-3	04/28/03	5810.13	29.19	28.86	0.33	5781.20
MW-3	05/07/03	5810.13	29.25	28.83	0.42	5781.21
MW-3	05/13/03	5810.13	29.27	28.85	0.42	5781.19
MW-3	05/21/03	5810.13	29.29	28.86	0.43	5781.17
MW-3	05/27/03	5810.13	29.21	28.85	0.36	5781.20
MW-3	06/03/03	5810.13	29.23	28.84	0.39	5781.20
MW-3	06/09/03	5810.13	29.20	28.84	0.36	5781.21
MW-3	06/16/03	5810.13	29.20	28.82	0.38	5781.23
MW-3	06/19/03	5810.13	29.16	28.86	0.30	5781.20
MW-3	06/23/03	5810.13	29.23	28.83	0.40	5781.21
MW-3	07/01/03	5810.13	29.85	29.78	0.07	5780.33
MW-3	07/10/03	5810.13	30.39	29.96	0.43	5780.07
MW-3	07/15/03	5810.13	30.29	30.12	0.17	5779.97
MW-3	07/21/03	5810.13	30.24	30.11	0.13	5779.99
MW-3	07/29/03	5810.13	30.14	29.89	0.25	5780.18
MW-3	08/04/03	5810.13	29.94	29.62	0.32	5780.44
MW-3	08/11/03	5810.13	30.09	30.02	0.07	5780.09
MW-3	08/18/03	5810.13	30.09	30.01	0.08	5780.10
MW-3	08/25/03	5810.13	30.09	30.00	0.09	5780.11
MW-3	09/02/03	5810.13	30.12	30.03	0.09	5780.08
MW-3	09/08/03	5810.13	30.15	30.05	0.10	5780.05
MW-3	09/15/03	5810.13	30.05	29.97	0.08	5780.14
MW-3	09/22/03	5810.13	29.14	28.70	0.44	5781.33
MW-3	09/29/03	5810.13	29.98	29.95	0.03	5780.17
MW-3	10/06/03	5810.13	30.00	29.94	0.06	5780.17
MW-3	10/13/03	5810.13	29.95	29.89	0.06	5780.22
MW-3	10/20/03	5810.13	29.86	29.80	0.06	5780.31
MW-3	10/27/03	5810.13	29.85	29.80	0.05	5780.31
MW-3	11/03/03	5810.13	29.83	29.80	0.03	5780.32
MW-3	11/10/03	5810.13	29.66	29.65	0.01	5780.47
MW-3	11/17/03	5810.13	29.32	29.31	0.01	5780.81
MW-3	11/26/03	5810.13	29.32	29.31	0.01	5780.81
MW-3	12/04/03	5810.13	29.23	ND		5780.90
MW-3	12/09/03	5810.13	29.24	ND		5780.89
MW-3	12/15/03	5810.13	28.40	ND		5781.73
MW-3	01/02/04	5810.13	28.42	ND		5781.71
MW-3	01/11/04	5810.13	28.37	28.36	0.01	5781.76
MW-3	01/16/04	5810.13	28.25	28.25	0.00	5781.88

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	01/23/04	5810.13	28.22	ND		5781.91
MW-3	01/30/04	5810.13	28.22	28.22	0.00	5781.90
MW-3	02/06/04	5810.13	28.23	ND		5781.90
MW-3	02/12/04	5810.13	28.20	ND		5781.93
MW-3	02/18/04	5810.13	28.17	ND		5781.96
MW-3	02/27/04	5810.13	28.20	ND		5781.93
MW-3	03/16/04	5810.13	28.21	ND		5781.92
MW-3	04/13/04	5810.13	28.19	ND		5781.94
MW-3	05/10/04	5810.13	28.22	ND		5781.91
MW-3	06/02/04	5810.13	28.19	ND		5781.94
MW-3	06/09/04	5810.13	28.21	ND		5781.92
MW-3	07/26/04	5810.13	28.08	ND		5782.05
MW-3	08/16/04	5810.13	28.08	ND		5782.05
MW-3	09/09/04	5810.13	28.02	ND		5782.11
MW-3	09/10/04	5810.13	28.03	ND		5782.10
MW-3	10/11/04	5810.13	27.96	ND		5782.17
MW-3	11/17/04	5810.13	27.87	ND		5782.26
MW-3	12/13/04	5810.13	27.87	ND		5782.26
MW-3	12/14/04	5810.13	27.83	ND		5782.30
MW-3	01/17/05	5810.13	27.78	ND		5782.35
MW-3	02/15/05	5810.13	27.74	ND		5782.39
MW-3	03/16/05	5810.13	27.72	ND		5782.41
MW-3	03/17/05	5810.13	27.69	ND		5782.44
MW-3	04/15/05	5810.13	27.69	ND		5782.44
MW-3	05/17/05	5810.13	27.38	ND		5782.75
MW-3	06/23/05	5810.13	27.19	ND		5782.94
MW-3	07/19/05	5810.13	27.07	ND		5783.06
MW-3	08/22/05	5810.13	26.87	ND		5783.26
MW-3	09/13/05	5810.13	26.78	ND		5783.35
MW-3	10/28/05	5810.13	26.43	ND		5783.70
MW-3	11/18/05	5810.13	26.44	ND		5783.69
MW-3	12/22/05	5810.13	26.36	ND		5783.77
MW-3	01/18/06	5810.13	23.36	ND		5786.77
MW-3	02/21/06	5810.13	26.52	ND		5783.61
MW-3	03/25/06	5810.13	26.60	ND		5783.53
MW-3	04/28/06	5810.13	26.73	ND		5783.40
MW-3	05/23/06	5810.13	26.78	ND		5783.35
MW-3	06/14/06	5810.13	26.71	ND		5783.42
MW-3	09/25/06	5810.13	26.34	ND		5783.79
MW-3	12/27/06	5810.13	26.96	ND		5783.17
MW-3	03/26/07	5810.13	26.40	ND		5783.73
MW-3	06/11/07	5810.13	26.42	ND		5783.71

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	09/18/07	5810.13	26.50	ND		5783.63
MW-3	03/04/08	5810.13	26.65	ND		5783.48
MW-3	06/12/08	5810.13	26.42	ND		5783.71
MW-3	09/08/08	5810.13	26.32	ND		5783.81
MW-3	12/03/08	5810.13	26.53	ND		5783.60
MW-3	03/02/09	5810.13	26.75	ND		5783.38
MW-3	06/03/09	5810.13	26.97	ND		5783.16
MW-3	08/27/09	5810.13	26.99	ND		5783.14
MW-3	11/02/09	5810.13	27.04	ND		5783.09
MW-3	02/11/10	5810.13	26.23	ND		5783.90
MW-3	05/26/10	5810.13	26.87	ND		5783.26
MW-3	09/30/10	5810.13	26.25	ND		5783.88
MW-3	11/01/10	5810.13	26.15	ND		5783.98
MW-3	02/02/11	5810.13	26.38	ND		5783.75
MW-3	05/10/11	5810.13	26.45	ND		5783.68
MW-3	09/26/11	5810.13	26.55	ND		5783.58
MW-3	11/01/11	5810.13	26.57	ND		5783.56
MW-3	02/16/12	5810.13	26.88	ND		5783.25
MW-3	05/08/12	5810.13	27.97	ND		5782.16
MW-3	06/07/13	5810.13	27.61	ND		5782.52
MW-3	09/12/13	5810.13	27.69	ND		5782.44
MW-3	12/13/13	5810.13	27.26	ND		5782.87
MW-3	04/05/14	5810.13	27.39	ND		5782.74
MW-3	10/21/14	5810.13	27.51	ND		5782.62
MW-3	05/27/15	5810.13	27.50	ND		5782.63
MW-3	11/18/15	5810.13	26.92	ND		5783.21
MW-3	04/15/16	5810.13	27.28	ND		5782.85
MW-3	10/11/16	5810.13	27.08	ND		5783.05
MW-3	06/10/17	5810.13	26.77	ND		5783.36
MW-3	11/10/17	5810.13	26.57	ND		5783.56

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	12/11/95	5809.54	25.55	NR		5783.99
MW-4	12/04/96	5809.54	26.27	NR		5783.27
MW-4	03/05/97	5809.54	26.44	NR		5783.10
MW-4	10/11/00	5809.54	26.56	NR		5782.98
MW-4	04/06/01	5809.54	26.82	NR		5782.72
MW-4	06/05/01	5809.54	26.94	NR		5782.60
MW-4	06/25/01	5809.54	26.93	NR		5782.61
MW-4	12/21/01	5809.54	26.92	NR		5782.62
MW-4	05/15/02	5809.54	27.14	NR		5782.40
MW-4	06/05/02	5809.54	27.16	NR		5782.38
MW-4	09/06/02	5809.54	27.19	NR		5782.35
MW-4	12/18/02	5809.54	27.02	NR		5782.52
MW-4	06/19/03	5809.54	26.92	ND		5782.62
MW-4	09/22/03	5809.54	26.83	ND		5782.71
MW-4	12/15/03	5809.54	26.37	ND		5783.17
MW-4	03/16/04	5809.54	26.40	ND		5783.14
MW-4	06/09/04	5809.54	26.41	ND		5783.13
MW-4	09/10/04	5809.54	26.29	ND		5783.25
MW-4	12/14/04	5809.54	26.19	ND		5783.35
MW-4	03/17/05	5809.54	26.23	ND		5783.31
MW-4	06/23/05	5809.54	25.90	ND		5783.64
MW-4	09/13/05	5809.54	25.69	ND		5783.85
MW-4	12/22/05	5809.54	25.49	ND		5784.05
MW-4	03/25/06	5809.54	25.68	ND		5783.86
MW-4	06/14/06	5809.54	25.83	ND		5783.71
MW-4	09/25/06	5809.54	25.67	ND		5783.87
MW-4	12/27/06	5809.54	25.22	ND		5784.32
MW-4	03/26/07	5809.54	25.53	ND		5784.01
MW-4	06/11/07	5809.54	25.60	ND		5783.94
MW-4	09/18/07	5809.54	25.62	ND		5783.92
MW-4	03/04/08	5809.54	25.88	ND		5783.66
MW-4	06/12/08	5809.54	25.64	ND		5783.90
MW-4	09/08/08	5809.54	25.46	ND		5784.08
MW-4	12/03/08	5809.54	25.60	ND		5783.94
MW-4	03/02/09	5809.54	25.85	ND		5783.69
MW-4	06/03/09	5809.54	26.13	ND		5783.41
MW-4	08/27/09	5809.54	26.09	ND		5783.45
MW-4	11/02/09	5809.54	26.13	ND		5783.41
MW-4	02/11/10	5809.54	26.28	ND		5783.26
MW-4	05/26/10	5809.54	26.10	ND		5783.44
MW-4	09/30/10	5809.54	25.47	ND		5784.07
MW-4	11/01/10	5809.54	25.35	ND		5784.19

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-4	02/02/11	5809.54	24.50	ND		5785.04
MW-4	05/10/11	5809.54	25.57	ND		5783.97
MW-4	09/26/11	5809.54	25.66	ND		5783.88
MW-4	11/01/11	5809.54	25.72	ND		5783.82
MW-4	02/16/12	5809.54	25.95	ND		5783.59
MW-4	05/08/12	5809.54	26.16	ND		5783.38
MW-4	06/07/13	5809.54	26.68	ND		5782.86
MW-4	09/12/13	5809.54	26.78	ND		5782.76
MW-4	12/13/13	5809.54	26.35	ND		5783.19
MW-4	04/05/14	5809.54	26.44	ND		5783.10
MW-4	10/21/14	5809.54	26.56	ND		5782.98
MW-4	05/27/15	5809.54	26.80	ND		5782.74
MW-4	11/18/15	5809.54	26.02	ND		5783.52
MW-4	04/15/16	5809.54	26.36	ND		5783.18
MW-4	10/11/16	5809.54	26.05	ND		5783.49
MW-4	06/10/17	5809.54	25.86	ND		5783.68
MW-4	11/12/17	5809.54	25.69	ND		5783.85

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-5	10/11/16	5811.49	31.51	ND		5779.98
MW-5	06/10/17	5811.49	32.09	ND		5779.40
MW-5	11/10/17	5811.49	26.82	ND		5784.67
MW-6	10/11/16	5807.41	22.28	ND		5785.13
MW-6	06/10/17	5807.41	21.82	ND		5785.59
MW-6	11/10/17	5807.41	21.68	ND		5785.73
MW-7	10/11/16	5807.17	23.38	ND		5783.79
MW-7	06/10/17	5807.17	22.83	ND		5784.34
MW-7	11/10/17	5807.17	22.38	ND		5784.79
MW-8	10/11/16	5806.62	22.76	22.51	0.25	5784.06
MW-8	06/10/17	5806.62	22.08	22.05	0.03	5784.56
MW-8	11/12/17	5806.62	21.62	ND		5785.00
MW-9	10/11/16	5810.31	26.97	ND		5783.34
MW-9	06/10/17	5810.31	26.87	ND		5783.44
MW-9	11/10/17	5810.31	26.31	ND		5784.00
MW-10	10/11/16	5807.54	23.92	23.90	0.02	5783.64
MW-10	06/10/17	5807.54	23.56	ND		5783.98
MW-10	11/10/17	5807.54	23.06	ND		5784.48
MW-11	10/11/16	5810.13	27.13	ND		5783.00
MW-11	06/10/17	5810.13	26.85	ND		5783.28
MW-11	11/10/17	5810.13	26.68	ND		5783.45
MW-12	10/11/16	5809.61	26.75	ND		5782.86
MW-12	06/10/17	5809.61	26.50	ND		5783.11
MW-12	11/10/17	5809.61	26.35	ND		5783.26
MW-13	11/10/17	5799.15	15.93	ND		5783.22
MW-14	11/10/17	5800.15	16.05	ND		5784.10
MW-15	11/10/17	5809.76	25.22	ND		5784.54
MW-16	11/10/17	5807.47	22.10	ND		5785.37

TABLE 2 - GROUNDWATER ELEVATION RESULTS

James F. Bell #1E						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-17	11/10/17	5811.60	25.34	ND		5786.26
MW-18	11/10/17	5813.23	DRY	ND		DRY

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

TABLE 3 - SOIL ANALYTICAL RESULTS

James F Bell E#1											
Location (depth in feet bgs)	**Date (mm/dd/yy)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethylbenzene (mg/kg)**	**Total Xylenes (mg/kg)**	**BTEX Total (mg/kg)**	**GRO C6-10 (mg/kg)**	**DRO C10-28 (mg/kg)**	**MRO C28-35 (mg/kg)**	**TPH (mg/kg)**	**Chloride (mg/kg)**
NMOCD Criteria:		10	NE	NE	NE	50	NE	NE	NE	100	600
MW-5 (17-18)	08/02/16	BRL	7.4	7.2	69	**83.6**	980	350	22	**1352**	BRL
MW-6 (9-10)	08/01/16	0.19	5.5	8.7	77	**91.4**	1300	370	20	**1690**	BRL
MW-7 (21-22)	08/01/16	0.0013	BRL	0.0024	0.015	0.02	0.23	15	BLR	15.2	BRL
MW-8 (22-23)	07/27/16	0.0024	0.11	0.4	3	3.51	130	440	33	**603**	BRL
MW-9 (19-20)	07/29/16	BRL	BRL	0.0024	0.018	0.02	1.9	37	BRL	38.9	BRL
MW-10 (19-20)	07/30/16	0.0011	BRL	BRL	BRL	0.001	BRL	BRL	BRL	BRL	BRL
MW-11 (20-20.5)	07/27/16	BRL	BRL	BRL	BRL	BRL	BRL	33	16	49	BRL
MW-12 (17-18)	07/28/16	BRL	BRL	BRL	BRL	BRL	BRL	12	BRL	12	BRL
SB-1 (7-8)	8/2/2016	0.28	12	6.5	59	**77.8**	920	570	51	**1541**	BRL
SB-1 (12-13)	8/2/2016	0.42	13	6.3	56	**75.7**	650	210	12	**872**	BRL
SB-1 (16-17)	8/2/2016	0.27	6.8	3.6	33	**43.7**	480	150	16	**646**	BRL
SB-1 (20-21)	8/2/2016	0.53	14	6.8	61	**82.3**	900	160	12	**1072**	BRL
MW-13 (12)	10/23/2017	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	57
MW-14 (14-15)	10/22/2017	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-15 (20)	10/21/2017	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-16 (19)	10/22/2017	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-17 (19)	10/21/2017	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-18 (0.5)	10/20/2017	BRL	BRL	BRL	BRL	BRL	BRL	21	9.5	30.5	BRL

Notes:

mg/kg	Milligrams per kilogram
BRL	Below Reporting Limits
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 is calculated by adding GRO, DRO, and MRO and rounded to the nearest mg/kg.
NMOCD Criteria	New Mexico Oil Conservation Division closure criteria for 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\JAMES F. BELL #1E\2017 MAPS\JF_Bell_#1E_GARM_1SA_2017.mxd

JAMES F. BELL #6

MW-12
B: <1.0
T: <5.0
E: <1.0
X: <5.0

MW-11
B: 4000
T: 12000
E: 1400
X: 13000

MW-10
B: 1600
T: 4900
E: 1800
X: 17000

MW-4
B: <1.0
T: <5.0
E: <1.0
X: <5.0

MW-3
B: 30
T: <10
E: 400
X: 91

MW-2
B: <1.0
T: <5.0
E: <1.0
X: <5.0

MW-8
NS

MW-7
B: 920
T: 1300
E: 1600
X: 10000

MW-9
B: 150
T: <5.0
E: 130
X: 66

MW-1
NS

MW-6
B: 1100
T: 4500
E: 1200
X: 10000

MW-5
B: 220
T: 260
E: 22
X: 2300

SB-1

5805
5800
5810
5815

WELLHEAD
TANK
FORMER AMOCO PIT
FORMER EPC PIT
SEPARATOR
PIT
METER HOUSE
COMPRESSOR
PIPELINE

SMA BENCHMARK
ELEV 5807.36'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 3/15/2015

LEGEND:

- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNKNOWN BURIED LINE
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- SOIL BORING
- WELLHEAD
- RIG ANCHOR
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT

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 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	7/14/2017	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
JUNE 10, 2017

PROJECT:
JAMES F. BELL #1E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec

Figure No.:
1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2017 MAPS\JF_Bell_#1E_GECM_1SA_2017.mxd

JAMES F. BELL #6

MW-12 5783.11
MW-11 5783.28
MW-3 5783.36
MW-4 5783.68
MW-10 5783.98
MW-2 5783.71
MW-8 5784.56*
MW-7 5784.34
MW-9 5783.44
MW-1 5784.41
MW-5 5779.40*
MW-6 5785.59

5835
5805
5800
5784
5784.5
5785
5785.5
5810
5815

WELLHEAD
TANK
FORMER AMOCO PIT
SEPARATOR
PIT
PIPELINE
METER HOUSE
COMPRESSOR
FORMER EPC PIT

SMA BENCHMARK
ELEV 5807.36'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 6/10/2013

LEGEND:

- 5805 APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UGC UNDERGROUND CABLE
- UKN UNKNOWN BURIED LINE
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- WELLHEAD
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

5783.88 GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5783.8 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

WATER LEVEL ANOMALOUS AND NOT USED FOR CONTOURING GROUNDWATER ELEVATIONS

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	7/14/2017	CCL	CCL	SRV

TITLE:

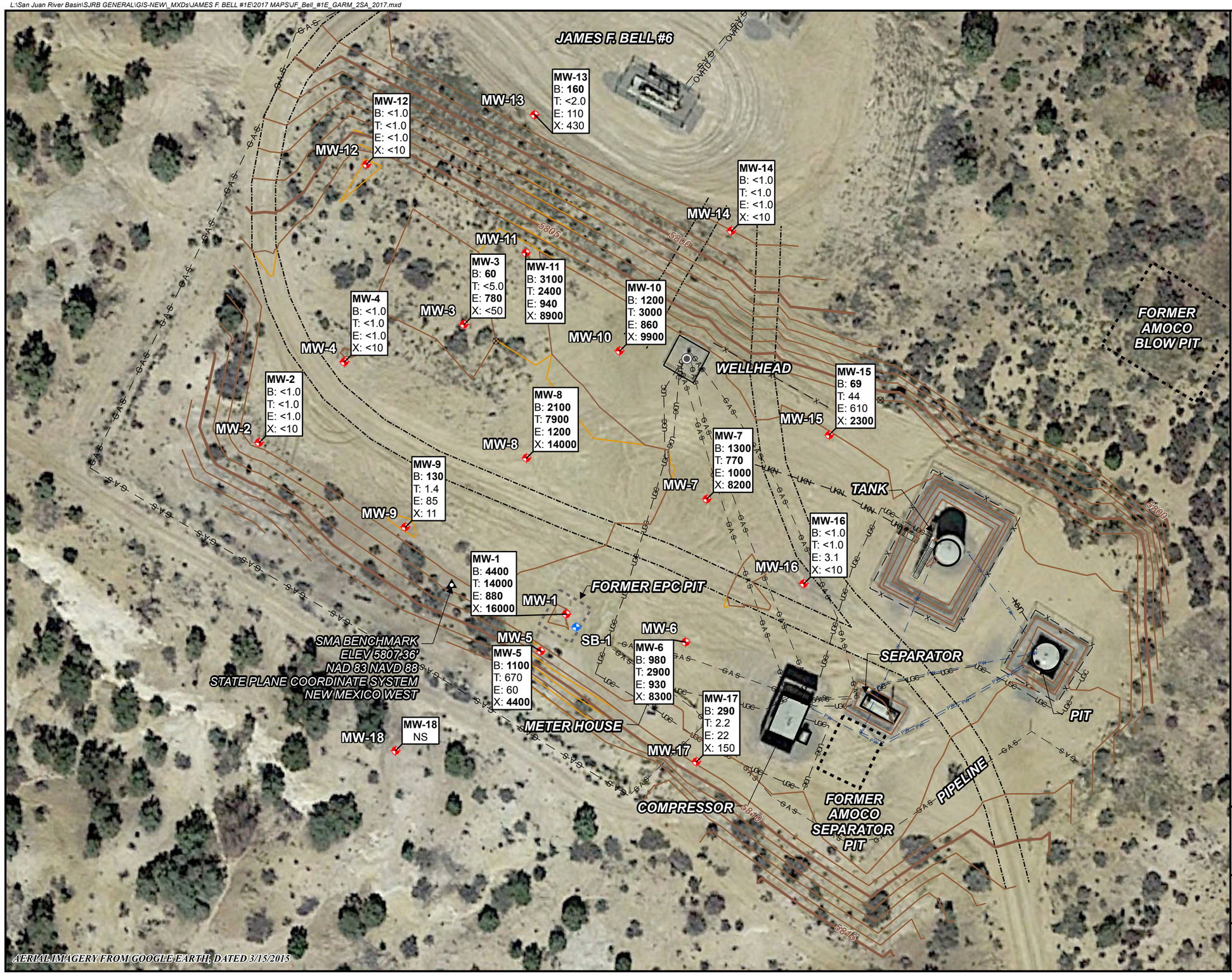
GROUNDWATER ELEVATION MAP
JUNE 10, 2017

PROJECT:
JAMES F. BELL #1E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2017 MAPS\JF_Bell_#1E_GARM_2SA_2017.mxd



LEGEND:

- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED JULY 2013.
- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED NOVEMBER 2017.
- ACCESS ROAD
- FENCE
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- UGC — UNDERGROUND CABLE
- UKN — UNKNOWN BURIED LINE
- MONITORING WELL
- SOIL BORING
- WELLHEAD
- RIG ANCHOR
- SMA BENCHMARK

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T = Toluene	750 µg/L
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X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/18/2018	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 10 & 12, 2017

PROJECT:
JAMES F. BELL #1E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2017 MAPS\JF_Bell_#1E_GECM_2SA_2017.mxd

JAMES F. BELL #6

MW-13 5783.22
MW-12 5783.26
MW-14 5784.10
MW-11 5783.45
MW-3 5783.56
MW-4 5783.85
MW-10 5784.48
MW-2 5783.98
MW-8 5785.00*
MW-15 5784.54
MW-7 5784.79
MW-9 5784.00
MW-16 5785.37
MW-1 5784.98
MW-6 5785.73
MW-5 5784.67
MW-17 5786.26
MW-18 DRY*

5783.5
5784
5784.5
5785
5785.5
5786
5805
5800
5810
5815

WELLHEAD
TANK
SEPARATOR
METER HOUSE
COMPRESSOR
FORMER EPC PIT
FORMER AMOCO BLOW PIT
FORMER AMOCO SEPARATOR PIT
PIPELINE
PIT

SMA BENCHMARK
ELEV 5807.36'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 6/10/2013

LEGEND:

- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED JULY 2013.
- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED NOVEMBER 2017.
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNKNOWN BURIED LINE
- MONITORING WELL
- WELLHEAD
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

5783.88 GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5783.8 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

WATER LEVEL ANOMALOUS AND NOT USED FOR CONTOURING GROUNDWATER ELEVATIONS

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/18/2018	CCL	CCL	SRV

TITLE:

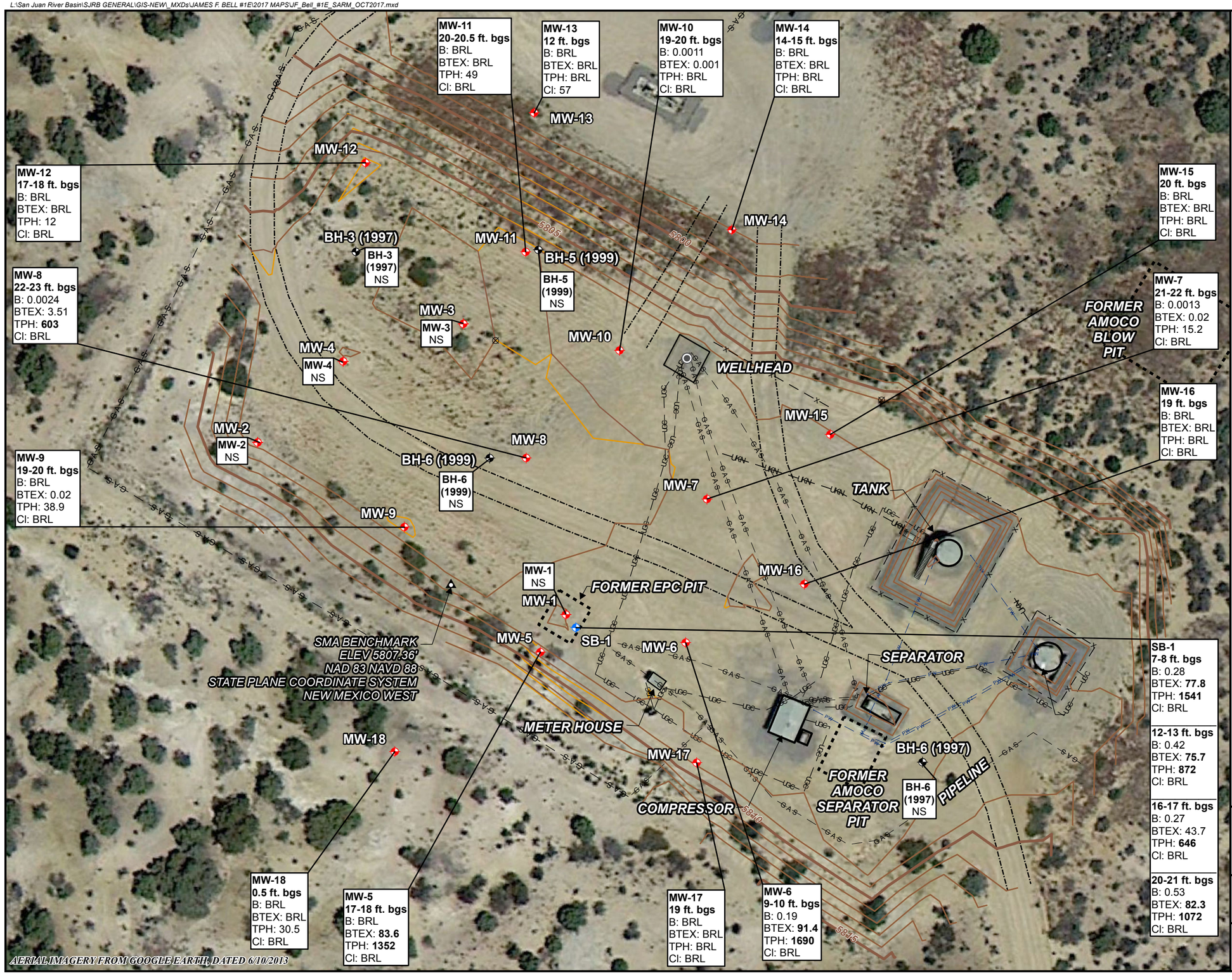
GROUNDWATER ELEVATION MAP
NOVEMBER 10, 2017

PROJECT:
JAMES F. BELL #1E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2017 MAPS\JF_Bell_#1E_SARM_OCT2017.mxd



LEGEND:

- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED JULY 2013.
- 5805 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET SURVEY COMPLETED NOVEMBER 2017.
- ACCESS ROAD
- FENCE
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- UGC — UNDERGROUND CABLE
- UKN — UNKNOWN BURIED LINE
- MONITORING WELL
- SOIL BORING
- SOIL BORING (1990s)
- WELLHEAD
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

MW-8 AND MW-11 SAMPLES COLLECTED 7/27/2016; MW-12 7/28/2016; MW-9 7/29/2016; MW-10 7/30/2016; MW-6 AND MW-7 8/1/2016; MW-5 AND SB-1 8/2/2016; MW-13 10/23/2017; MW-14 AND MW-16 10/22/2017; MW-15 AND MW-17 10/21/2017; MW-18 10/20/2017.

UTILITY LOCATIONS ARE APPROXIMATE.

ft. bgs = FEET BELOW GROUND SURFACE
NS = NOT SAMPLED

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF APPLICABLE NEW MEXICO OIL CONSERVATION DIVISION SOIL CRITERIA FOR THAT ANALYTE.
mg/kg = MILLIGRAM/KILOGRAM
BRL = BELOW REPORTING LIMITS

ANALYTE	NMOCD STANDARDS
B = Benzene	10 mg/kg
BTEX = Benzene, toluene, ethylbenzene, xylenes	50 mg/kg
TPH = Total Petroleum Hydrocarbons	100 mg/kg
Cl = Chloride	600 mg/kg

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/18/2018	SLG	SLG	SRV

TITLE:

SOIL ANALYTICAL RESULTS

PROJECT:

JAMES F. BELL #1E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec

Figure No.: **5**

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORT

APPENDIX C – WASTE DISPOSAL DOCUMENTATION

APPENDIX D – NOTIFICATIONS OF SAMPLING ACTIVITIES

APPENDIX E – MDPE REPORT

APPENDIX F – JUNE 10, 2017 GROUNDWATER SAMPLING ANALYTICAL REPORT
NOVEMBER 10, 2017 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

Monitoring Well **MW-12**

Project *JF Bell #1E* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509366*

Surface Elev. *5807.09 ft* North *2119004.951* East *2619437.866*

Top of Casing *5809.61 ft* Water Level Initial ▽ *5783.61* 07/26/16 00:00 Static ▼ *5777.12* 08/11/16 00:00

Hole Depth *40.0ft* Screen: Diameter *2 in* Length *25.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *6.0 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Rock Core/Stratex* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *7/26/2016* Completion Date *8/4/2016* Checked By *S. Varsa*

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

COMMENTS
Surface is dirt with minor vegetation and gravel. NR = No recovery.

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
0							
0	0.0	100%			SM	Silty sand, brown, trace cobbles and gravel present, loose, dry, no hydrocarbon odor, fine-grained sand. Pothole to refusal at 7'.	
6	NR	100%					
	0.0					Sandstone, dry, highly fractured, medium to coarse-grained, no hydrocarbon odor, weakly to moderately cemented, poor recovery.	
8	0.0						
	0.0						
10	0.0						
	NR	100%				No recovery from 11.1' to 16'.	
12	NR						
	NR						
14	NR						
	NR						
16	0.0	0%				Sandstone (see above). Rock coring began at 17'.	
	0.0						
18	NR					No recovery from 18' to 21'.	
		100%					

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-12**

Project *JF Bell #1E* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509366*

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
						Continued	
20	NR	MW-12 17-18'					
	NR	100%					
22	NR					No recovery from 21' to 26.5', water at 26'.	
	NR						
24 ▽	NR						
	NR						
26		0%					
	0.0					Shale, clayey, wet at 26.5', no hydrocarbon odor, dark gray, medium stiff to hard, pulverized, balled cuttings. Stratex/air rotary began at 30'.	
28	0.0	100%					
	0.0						
30 ▼		100%					
32	0.0						
34		100%				Light gray at 35.5'.	
36							
38	0.0						
40		100%				Total depth = 40'.	
42							
44							

Drilling Log

Monitoring Well **MW-13**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5796.50 ft* North *2119025.72300* East *2619508.06400*

Top of Casing *5799.15 ft* Water Level Initial ▽ *5785.15* 10/23/17 00:00 Static ▼ *5783.22* 11/10/17 00:00

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

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *7.9 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/23/2017* Completion Date *10/23/2017* Checked By *S. Varsa*

COMMENTS
Surface is loose, silty, weathered sandstone with minor vegetation. Soil sample MW-13 @ 5' was not analyzed.

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
0	0.0					Borehole hydro-vacuumed to refusal at 5'. Material was weathered sandstone, gray, dry, silty, fine-grained. At 5', became very hard.	
	0.0	100%					
2	0.0						
	0.0						
4	0.0						
	0.0						
	MW-13 5'						
6	3.0	100%				At 5.5' becomes moderately well-cemented with thin darker gray layers of sandstone with banding from 5.5-6.5'.	
	2.3					At 6.5' becomes orange and iron-mottled, clayey.	
8	0.7					At 8' becomes orangish-brown, slightly moist, weakly cemented, fine- to medium-grained.	
	0.7						
10	1.1						
▽	3.0	100%					
12	5.2					At 12.5' becomes light gray with a greenish tint, some orangish grains still present, wet at 14', hard, silty purplish-black stained layer noted at 14'.	
	MW-13 12'						
▼	9.7						
14	11.3					At 14' sandstone becomes reddish-brown, moist, fine- to medium-grained,	
	523.6					At 15' sandstone is gray again, wet, fine- to coarse-grained from 15-19', banded from 17-19', with purplish-black staining present from 18-19'. At 19' sandstone changes to a silty shale/weathered siltstone, olive-gray, very weakly cemented.	
16	809.9	100%					
	1087						
18	1185						
	1633					Shale, very silty, moist with free water noted from a few fractures 22-23.5', olive-gray, soft to 22.5', massive and blocky below 22.5', no lamination	
20							

Continued Next Page

Drilling Log

Monitoring Well **MW-13**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	284	100%				visible.	
22	21						
	10.1						
24	75.6						
	36						
26	16.5	100%				Shale, very sandy to a shaly sandstone, brittle, very fine-grained sand.	
	0.0						
28	0.0						
	0.0					Sandstone, light gray, moist to wet, fine- to coarse-grained.	
30	0.7						
	0.4					End of boring = 30'.	
32							
34							
36							
38							
40							
42							
44							
46							

Drilling Log

Monitoring Well **MW-14**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5797.63 ft* North *2118976.97600* East *2619590.37700*

Top of Casing *5800.15 ft* Water Level Initial ▽ *5785.15* 10/22/17 00:00 Static ▼ *5784.1* 11/10/17 00:00

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

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *8.8 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/22/2017* Completion Date *10/22/2017* Checked By *S. Varsa*

COMMENTS
Surface is loose, silty, weathered sandstone with minor vegetation. Soil sample MW-14 @ 3.75' was not analyzed.

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
0	0.0	100%				Borehole hydro-vacuumed to refusal at 3.75'. Material was sandstone, silty, weathered.	
2	0.0						
	0.0						
4	0.0	MW-14 3.75'					
	0.0	100%				At 5', sandstone, brown to light brown, loose, some weakly iron-cemented nodules to 1.5" diameter.	
6	0.0						
	0.0						
8	0.0					At 8', sandstone, light orange, dry, weakly cemented, fine-grained, silty; becomes darker orange from 9-10' with some black mottling and banding.	
	0.0						
10	0.0	100%				At 10', sandstone, silty, brown, with some moderately-cemented thin (3/8" thick) layers; color becomes a mix of light brown, orange, and buff to 12.5', sandstone becomes light gray and more dense at 12.5', thin darker gray banding present to 13'.	
	0.0						
12 ▽	0.0						
▼	0.0					At 13' sandstone becomes intensely mottled and banded (orange, red, and brown) in 0.1" to 1" thick bands to 15', weakly cemented to 14'; very moist at 14', below 14' sand is hard, slightly clayey, fine- to medium-grained.	
14	0.0	MW-14 14-15'					
	0.2					At 15' sandstone has a green tint and orangish-red mottling, saturated, fine-grained, has a sharp contact with the underlying shale.	
16	0.0	100%				Shale, olive-gray, top 6" is wet and soft/weak, then becomes stiff/moderately strong, slightly sandy (very fine-grained sand), lamination visible to 19' then massive.	
	0.0						
18	0.0						
	0.0						
20							

Continued Next Page

Drilling Log

Monitoring Well **MW-14**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	0.0	100%				Shale, slightly moist, free water noted at 24' from fractures, top 1' is soft becoming hard/strong below 21', silty, slightly sandy (very fine-grained sand).	
22	0.0						
24	0.0						
26	0.0	100%					
28	0.0					Sandstone, light gray, very moist to wet at 29', very hard, fine- to medium-grained sand; at 29' a soft and wet 4" thick clayey layer is present, from 30.5' to 32.5' sandstone becomes more shaly and olive-green/grades into underlying shale.	
30	0.0	100%					
32	0.0					Shale, olive-green.	
34	0.0						
36	0.0					End of boring = 35'.	
38							
40							
42							
44							
46							

Drilling Log

Monitoring Well **MW-15**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5807.36 ft* North *2118891.83500* East *2619631.32500*

Top of Casing *5809.76 ft* Water Level Initial ▽ *5782.26* 10/21/17 00:00 Static ▼ *5784.54* 11/10/17 00:00

Hole Depth *41.0 ft* Screen: Diameter *2 in* Length *25.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *16.4 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/21/2017* Completion Date *10/21/2017* Checked By *S. Varsa*

COMMENTS
Surface is ~2" of imported rock/gravel with sand. Soil sample MW-15 @ 5.5' was not analyzed.

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
0	0.0	100%				Borehole shoveled and posthole dug to 2', then hydro-vacuumed to refusal at 5.5'. Material was sandstone, loose, weathered.	
2	0.0						
	0.0						
4	0.0						
	0.0						
6	MW-15 5.5' 0.0	100%				At 5.5', weathered sandstone, tan/buff, dry, very loose, silty, some mottling. No recovery from 9-10'.	
	0.0						
8	0.0						
	0.0						
10	NR	100%				At 10', weathered sandstone, tan/buff, slightly moist, overall weakly (iron) cemented, mottled orange and brown, becomes hard at 14'.	
	0.0						
12	0.0						
	0.0						
14	0.0						
	0.5	100%				At 15', sandstone, light gray-brown, moist, some weakly cemented 2.5" diameter nodules, silty; becoming greenish and iron-stained at 16', slightly moist, very weak with weakly cemented and non-cemented layers, some shaly rip-up clasts present at 17.5'.	
16	0.0						
	0.0						
18	0.0					At 17.5', a 6" thick shale, slightly sandy (very fine-grained), medium to dark gray; underlain by sandstone, clayey, reddish with iron staining, weathered/loose, fine- to medium-grained sand to 19.'	
	59.8					At 19', sandstone becomes light brown, slightly moist, weakly cemented/loose, uniform to 20'; at 20', sandstone becomes dark brown,	
20						*Continued Next Page*	

Drilling Log

Monitoring Well **MW-15**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	146.8	MW-15 20' 100%				loose with some cemented thin layers, slightly clayey, fine-grained, banded; from 23'-24' becomes orangish as at 10'-14'.	
	0.0						
22	0.0						
	0.0						
24	451.8					At 23.8', a 5" thick weathered sandstone, whitish-blue, moist, fine-grained sand, visible 1/4" hydrocarbon stain layer with odor present at 24', forms sharp contact with underlying dark brown, dense, clayey, massive weathered sandstone to 28'.	
	NM						
26	10.8	100%					
	40.3						
28	4.0					At 28', sandstone, light gray, wet, weakly cemented and very loose with depth, leached, fine- to medium-grained, becomes intensely mottled (orange) at 30'; below 30' sand, brown, wet, loose, fine- to medium-grained, muddy with a clayey base.	
	6.7						
30	7.4						
	2.5	100%				Shale, wet, clayey and muddy to 33' then dry and hard to 35', becoming powdery silt, very slightly sandy (very fine-grained) at 35'.	
32	1.5						
	0.3						
34	1.0						
	1.8					Shale, wet and soft 35'-37', then dry, stiff, and hard at 40', distinctly laminated or massive.	
36	0.4	100%					
	0.4						
38	0.9						
	1.4						
40	22.6						
		100%					
42						End of boring = 41'.	
44							
46							

Drilling Log

Monitoring Well **MW-16**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5807.49 ft* North *2118829.52400* East *2619620.61800*

Top of Casing *5807.47 ft* Water Level Initial ▽ *5783.47* 10/22/17 00:00 Static ▼ *5785.37* 11/10/17 00:00

Hole Depth *41.0 ft* Screen: Diameter *2 in* Length *25.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *15.1 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/22/2017* Completion Date *10/22/2017* Checked By *S. Varsa*

Bentonite Grout | Bentonite Granules | Grout | Portland Cement | Sand Pack | Sand Pack

COMMENTS
Surface is ~2" of imported rock/gravel with sand. Well completed as a flushmount due to location at site. Driller notes material at this location was the hardest among MW-13, MW-14, MW-15, MW-17, and MW-18. Soil sample MW-16 @ 16" was not analyzed.

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
0	0.0	100% MW-16 16"				Borehole shoveled and posthole dug to refusal at 16". Material was sandstone, weathered. At 16", sandstone, orangish-brown, dry to slightly moist, loose, weakly cemented, fine-grained, mottled at 5'.	
2	0.0						
4	0.0						
6	0.0	100%				At 5', sandstone is brown, slightly moist, loose, silty, fine-grained sand, with subrounded to rounded gravel to 2.5" diameter, very uniform.	
8	0.0					At 8', sandstone becomes light orangish-tan, fine-grained and with same gravel as above, weathered top of underlying cemented sand at 8.25'; at 8.25', sand becomes yellowish-orange, cemented/dense to 9.5' then loose to 12.8', same gravel at 9.5', uniform.	
10	0.0	100%					
12	0.0					At 12.8', sharp contact with purplish-black (ending at 14') and orange sandstone, very weak, fine- to coarse-grained, greenish-gray clayey or shale rip-up clasts increasing with depth, intensely discolored/mottled, massive to 14'; hard at 15-15.5'.	
14	0.0						
16	0.0	100%				From 15.5'-16', sandstone, buff, moist, weakly cemented, fine-grained, uniform; at 16', becomes orangish. moist, very dense from 18'-20' then loose, some minor banding/mottling at 18', no rip-up clasts observed from 15.5'-20'.	
18	0.3						
20	3.4 5.3	MW-16 19'					

Continued Next Page

Drilling Log

Monitoring Well **MW-16**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	1.1	100%				From 20'-22.5', sandstone is light orange then dark orange from 22.5'-24', shale rip-up clasts appear again 23.5-24'; at 24', sandstone sharply becomes brown, moist, weakly cemented, with slight hydrocarbon odor, tip of sampler in weathered shale at 25'.	
	0.0						
22 ▼	1.3						
	4.8						
24 ▽	2.4						
	17.5	100%				Shale, olive-gray, moist to wet and soft in top foot, but quickly becomes dry, hard and laminated to 30'.	
26	6.0						
	1.1						
28	1.5						
	1.3						
30	0.2	100%				Shale, olive-gray, dry, hard, silty, slightly sandy with sandy partings (very fine-grained), faintly laminated from 34'-35', mostly massive; at 35' becomes a darker gray, very weak parallel to laminations but strong in the perpendicular.	
	0.0						
32	0.0						
	0.0						
34	0.0						
	0.0						
36	0.1	100%					
	0.1						
38	0.7						
	0.4						
40	0.0						
		100%				End of boring = 41'.	
42							
44							
46							

Drilling Log

Monitoring Well **MW-17**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5808.88 ft* North *2118755.09000* East *2619575.75500*

Top of Casing *5811.60 ft* Water Level Initial ▽ *5787.6* 10/21/17 00:00 Static ▼ *5786.26* 11/10/17 00:00

Hole Depth *41.0 ft* Screen: Diameter *2 in* Length *25.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *18.6 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/21/2017* Completion Date *10/22/2017* Checked By *S. Varsa*

COMMENTS
Surface is imported rock/gravel.

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
0	0.0	MW-17 10" 100%				Borehole shoveled to refusal at 10". Material was sandstone, weathered. At 10", sandstone, buff/orange becoming more gray/brown at 3', dry to slightly moist, loose, fine- to medium-grained, few 3/4" subrounded to rounded gravels.	
2	0.0						
	0.0						
4	0.0					At 4', sandstone, orangish, slightly moist, dense, very thin white/leached planes, fine- to medium-grained; at 6.25', becomes light gray, slightly moist, less dense, mostly fine-grained; at 7' becomes dense again.	
	0.0	100%					
6	0.0						
	0.0						
8	0.0						
	0.0					At 9', sandstone, buff/orange again, slightly moist, fine- to medium-grained, few 3/4" subrounded to rounded gravels; from 11'-18', light gray again, loose, finer grained, some weakly cemented sandstone nodules, fine gravel up to 1.25" in diameter.	
10	0.0						
	0.0	100%					
12	0.0						
	0.0						
14	0.0						
	0.0						
16	0.0	100%					
	0.0						
18	0.0					At 18', becomes more fine-grained and clayey, with dark gray brittle sandstone layers throughout to 24', iron staining at 19'.	
	0.0						
20		MW-17 19'					

Continued Next Page

Drilling Log

Monitoring Well **MW-17**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	0.0						
	0.0	100%					
22	0.0						
	0.0						
24	30.3					At 24', sandstone, brown at 24' then reddish to 25.5', wet, fine- to medium-grained, clayey/muddy to 25.5'.	
	78.2						
26	0.0	100%				Shale, olive-gray, wet/muddy, hard, no recovery from 25.5'-29'.	
	0.0						
28	0.0						
	0.0					Shale, olive-gray, dry, hard, slightly sandy (very fine-grained), fresh, massive, some lamination at 31', iron staining from 31'-32'; paper-thin laminations present from 34'-36.5', then more massive to 39', becoming a silty powder from 40'-41'.	
30	0.0						
	0.0	100%					
32	0.0						
	0.0						
34	0.0						
	0.0						
36	0.0	100%					
	0.0						
38	0.0						
	0.0						
40	0.0						
		100%					
42						End of boring = 41'.	
44							
46							

Drilling Log

Monitoring Well **MW-18**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

Surface Elev. *5810.59 ft* North *2118759.74500* East *2619449.99200*

Top of Casing *5813.23 ft* Water Level Initial ▽ *NA* Static ▼ *NA*

Hole Depth *40.0 ft* Screen: Diameter *2 in* Length *25.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *6.25 in* Casing: Diameter *2 in* Length *18.1 ft* Type *PVC*

Drill Co. *Cascade Environmental* Drilling Method *HSA* Sand Pack *10/20 CO silica*

Driller *Matt Cain* Driller Reg. # *WD-1210* Log By *Chris Hiatt*

Start Date *10/20/2017* Completion Date *10/23/2017* Checked By *S. Varsa*

COMMENTS
Surface is loose sand in pinyon-juniper forest. Well was dry on 10/24/2017 and on 11/10/2017.

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
0	NM	MW-18 6"				Borehole shoveled to refusal at 6". Material was loose, silty, weathered sandstone. From 6"-10', sandstone, light brown, dry, fine-grained, weathered. No odor or hydrocarbon staining.	
2	NM						
	NM						
4	NM						
	NM						
6	NM						
	NM						
8	NM						
	NM						
10	NM					From 10'-17.5', sandstone becomes more orange, weakly cemented, and slightly more medium-grained. No odor or hydrocarbon staining.	
	NM						
12	NM						
	NM						
14	NM						
	NM						
16	NM						
	NM						
18	NM					At 17.5', color change to brown, harder per driller comment, fine- and medium-grained sandstone with subrounded to rounded pebbles and fine gravel; between 17.5' and 20' color change to darker brown, some clay noted above 20'. No odor or hydrocarbon odor	
	NM						
20							

Continued Next Page

Drilling Log

Monitoring Well **MW-18**

Project *JF Bell #1E* Client *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *193710223*

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
						Continued	
20	NM						
	NM						
22	NM						
	NM						
24	NM						
	NM					Shale, olive-gray, dry, very weakly cemented, silty, slightly sandy; at 35', becomes light gray and significantly more silty.	
26	NM						
	NM						
28	NM						
	NM						
30	NM						
	NM						
32	NM						
	NM						
34	NM						
	NM						
36	NM						
	NM						
38	NM					At 37.5', shale is olive-gray, dry, very weakly cemented, laminations are present, some iron-stained sands (very fine- to medium-grained) are interbedded, shale is moderately decomposed and disintegrated.	
	NM						
40	NM					End of boring = 40'.	
42							
44							
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: 400-145088-1
Client Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

For:
Stantec Consulting Services Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Carol M Webb

Authorized for release by:
10/31/2017 7:20:06 PM

Carol Webb, Project Manager II
(850)471-6250
carol.webb@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
*	LCS or LCSD 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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Job ID: 400-145088-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-145088-1

Comments
No additional comments.

Receipt
The samples were received on 10/26/2017 8:26 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.

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

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

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

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

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

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

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-13@12' — Lab Sample ID: 400-145088-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	57		22		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: MW-14@14-15' — Lab Sample ID: 400-145088-3

No Detections.

Client Sample ID: MW-15@20' — Lab Sample ID: 400-145088-6

No Detections.

Client Sample ID: MW-16@19' — Lab Sample ID: 400-145088-8

No Detections.

Client Sample ID: MW-17@19' — Lab Sample ID: 400-145088-10

No Detections.

Client Sample ID: MW-18@6" — Lab Sample ID: 400-145088-11

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	21		5.2		mg/Kg	1	☼	8015B	Total/NA
Oil Range Organics (C28-C35)	9.5	*	5.2		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-145088-2	MW-13@12'	Solid	10/23/17 09:30	10/26/17 08:26
400-145088-3	MW-14@14-15'	Solid	10/22/17 14:20	10/26/17 08:26
400-145088-6	MW-15@20'	Solid	10/21/17 14:00	10/26/17 08:26
400-145088-8	MW-16@19'	Solid	10/22/17 09:50	10/26/17 08:26
400-145088-10	MW-17@19'	Solid	10/21/17 09:30	10/26/17 08:26
400-145088-11	MW-18@6"	Solid	10/20/17 13:40	10/26/17 08:26

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-13@12'
Date Collected: 10/23/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-2
Matrix: Solid
Percent Solids: 92.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.10		0.10		mg/Kg	☼	10/30/17 12:00	10/30/17 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*99*		*65 - 125*	*10/30/17 12:00*	*10/30/17 13:13*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 13:13	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 13:13	1
Toluene	<0.0052		0.0052		mg/Kg	☼	10/30/17 12:00	10/30/17 13:13	1
Xylenes, Total	<0.0052		0.0052		mg/Kg	☼	10/30/17 12:00	10/30/17 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*10/30/17 12:00*	*10/30/17 13:13*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<5.4		5.4		mg/Kg	☼	10/27/17 10:15	10/27/17 19:05	1
Oil Range Organics (C28-C35)	<5.4	*	5.4		mg/Kg	☼	10/27/17 10:15	10/27/17 19:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*58*		*27 - 151*	*10/27/17 10:15*	*10/27/17 19:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**57**		22		mg/Kg	☼		10/31/17 07:33	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-14@14-15'
Date Collected: 10/22/17 14:20
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-3
Matrix: Solid
Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.11		0.11		mg/Kg	☼	10/30/17 12:00	10/30/17 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*96*		*65 - 125*	*10/30/17 12:00*	*10/30/17 13:39*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011		mg/Kg	☼	10/30/17 12:00	10/30/17 13:39	1
Ethylbenzene	<0.0011		0.0011		mg/Kg	☼	10/30/17 12:00	10/30/17 13:39	1
Toluene	<0.0054		0.0054		mg/Kg	☼	10/30/17 12:00	10/30/17 13:39	1
Xylenes, Total	<0.0054		0.0054		mg/Kg	☼	10/30/17 12:00	10/30/17 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*40 - 150*	*10/30/17 12:00*	*10/30/17 13:39*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<5.4		5.4		mg/Kg	☼	10/27/17 10:15	10/27/17 19:17	1
Oil Range Organics (C28-C35)	<5.4	*	5.4		mg/Kg	☼	10/27/17 10:15	10/27/17 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*27 - 151*	*10/27/17 10:15*	*10/27/17 19:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		10/31/17 09:08	1

Client Sample ID: MW-15@20'
Date Collected: 10/21/17 14:00
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-6
Matrix: Solid
Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.10		0.10		mg/Kg	☼	10/30/17 12:00	10/30/17 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*99*		*65 - 125*	*10/30/17 12:00*	*10/30/17 14:05*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 14:05	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 14:05	1
Toluene	<0.0051		0.0051		mg/Kg	☼	10/30/17 12:00	10/30/17 14:05	1
Xylenes, Total	<0.0051		0.0051		mg/Kg	☼	10/30/17 12:00	10/30/17 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*40 - 150*	*10/30/17 12:00*	*10/30/17 14:05*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<5.5		5.5		mg/Kg	☼	10/27/17 10:15	10/27/17 20:04	1
Oil Range Organics (C28-C35)	<5.5	*	5.5		mg/Kg	☼	10/27/17 10:15	10/27/17 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*61*		*27 - 151*	*10/27/17 10:15*	*10/27/17 20:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		10/31/17 09:39	1

Client Sample ID: MW-16@19'
Date Collected: 10/22/17 09:50
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-8
Matrix: Solid
Percent Solids: 90.3

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.099		0.099		mg/Kg	☼	10/30/17 12:00	10/30/17 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*98*		*65 - 125*	*10/30/17 12:00*	*10/30/17 14:32*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00099		0.00099		mg/Kg	☼	10/30/17 12:00	10/30/17 14:32	1
Ethylbenzene	<0.00099		0.00099		mg/Kg	☼	10/30/17 12:00	10/30/17 14:32	1
Toluene	<0.0049		0.0049		mg/Kg	☼	10/30/17 12:00	10/30/17 14:32	1
Xylenes, Total	<0.0049		0.0049		mg/Kg	☼	10/30/17 12:00	10/30/17 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*10/30/17 12:00*	*10/30/17 14:32*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<5.5		5.5		mg/Kg	☼	10/27/17 10:15	10/27/17 20:28	1
Oil Range Organics (C28-C35)	<5.5	*	5.5		mg/Kg	☼	10/27/17 10:15	10/27/17 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*70*		*27 - 151*	*10/27/17 10:15*	*10/27/17 20:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		10/31/17 10:11	1

Client Sample ID: MW-17@19'
Date Collected: 10/21/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-10
Matrix: Solid
Percent Solids: 72.6

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.13		0.13		mg/Kg	☼	10/30/17 12:00	10/30/17 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*65 - 125*	*10/30/17 12:00*	*10/30/17 14:58*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0013		0.0013		mg/Kg	☼	10/30/17 12:00	10/30/17 14:58	1
Ethylbenzene	<0.0013		0.0013		mg/Kg	☼	10/30/17 12:00	10/30/17 14:58	1
Toluene	<0.0066		0.0066		mg/Kg	☼	10/30/17 12:00	10/30/17 14:58	1
Xylenes, Total	<0.0066		0.0066		mg/Kg	☼	10/30/17 12:00	10/30/17 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*10/30/17 12:00*	*10/30/17 14:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<6.8		6.8		mg/Kg	☼	10/27/17 10:15	10/27/17 20:52	1
Oil Range Organics (C28-C35)	<6.8	*	6.8		mg/Kg	☼	10/27/17 10:15	10/27/17 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*73*		*27 - 151*	*10/27/17 10:15*	*10/27/17 20:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<27		27		mg/Kg	☼		10/31/17 10:42	1

Client Sample ID: MW-18@6"
Date Collected: 10/20/17 13:40
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-11
Matrix: Solid
Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.10		0.10		mg/Kg	☼	10/30/17 12:00	10/30/17 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*100*		*65 - 125*	*10/30/17 12:00*	*10/30/17 15:24*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 15:24	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	10/30/17 12:00	10/30/17 15:24	1
Toluene	<0.0051		0.0051		mg/Kg	☼	10/30/17 12:00	10/30/17 15:24	1
Xylenes, Total	<0.0051		0.0051		mg/Kg	☼	10/30/17 12:00	10/30/17 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*10/30/17 12:00*	*10/30/17 15:24*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**21**		5.2		mg/Kg	☼	10/27/17 10:15	10/27/17 21:03	1
Oil Range Organics (C28-C35)	**9.5**	*	5.2		mg/Kg	☼	10/27/17 10:15	10/27/17 21:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*62*		*27 - 151*	*10/27/17 10:15*	*10/27/17 21:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		10/31/17 12:17	1

GC VOA

Analysis Batch: 373890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	8021B	373908
400-145088-3	MW-14@14-15'	Total/NA	Solid	8021B	373908
400-145088-6	MW-15@20'	Total/NA	Solid	8021B	373908
400-145088-8	MW-16@19'	Total/NA	Solid	8021B	373908
400-145088-10	MW-17@19'	Total/NA	Solid	8021B	373908
400-145088-11	MW-18@6"	Total/NA	Solid	8021B	373908
MB 400-373908/3-A	Method Blank	Total/NA	Solid	8021B	373908
LCS 400-373908/1-A	Lab Control Sample	Total/NA	Solid	8021B	373908
400-145088-2 MS	MW-13@12'	Total/NA	Solid	8021B	373908
400-145088-2 MSD	MW-13@12'	Total/NA	Solid	8021B	373908

Analysis Batch: 373891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	8015B	373908
400-145088-3	MW-14@14-15'	Total/NA	Solid	8015B	373908
400-145088-6	MW-15@20'	Total/NA	Solid	8015B	373908
400-145088-8	MW-16@19'	Total/NA	Solid	8015B	373908
400-145088-10	MW-17@19'	Total/NA	Solid	8015B	373908
400-145088-11	MW-18@6"	Total/NA	Solid	8015B	373908
MB 400-373908/3-A	Method Blank	Total/NA	Solid	8015B	373908
LCS 400-373908/2-A	Lab Control Sample	Total/NA	Solid	8015B	373908
400-145088-2 MS	MW-13@12'	Total/NA	Solid	8015B	373908
400-145088-2 MSD	MW-13@12'	Total/NA	Solid	8015B	373908

Prep Batch: 373908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	5035	
400-145088-3	MW-14@14-15'	Total/NA	Solid	5035	
400-145088-6	MW-15@20'	Total/NA	Solid	5035	
400-145088-8	MW-16@19'	Total/NA	Solid	5035	
400-145088-10	MW-17@19'	Total/NA	Solid	5035	
400-145088-11	MW-18@6"	Total/NA	Solid	5035	
MB 400-373908/3-A	Method Blank	Total/NA	Solid	5035	
LCS 400-373908/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-373908/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-145088-2 MS	MW-13@12'	Total/NA	Solid	5035	
400-145088-2 MS	MW-13@12'	Total/NA	Solid	5035	
400-145088-2 MSD	MW-13@12'	Total/NA	Solid	5035	
400-145088-2 MSD	MW-13@12'	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 373504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	3546	
400-145088-3	MW-14@14-15'	Total/NA	Solid	3546	
400-145088-6	MW-15@20'	Total/NA	Solid	3546	
400-145088-8	MW-16@19'	Total/NA	Solid	3546	
400-145088-10	MW-17@19'	Total/NA	Solid	3546	
400-145088-11	MW-18@6"	Total/NA	Solid	3546	

GC Semi VOA (Continued)

Prep Batch: 373504 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-373504/1-A	Method Blank	Total/NA	Solid	3546	
LCS 400-373504/2-A	Lab Control Sample	Total/NA	Solid	3546	
400-145051-A-1-A MS	Matrix Spike	Total/NA	Solid	3546	
400-145051-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 373664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	8015B	373504
400-145088-3	MW-14@14-15'	Total/NA	Solid	8015B	373504
400-145088-6	MW-15@20'	Total/NA	Solid	8015B	373504
400-145088-8	MW-16@19'	Total/NA	Solid	8015B	373504
400-145088-10	MW-17@19'	Total/NA	Solid	8015B	373504
400-145088-11	MW-18@6"	Total/NA	Solid	8015B	373504
MB 400-373504/1-A	Method Blank	Total/NA	Solid	8015B	373504
LCS 400-373504/2-A	Lab Control Sample	Total/NA	Solid	8015B	373504
400-145051-A-1-A MS	Matrix Spike	Total/NA	Solid	8015B	373504
400-145051-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	373504

HPLC/IC

Leach Batch: 373935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Soluble	Solid	DI Leach	
400-145088-3	MW-14@14-15'	Soluble	Solid	DI Leach	
400-145088-6	MW-15@20'	Soluble	Solid	DI Leach	
400-145088-8	MW-16@19'	Soluble	Solid	DI Leach	
400-145088-10	MW-17@19'	Soluble	Solid	DI Leach	
400-145088-11	MW-18@6"	Soluble	Solid	DI Leach	
MB 400-373935/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 400-373935/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-373935/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
400-145088-2 MS	MW-13@12'	Soluble	Solid	DI Leach	
400-145088-2 MSD	MW-13@12'	Soluble	Solid	DI Leach	

Analysis Batch: 374010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Soluble	Solid	300.0	373935
400-145088-3	MW-14@14-15'	Soluble	Solid	300.0	373935
400-145088-6	MW-15@20'	Soluble	Solid	300.0	373935
400-145088-8	MW-16@19'	Soluble	Solid	300.0	373935
400-145088-10	MW-17@19'	Soluble	Solid	300.0	373935
400-145088-11	MW-18@6"	Soluble	Solid	300.0	373935
MB 400-373935/1-A	Method Blank	Soluble	Solid	300.0	373935
LCS 400-373935/2-A	Lab Control Sample	Soluble	Solid	300.0	373935
LCSD 400-373935/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	373935
400-145088-2 MS	MW-13@12'	Soluble	Solid	300.0	373935
400-145088-2 MSD	MW-13@12'	Soluble	Solid	300.0	373935

QC Association Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

General Chemistry

Analysis Batch: 373747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145088-2	MW-13@12'	Total/NA	Solid	Moisture	
400-145088-3	MW-14@14-15'	Total/NA	Solid	Moisture	
400-145088-6	MW-15@20'	Total/NA	Solid	Moisture	
400-145088-8	MW-16@19'	Total/NA	Solid	Moisture	
400-145088-10	MW-17@19'	Total/NA	Solid	Moisture	
400-145088-11	MW-18@6"	Total/NA	Solid	Moisture	
400-145162-E-1 DU	Duplicate	Total/NA	Solid	Moisture	

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

Lab Sample ID: MB 400-373908/3-A
Matrix: Solid
Analysis Batch: 373891

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373908

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	<0.10		0.10		mg/Kg		10/30/17 12:00	10/30/17 12:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*65 - 125*	*10/30/17 12:00*	*10/30/17 12:47*	*1*

Lab Sample ID: LCS 400-373908/2-A
Matrix: Solid
Analysis Batch: 373891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373908

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			1.00	0.896		mg/Kg		90	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*97*		*65 - 125*

Lab Sample ID: 400-145088-2 MS
Matrix: Solid
Analysis Batch: 373891

Client Sample ID: MW-13@12'
Prep Type: Total/NA
Prep Batch: 373908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10	<0.10		1.02	0.916		mg/Kg	☼	89	10 - 150		

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

Lab Sample ID: 400-145088-2 MSD
Matrix: Solid
Analysis Batch: 373891

Client Sample ID: MW-13@12'
Prep Type: Total/NA
Prep Batch: 373908

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10	<0.10		1.04	0.860		mg/Kg	☼	83	10 - 150	6	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*100*		*65 - 125*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-373908/3-A
Matrix: Solid
Analysis Batch: 373890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373908

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		10/30/17 12:00	10/30/17 12:47	1
Ethylbenzene	<0.0010		0.0010		mg/Kg		10/30/17 12:00	10/30/17 12:47	1
Toluene	<0.0050		0.0050		mg/Kg		10/30/17 12:00	10/30/17 12:47	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		10/30/17 12:00	10/30/17 12:47	1

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

Lab Sample ID: MB 400-373908/3-A
Matrix: Solid
Analysis Batch: 373890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373908

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	99		40 - 150	10/30/17 12:00	10/30/17 12:47	1

Lab Sample ID: LCS 400-373908/1-A
Matrix: Solid
Analysis Batch: 373890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373908

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0434		mg/Kg		87	74 - 127
Ethylbenzene	0.0500	0.0420		mg/Kg		84	79 - 131
Toluene	0.0500	0.0429		mg/Kg		86	76 - 127
Xylenes, Total	0.150	0.127		mg/Kg		84	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	98		40 - 150

Lab Sample ID: 400-145088-2 MS
Matrix: Solid
Analysis Batch: 373890

Client Sample ID: MW-13@12'
Prep Type: Total/NA
Prep Batch: 373908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.0010		0.0519	0.0439		mg/Kg	☼	85	10 - 150
Ethylbenzene	<0.0010		0.0519	0.0416		mg/Kg	☼	80	10 - 150
Toluene	<0.0052		0.0519	0.0430		mg/Kg	☼	83	10 - 150
Xylenes, Total	<0.0052		0.156	0.126		mg/Kg	☼	81	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	98		40 - 150

Lab Sample ID: 400-145088-2 MSD
Matrix: Solid
Analysis Batch: 373890

Client Sample ID: MW-13@12'
Prep Type: Total/NA
Prep Batch: 373908

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0010		0.0517	0.0438		mg/Kg	☼	85	10 - 150	0	34
Ethylbenzene	<0.0010		0.0517	0.0413		mg/Kg	☼	80	10 - 150	1	66
Toluene	<0.0052		0.0517	0.0431		mg/Kg	☼	83	10 - 150	0	44
Xylenes, Total	<0.0052		0.155	0.126		mg/Kg	☼	81	50 - 150	0	46

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	98		40 - 150

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

Lab Sample ID: MB 400-373504/1-A
Matrix: Solid
Analysis Batch: 373664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 373504

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<5.0		5.0		mg/Kg		10/27/17 10:15	10/27/17 17:54	1
Oil Range Organics (C28-C35)	<5.0		5.0		mg/Kg		10/27/17 10:15	10/27/17 17:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*27 - 151*	*10/27/17 10:15*	*10/27/17 17:54*	*1*

Lab Sample ID: LCS 400-373504/2-A
Matrix: Solid
Analysis Batch: 373664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 373504

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			327	272		mg/Kg		83	63 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*93*		*27 - 151*

Lab Sample ID: 400-145051-A-1-A MS
Matrix: Solid
Analysis Batch: 373664

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 373504

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	710	E	322	1070	E	mg/Kg		111	62 - 204		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*43*		*27 - 151*

Lab Sample ID: 400-145051-A-1-B MSD
Matrix: Solid
Analysis Batch: 373664

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 373504

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	710	E	327	1150	E	mg/Kg		134	62 - 204	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*40*		*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-373935/1-A
Matrix: Solid
Analysis Batch: 374010

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			10/31/17 05:58	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-373935/2-A
Matrix: Solid
Analysis Batch: 374010

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			99.6	97.4		mg/Kg		98	80 - 120		

Lab Sample ID: LCSD 400-373935/3-A
Matrix: Solid
Analysis Batch: 374010

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	97.9		mg/Kg		98	80 - 120	1	15

Lab Sample ID: 400-145088-2 MS
Matrix: Solid
Analysis Batch: 374010

Client Sample ID: MW-13@12'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	57		105	169		mg/Kg	☼	106	80 - 120		

Lab Sample ID: 400-145088-2 MSD
Matrix: Solid
Analysis Batch: 374010

Client Sample ID: MW-13@12'
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	57		110	164		mg/Kg	☼	97	80 - 120	3	15

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-13@12'
Date Collected: 10/23/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-2
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			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-13@12'
Date Collected: 10/23/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-2
Matrix: Solid
Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.25 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 13:13	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.25 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 13:13	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.20 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 19:05	TAJ	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.47 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 07:33	JAW	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-14@14-15'
Date Collected: 10/22/17 14:20
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-14@14-15'
Date Collected: 10/22/17 14:20
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-3
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			5.09 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 13:39	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.09 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 13:39	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.35 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 19:17	TAJ	TAL PEN
	Instrument ID: Eva									

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-14@14-15'

Lab Sample ID: 400-145088-3
Date Collected: 10/22/17 14:20
Matrix: Solid
Date Received: 10/26/17 08:26
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	Leach	DI Leach			2.47 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 09:08	JAW	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-15@20'

Lab Sample ID: 400-145088-6
Date Collected: 10/21/17 14:00
Matrix: Solid
Date Received: 10/26/17 08:26

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			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-15@20'

Lab Sample ID: 400-145088-6
Date Collected: 10/21/17 14:00
Matrix: Solid
Date Received: 10/26/17 08:26
Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.40 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 14:05	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.40 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 14:05	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.07 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 20:04	TAJ	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.58 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 09:39	JAW	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-16@19'

Lab Sample ID: 400-145088-8
Date Collected: 10/22/17 09:50
Matrix: Solid
Date Received: 10/26/17 08:26

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			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-16@19'

Date Collected: 10/22/17 09:50
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-8

Matrix: Solid
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.61 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 14:32	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.61 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 14:32	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.07 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 20:28	TAJ	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.54 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 10:11	JAW	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-17@19'

Date Collected: 10/21/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-10

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			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-17@19'

Date Collected: 10/21/17 09:30
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-10

Matrix: Solid
Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.20 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 14:58	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.20 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 14:58	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.17 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 20:52	TAJ	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.59 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 10:42	JAW	TAL PEN
	Instrument ID: IC2									

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

Client Sample ID: MW-18@6"

Date Collected: 10/20/17 13:40
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-11

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			373747	10/28/17 14:57	TMP	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-18@6"

Date Collected: 10/20/17 13:40
Date Received: 10/26/17 08:26

Lab Sample ID: 400-145088-11

Matrix: Solid
Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.07 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	373891	10/30/17 15:24	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.07 g	5.0 g	373908	10/30/17 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	373890	10/30/17 15:24	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.02 g	1.0 mL	373504	10/27/17 10:15	KLR	TAL PEN
Total/NA	Analysis	8015B		1			373664	10/27/17 21:03	TAJ	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	373935	10/30/17 14:07	JAW	TAL PEN
Soluble	Analysis	300.0		1			374010	10/31/17 12:17	JAW	TAL PEN
	Instrument ID: IC2									

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
TestAmerica Job ID: 400-145088-1
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Method Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-145088-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

Laboratory References:

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

TestAmerica Pensacola
5555 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica

Client Information	Sampler: CSH	Lab PM: Webb, Carol M	Carrier Tracking No(s):	COC No: 400-68723-27872.1
Client Contact: ~~Clint Oberbroeckling~~ STEVE VARSA	Phone: 515-707-3276	E-Mail: carol.webb@testamericainc.com		Page: Page 1 of 1
Company: Stantec Consulting Services Inc				Job #:

Address: 11153 Aurora Avenue	Due Date Requested:	Analysis Requested
City: Des Moines	TAT Requested (days): 10	
State, Zip: IA, 50322-7904		
Phone: ~~303-291-2239(Tel)~~ 515-251-1020	PO #: Purchase Order Requested	
Email: ~~clint.w.oberbroeckling@mwglobal.com~~ STEVE.VARSA@STANTEC.COM	WO #: ~~AAP#~~ ERG-STN-10-01-17-CSM-03	
Project Name: James F Bell #1E Soil	Project #: 40005479	
Site: (SAME AS PROJECT)	SSOW#:	

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 - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

400-145088 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO - TPH DRO ORO, Chloride (Method 300)	8015B_GRO, 8021B	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
~~MW-13 @ 5'~~ AW 10-31-17 -	10/20/17	1615	G	SL			X	X	2	
MW-13 @ 12'	10/23/17	0930					X	X	2	
MW-14 @ 14-15'	10/22/17	1420					X	X	2	
~~MW-14 @ 3.75'~~ AW 10-31-17 -	10/20/17	1610					X	X	2	
~~MW-15 @ 5.5'~~ AW 10-31-17 -	10/20/17	1550					X	X	2	
MW-15 @ 20'	10/21/17	1400					X	X	2	
~~MW-16 @ 16'~~ AW 10-31-17 -	10/20/17	1545					X	X	2	
MW-16 @ 19'	10/22/17	0950					X	X	2	
~~MW-17 @ 10'~~ AW 10-31-17 -	10/20/17	1540					X	X	2	
MW-17 @ 19'	10/21/17	0930					X	X	2	
MW-18 @ 6'	10/20/17	1340					X	X	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	Date/Time	Company	Received by	Date/Time	Company
1		10/23/17 1600	STANTEC		10/24/17 1052	TAL
2		10-25-17 1821			10/26/17 1826	
3		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: 0.0C 1.0

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-145088-1

Login Number: 145088
List Number: 1
Creator: Johnson, Jeremy N

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	0.00°C IR7
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 (excluding tests with immediate HTs)	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

BASIN DISPOSAL

30 Years of Environmental Health and Safety Excellence

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 687962
NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 6-8-17
DEL. TKT#.
GENERATOR: El PASO
BILL TO: El Paso
HAULING CO. [illegible]
DRIVER: Sarah Gardner
(Print Full Name)
ORDERED BY: Joseph Wiley
CODES:

WASTE DESCRIPTION: ☒ Exempt Oilfield Waste ☐ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☒ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1	01	Jones Frank #1E	1	750			750 '17 JUN 8	4:13PM
2		State Gas Com #1 Canada Mesa #2						
3		M.Lestrad 1A Fields A #2A						
4		Lindrith B #24 Hammond #41A						
5		Knight #1 K7210072						

I, Sarah Gardner representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt Oil field wastes.

☐ Approved ☐ Denied ATTENDANT SIGNATURE [signature]

san juan reproduction 168-6

mwH Bid

BASIN DISPOSAL

30 Years of Environmental Health and Safety Excellence

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 690410
NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 7-14-17
DEL. TKT#.
GENERATOR: El Paso
BILL TO: El Paso
HAULING CO. Sierra Oil Field
DRIVER: Juan Medrano
(Print Full Name)
ORDERED BY: Josepha
CODES:

WASTE DESCRIPTION: ☒ Exempt Oilfield Waste ☒ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☒ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1	54	James F. Bell #1E	600 Gal	75			1050	
2							'17 JUL 14	
3								8:28PM
4								
5								

I, _____ representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt Oil field wastes.

☒ Approved ☐ Denied ATTENDANT SIGNATURE _____

san juan reproduction 168-6

envirotech

Bill of Lading

MANIFEST # 58008
GENERATOR El Paso
POINT OF ORIGIN James F. Bell 1E
TRANSPORTER Sierra Oil Field
DATE 10-30-17 JOB # 14073-0025

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	LF II	Cont. Soil/Cuttings	T10	—	20	—	17	1054	Norman Hurtado
					20				

RESULTS			LANDFARM EMPLOYEE	NOTES
< 295	CHLORIDE TEST	1	Gary Robinson EL	Leaving BBLS Here to be Dumped
	PAINT FILTER TEST	1	Certification of above receival & placement	and Dozed.

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# 58008

CHLORIDE TESTING / PAINT FILTER TESTING

DATE 10.30.17 TIME 1054

Attach test strip here

CUSTOMER El Paso

SITE James F. Bell

DRIVER Norman Hartfield

SAMPLE (Soil) Straight ✓ With Dirt _____

CHLORIDE TEST 295 mg/Kg

ACCEPTED YES ✓ NO _____

PAINT FILTER TEST Time started 1054 Time completed 1112

PASS YES ✓ NO _____

SAMPLER/ANALYST Gary Robinson

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

30 Years of Environmental Health and Safety Excellence

BASIN DISPOSAL

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 698158
NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 10-26-11
DEL. TKT#.
GENERATOR: El Paso
BILL TO: El Paso
HAULING CO. Sierra
DRIVER:
(Print Full Name)
ORDERED BY: Joseph Luna
CODES:

WASTE DESCRIPTION: ☒ Exempt Oilfield Waste ☐ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☒ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1		James F Bell 1E	7	706			490	
2							10CT26	9:13AM
3								
4								
5								

I, Aaron Johnson representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt Oil field wastes.

☒ Approved ☐ Denied ATTENDANT SIGNATURE

san juan reproduction 168-6

BASIN DISPOSAL

30 Years of Environmental Health and Safety Excellence

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO. 700071

NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 11-14-17

DEL. TKT#.

GENERATOR: El Paso

BILL TO: El Paso

HAULING CO. Stanteo

DRIVER: Sam Spring
(Print Full Name)

ORDERED BY: Joseph Wiley

CODES:

WASTE DESCRIPTION: ☒ Exempt Oilfield Waste ☐ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☑ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1	1	Fogelson 4-1	1	75			75 17 NOV 14	2:31 pm
2		~~State Gas Com~~, Knight JF Bell, ~~Lat L-40~~, ~~Std Oil Com~~						
3		~~Sandoval~~, GCU 124E ~~J Fed 4~~, ~~J Fed 6~~						
4		Fields A7A, GCU 142E Fogelson, Canada Mesa, K-27						
5		Miles Fed						

I, _____ representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt Oil field wastes.

☑ Approved ☐ Denied ATTENDANT SIGNATURE _____

san juan reproduction 168-6

APPENDIX D

From: Varsa, Steve
To: Randolph.Bayliss@state.nm.us
Cc: brandon.powell@state.nm.us; Wiley, Joe
Subject: El Paso CGP Company - Notice of upcoming groundwater sampling activities
Date: Tuesday, May 30, 2017 3:05:18 PM

Hi Randy –

This correspondence is to provide notice to the NMOCD of upcoming semi-annual groundwater sampling and monitoring activities at the following project sites:

Site Name	NMOCD Case #
Canada Mesa #2	3RP-155-0
Fields A#7A	3RP-170-0
Fogelson 4-1	3RP-068-0
Gallegos Canyon Unit #124E	3RP-407-0
GCU Com A #142E	3RP-179-0
Hammond #41A	3RP-186-0
James F. Bell #1E	3RP-196-0
Johnston Fed #4	3RP-201-0
Johnston Fed #6A	3RP-202-0
K27 LDO72	3RP-204-0
Knight #1	3RP-207-0
Lateral L 40 Line Drip	3RP-212-0
Lat O-21 Line Drip	3RP-213-0
Lindrith B #24	3RP-214-0
Miles Fed #1A	3RP-223-0
Sandoval GC A #1A	3RP-235-0
Standard Oil Com #1	3RP-238-0
State Gas Com N #1	3RP-239-0

Groundwater sampling and monitoring is planned to be conducted the week of June 5, 2017.

Thank you,
Steve

Stephen Varsa, P.G.
Supervising Hydrogeologist
MWH, now part of Stantec
11153 Aurora Avenue
Des Moines, Iowa 50322
Direct: (515) 251-1020
Cell: (515) 710-7523

Office: (515) 253-0830
steve.varsa@stantec.com

From:	Varsa, Steve
To:	Bayliss, Randolph, EMNRD
Cc:	Griswold, Jim, EMNRD; Perrin, Charlie, EMNRD; Powell, Brandon, EMNRD; Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; Wiley, Joe
Subject:	RE: MPDE Work Plan Approvals
Date:	Saturday, July 08, 2017 4:55:00 PM

Hi Randy –

Pursuant to the conditions in the above-referenced July 5, 2017, approval letter, the following is the schedule for the MDPE activities:

James F. Bell #1E – start late the afternoon of Tuesday, July 11, and will go through Friday, July 14.
Johnston Federal #4 and Johnston Federal #6A – both sites beginning on Saturday, July 15, and go through Tuesday, July 18.
No work planned for Wednesday, July 19 (rest day).
GCU #124 – Thursday, July 20 through Sunday, July 23.
Knight #1 – Monday and Tuesday, July 24 and 25.
K27 LD072 – Wednesday, July 26.
Miles Federal #1A – Thursday, July 27.

As noted in the work plan submittal, work at State Gas Com N#1 is still pending receipt of a State Water Easement. NMOCD will be notified once the State Gas Com pilot testing activities have been scheduled, or if there are changes to the schedule offered above. Do you anticipate any OCD staff will be on-site during one or more of these events?

Thank you,
Steve

Stephen Varsa, P.G.
Supervising Hydrogeologist
MWH, now part of Stantec
11153 Aurora Avenue
Des Moines, Iowa 50322
Direct: (515) 251-1020
Cell: (515) 710-7523
Office: (515) 253-0830
steve.varsa@stantec.com

From: Bayliss, Randolph, EMNRD [mailto:Randolph.Bayliss@state.nm.us]
Sent: Wednesday, July 05, 2017 9:08 AM
To: Wiley, Joe <Joe_Wiley@kindermorgan.com>; Varsa, Steve <steve.varsa@stantec.com>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Perrin, Charlie, EMNRD <charlie.perrin@state.nm.us>; Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>; Smith, Cory, EMNRD <Cory.Smith@state.nm.us>; Fields, Vanessa, EMNRD <Vanessa.Fields@state.nm.us>

Subject: MPDE Work Plan Approvals

Good morning Joe, Steve, others.

Thank you for your proposed MPDE efforts.

Cheers

Randolph Bayliss, P.E.
Hydrologist, Districts III and IV
NMOCD Environmental Bureau
1220 S St Francis St, Santa Fe, NM 87505
505-476-3084, Cell 575-840-5961

From:	Varsa, Steve
To:	Bayliss, Randolph, EMNRD
Cc:	Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; Wiley, Joe
Subject:	3RP-196 - James F Bell #1E - Work Plan for Additional Delineation Activities
Date:	Friday, October 06, 2017 5:08:00 PM
Attachments:	2017-10_Monitoring Well Installation Work Plan (JF Bell).pdf

Hi Randy –

Please find attached the above-referenced work plan for your review and files. Drilling for the well installation activities are planned to begin on Thursday, October 19, 2017, and conclude the following week. Utility clearing activities will be completed earlier in the week (planned for Tuesday, October 17).

Please feel free to contact Joseph Wiley or me if you have any questions or need additional information.

Thank you,
Steve

Stephen Varsa, P.G.
Supervising Hydrogeologist
MWH, now part of Stantec
11153 Aurora Avenue
Des Moines, Iowa 50322
Direct: (515) 251-1020
Cell: (515) 710-7523
Office: (515) 253-0830
steve.varsa@stantec.com

From: Varsa, Steve
To: Bayliss, Randolph, EMNRD
Cc: Smith, Cory, EMNRD; Fields, Vanessa, EMNRD; Wiley, Joe
Subject: El Paso CGP Company - Notice of upcoming groundwater sampling activities
Date: Monday, November 06, 2017 11:41:36 AM

Hi Randy –

This correspondence is to provide notice to the NMOCD of upcoming semiannual groundwater sampling and monitoring activities at the following project sites:

Site Name	NMOCD Case #
Canada Mesa #2	3RP-155-0
Fields A#7A	3RP-170-0
Fogelson 4-1	3RP-068-0
Gallegos Canyon Unit #124E	3RP-407-0
GCU Com A #142E	3RP-179-0
James F. Bell #1E	3RP-196-0
Johnston Fed #4	3RP-201-0
Johnston Fed #6A	3RP-202-0
K27 LDO72	3RP-204-0
Knight #1	3RP-207-0
Lateral L 40 Line Drip	3RP-212-0
Lat O-21 Line Drip	3RP-213-0
Miles Fed #1A	3RP-223-0
Sandoval GC A #1A	3RP-235-0
Standard Oil Com #1	3RP-238-0
State Gas Com N #1	3RP-239-0

Groundwater sampling and monitoring is planned to be conducted November 10-14, 2017.

Please contact Joe Wiley, remediation manager with El Paso CGP Company, at (713) 420-3475, or me, if you have any questions.

Thank you,
Steve

Stephen Varsa, P.G.
Supervising Hydrogeologist
MWH, now part of Stantec
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Des Moines, Iowa 50322
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APPENDIX E

AcuVac Remediation, LLC
1656-H Townhurst, Houston, Texas 77043
713.468.6688 • www.acuvac.com

August 15, 2017

Mr. Stephen Varsa
Supervising Hydrogeologist
Stantec Consulting Services, Inc.
11153 Aurora Avenue
Des Moines, IA 50322

Dear Steve:

Re: James F. Bell #1E, San Juan County, NM (Event #2)

At your request, AcuVac Remediation, LLC (AcuVac) performed two 72.0-hour Mobile Dual Phase Extraction (MDPE) events; Event #2A on well MW-1, and Event #2B on well MW-8, at the above referenced site (Site) on July 11 through 14, 2017. MDPE Event #1 was performed at the Site in December, 2016. The following is the Report and a copy of the Operating Data collected during Event #2. Additionally, the attached Table #1 contains the Summary Well Data, and Table #2 contains the Summary Recovery Data.

The purpose of the MDPE events was to enhance recovery of Phase Separated Hydrocarbons (PSH) present at the Site through the removal of petroleum hydrocarbons in both liquid and vapor phases. PSH is referred to as petroleum hydrocarbons and Light Non-Aqueous Phase Liquids (LNAPL). The source of the PSH is a historical release of natural gas condensate.

OBJECTIVES

The Objectives of the MDPE Events are to:

- Evaluate the potential for removing liquid and vapor phase NAPL from the groundwater (GW) and soils in the subsurface formations within the influence of the extraction well.
- Expose the capillary fringe area and below to the extraction well induced vacuums.
- Increase the vapor phase and liquid NAPL specific yields with high induced vacuums.
- Provide an induced hydraulic gradient (IHG) to gain hydraulic control of the area surrounding the extraction well during the event periods.
- Select the groundwater depression and pump rates to accomplish the above objectives.

METHODS AND EQUIPMENT

AcuVac owns and maintains an inventory of equipment to perform MDPE events. No third party equipment was utilized. The events at the Site were conducted using the AcuVac I-6 System (System) with a Roots RAI-33 blower used as a vacuum pump and a Roots RAI-22 positive displacement blower. The following table lists equipment and instrumentation employed during Event #1, and the data element captured by each.

Equipment and Instrumentation Employed by AcuVac	
Measurement Equipment	**Data Element**
Extraction Well Induced Vacuum and Flow	
Dwyer Magnehelic Gauges	Extraction Well Vacuum
Dwyer Averaging Pitot Tubes / Magnehelic Gauges	Extractions Well Vapor Flow
Observation Wells	
Dwyer Digital Manometer	Vacuum / Pressure Influence
Extraction Well Vapor Monitoring	
V-1 vacuum box	Extraction Well Non-Diluted Vapor Sample Collection
HORIBA® Analyzer	Extraction Well Vapor TPH Concentration
QRae Mini II O_2 Monitor	Extraction Well Vapor Oxygen Content
LNAPL Thickness (if present)	
Solinst Interface Probes Model 122	Depth to LNAPL and Depth to Groundwater
Liquid Recovery	
Totalizer Flow Meter	Liquid Flow and Total Volume
Grundfos Red-Flo 2 Total Fluids Pump	In-Well Pumping
Grundfos Variable Frequency Drive	Pump Speed and Other Diagnostics
Groundwater Depression / Upwelling	
In-Situ Level Troll 700 Data Logger	Liquid Column in Extraction and Observation Wells
In-Situ Vented Cable with Chamber	Equalize Well Vacuum/Pressure
In-Situ Rugged Reader Data Logger Interface	Capture Readings from Data Logger Trolls
Atmospheric Conditions	
Testo Model 511	Relative and Absolute Barometric Pressure

The vacuum extraction portion of the AcuVac System consists of a vacuum pump driven by an internal combustion (IC) engine. The vacuum pump was connected to the extraction well and the vacuum created on the extraction well caused light hydrocarbons in the soil and on the groundwater to volatilize and flow through a moisture knockout tank to the vacuum pump and the IC Engine where they were burned as part of the normal combustion process. Propane was used as auxiliary fuel to help power the engine if the well vapors did not provide the required energy.

The IC engine provided the power necessary to achieve and maintain high induced vacuums and/or high well vapor flows required to maximize the vacuum radius of influence for pilot tests and short term event remediation.

Emissions from the engine were passed through three catalytic converters to maximize destruction of removed hydrocarbon vapors. The engine's fuel-to-air ratio was adjusted to maintain efficient combustion. Because the engine is the power source for the equipment, the System stops when the engine stops. This prevents an uncontrolled release of hydrocarbons. Since the System is held entirely under vacuum, any leaks in the seals or connections are leaked into the System and not emitted into the atmosphere. The engine is automatically shut down by vacuum loss, low oil pressure, over speed, or overheating.

Groundwater extraction was provided by an in-well, Redi-Flo 2 total fluids pump that has the discharge line connected to a total volume meter. The discharge line from the volume meter was then connected to the stand-by tank. The electrical power for the groundwater pump was supplied from a 120v Honda generator. The groundwater flow rate was adjusted to maintain a target level. An interface meter was used to collect depth to

groundwater and depth to LNAPL measurements. Groundwater samples were taken periodically in a graduated cylinder to determine the average LNAPL percentages and volume.

The design of the AcuVac System enabled independent control of both the induced well vacuum and the groundwater pumping functions such that the AcuVac team controlled the induced hydraulic gradient to increase exposure of the formation to soil vapor extraction (SVE). The ability to separate the vapor and liquid flows within the extraction well improved the LNAPL recovery rates and enables the AcuVac team to record data specific to each media.

RECOVERY SUMMARY FOR MDPE EVENT #2

The Recovery Summary table below lists the groundwater and LNAPL recovery data for Event #2 with the Event #2 total compared with the Event #1 total.

Recovery Summary				
	Event #2A	Event #2B	Total	
	MW-1	MW8	Event #2	Event #1
Event Hours	72.0	72.0	144.0	16.0
GW Recovery	207	313	520	66
NAPL Recovery				
Liquid	10	0	10	0
Vapor	72.3	40.1	112.4	20.3
Total	82.3	40.1	122.4	20.3
Gallons/Hour	**1.14**	**0.56**	**0.85**	**1.27**

SUMMARY OF MDPE EVENT #2A- WELL MW-1

- Event #2A was conducted on July 11 through 14, 2017. The total time for Event #2A was 72.0 hours.
- The total liquid volume recovered was 207 gallons (gals) with an estimated 10 gals, or 4.8% of which were recovered liquid LNAPL. An additional 0.2 gals of LNAPL was manually removed from the well by Stantec personnel following the completion of Event #2A.
- Based on the HORIBA® analytical data, the total vapor LNAPL burned as IC engine fuel was 72.3 gals for a total liquid and vapor LNAPL recovery of 82.3 gals or 1.14 gals per hour.
- The volume of liquid and vapor LNPAL recovered during Event #2A is compared with Event #1A in the table below.

LNAPL Recovery Well MW-1					
		Event #2A		Event #1A	
		Amount	Percent	Amount	Percent
Event Hours		72.0	-	8.0	-
GW Recovery	gals	207	-	21	-
NAPL Recovery					
Liquid	gals	10	12.1	0	0
Vapor	gals	72.3	87.9	12.2	100.0
Total	gals	82.3	100.0	12.2	100.0
Gallons/Hour		**1.14**	**-**	**1.52**	**-**

- Average HORIBA® analytical data from the influent vapor samples for Event #2A is compared with Event #1A in the table below:

Influent Vapor Data Well MW-1			
Data Element		**EV #2A**	**EV #1A**
TPH- Maximum	ppmv	48,220	46,280
TPH- Average	ppmv	40,444	40,204
TPH- Minimum	ppmv	29,330	30,870
TPH- Initial	ppmv	45,950	40,870
TPH- Ending	ppmv	44,260	40,340
CO_2	%	2.61	3.57
CO	%	0.70	0.66
O_2	%	13.4	10.8
H_2S	ppm	0	0

- The Event #2A extraction well induced vacuum and well vapor flow are compared with Event #1A in the table below.

Well Vacuum and Well Vapor Flow Well MW-1			
Data Element		**EV #2A**	**EV #1A**
Well Vacuum- Maximum	"H_2O	110.00	150.00
Well Vacuum- Average	"H_2O	104.71	137.65
Well Vacuum- Minimum	"H_2O	95.00	80.00
Well Vapor Flow- Maximum	scfm	14.87	19.51
Well Vapor Flow- Average	scfm	11.49	17.54
Well Vapor Flow- Minimum	scfm	8.92	10.30

- The groundwater pump inlet was set at 33.0 feet (ft) below top of casing (BTOC) in well MW-1. The groundwater pump was cycled on and off during the course of Event #2A. The total liquid volume recovered was 207 gals.
- Measurable LNAPL was not detected in well MW-1 prior to the start of Event #2A. LNAPL with a measured thickness of 0.25 ft was present in well MW-1 at the conclusion of Event #2A. The LNAPL present at the conclusion of Event #2A was most likely the result of LNAPL being drawn into the well and accumulating above the total fluids pump inlet.

The total hydrocarbons removed during the 72.0 hour MDPE Event #2A, extraction well MW-1, both as liquid and vapor phases was 82.3 gallons.

ADDITIONAL EVENT #2A INFORMATION

- No measurable liquid LNAPL was visible in the sight glass during the course of Event #2A. The collection tank was observed at the conclusion of the event and the LNAPL thickness was measured. The volume of liquid LNAPL recovered during the event was estimated to be 10 gals. As previously noted, Stantec personnel hand-bailed 0.2 gals of LNAPL from well MW-1 following the completion of Event #2A.

- The larger percentage of LNAPL recovery, 87.6%, was the result of the TPH in the recovered well vapors and was burned as IC engine fuel.
- The average TPH concentration during the first 24 hour period was 38,042 parts per million by volume (ppmv). The average TPH concentration during the second 24 hour period was 40,795 ppmv. The average TPH concentration during the third 24 hour period was 42,493 ppmv.
- The maximum TPH concentration reading of 48,220 ppmv occurred at the 5.0 hour mark after the start of Event #2A.
- The increase in the average TPH concentrations during Event #2A suggests a high concentration of petroleum hydrocarbons within the radius of influence of well MW-1.

SUMMARY OF MDPE EVENT #2B- WELL MW-8

- The total time for Event #2B was 72.0 hours. Event #2B was conducted on July 11 through 14, 2017.
- The total liquid volume recovered was 313 gals with no measureable liquid LNAPL recovered.
- Based on the HORIBA® analytical data, total vapor LNAPL burned as IC engine fuel was 40.1 gals, for a total liquid and vapor LNAPL recovery of 40.1 gals, or 0.56 gals per hour.
- The volume of liquid and vapor LNPAL recovered during Event #2B is compared with Event #1B in the table below.

LNAPL Recovery Well MW-8					
		Event #2B		Event #1B	
		Amount	Percent	Amount	Percent
Event Hours		72.0	-	8.0	-
GW Recovery	gals	313	-	45	-
NAPL Recovery					
Liquid	gals	0	0	0	0
Vapor	gals	40.1	100.0	8.1	100.0
Total	gals	40.1	100.0	8.1	100.0
Gallons/Hour		**0.56**	**-**	**1.01**	**-**

- Average HORIBA® analytical data from the influent vapor samples for Event #2B are compared with Event #1B in the table below:

Influent Vapor Data Well MW-8			
Data Element		**Event #2B**	**Event #1B**
TPH- Maximum	ppmv	76,100	36,610
TPH- Average	ppmv	56,674	20,580
TPH- Minimum	ppmv	31,850	2,810
TPH- Initial	ppmv	48,510	2,810
TPH- Final	ppmv	76,100	39,610
CO_2	%	2.24	1.47
CO	%	1.64	0.20
O_2	%	10.5	15.1
H_2S	ppm	0	0

- The Event #2B extraction well induced vacuum and well vapor flow are compared with Event #1B in the table below.

Well Vacuum and Well Vapor Flow Well MW-8			
Data Element		**EV #2B**	**EV #1B**
Well Vacuum- Maximum	"H_2O	150.00	150.00
Well Vacuum- Average	"H_2O	122.88	98.80
Well Vacuum- Minimum	"H_2O	0	20.00
Well Vapor Flow- Maximum	scfm	5.38	46.20
Well Vapor Flow- Average	scfm	4.55	22.70
Well Vapor Flow- Minimum	scfm	3.35	10.09

- The groundwater pump inlet was set at 38.5 ft BTOC. The groundwater pump was cycled on and off during the course of Event #2B. The total liquid volume recovered was 313 gals.
- An LNAPL thickness of 0.03 ft in well MW-8 was measured prior to the start of Event #2B. No measurable LNAPL was detected in well MW-8 at the conclusion of the Event #2B.

The total hydrocarbons removed during the 72.0 hour MDPE Event #2B, extraction well MW-8, both in liquid an vapor phases was 40.1 gallons.

ADDITIONAL EVENT #2B INFORMATION

- No measurable liquid LNAPL was recovered. The quantifiable LNAPL recovery was the result of the TPH in recovered well vapors being burned as IC engine fuel.
- The TPH vapor concentrations increased significantly during Event #2B. The initial reading was 48,510 ppmv, the average was 56,674 ppmv and the final, and maximum, reading was 76,100 ppmv.
- The average TPH concentration during the first 24 hour period was 50,338 ppmv. The average TPH concentration during the second 24 hour period was 56,671 ppmv. The average TPH concentration during the third 24 hour period was 63,841 ppmv.
- The maximum TPH concentration reading of 76,100 ppmv was the last reading of the Event at the 72.0 hour mark.
- The increase of average TPH concentrations during the Event #2B suggests a high concentration of petroleum hydrocarbons within the radius of influence of well MW-8.

METHOD OF CALIBRATION AND CALCULATIONS

The HORIBA® Analytical instrument is calibrated with hexane, carbon monoxide and carbon dioxide. The formula used to calculate the emission rate is:

$$ER = TPH\ (ppmv) \times MW\ (hexane) \times Flow\ Rate\ (scfm) \times 1.58E^{-7} \frac{(min)(lb\ mole)}{(hr)(ppmv)(ft^3)} = lbs/hr$$

INFORMATION INCLUDED WITH REPORT

- Table #1 Summary Well Data
- Table #2 Summary Recovery Data
- Recorded Data
- Photographs of the MDPE System and extraction wells MW-1 and MW-8.

After you have reviewed the report and if you have any questions, please contact me. We appreciate you selecting AcuVac to provide this service.

Sincerely,
ACUVAC REMEDIATION, LLC

Paul D. Faucher
Vice President, Operations

Summary Well Data
Table #1

Event		2A	2B
WELL NO.		**MW-1**	**MW-8**
Total Event Hours		72.0	72.0
Total Depth	ft BGS	32.50	40.00
Well Screen	ft BGS	19.7 – 29.7	25.0 – 40.0
Well Size	in	4.0	2.0
Well Data			
DTGW - Static - Start Event	ft BTOC	23.61	21.99
DTLNAPL - Static - Start Event	ft BTOC	-	21.96
LNAPL	ft BTOC	-	0.03
Hydro-Equivalent- Beginning	ft BTOC	23.61	21.97
DTGW - End Event	ft BTOC	31.12	34.35
DTLNAPL - End Event	ft BTOC	30.87	-
LNAPL	ft BTOC	0.25	-
Hydro-Equivalent- Ending	ft BTOC	30.94	34.35
Extraction Data			
Maximum Extraction Well Vacuum	"H_2O	110.00	150.00
Average Extraction Well Vacuum	"H_2O	104.71	122.88
Minimum Extraction Well Vacuum	"H_2O	95.00	0
Maximum Extraction Well Vapor Flow	scfm	14.87	5.38
Average Extraction Well Vapor Flow	scfm	11.49	4.55
Minimum Extraction Well Vapor Flow	scfm	8.92	3.35
Average GW / LNAPL Pump Rate	gpm	0.14	0.20
Maximum GW / LNAPL Pump Rate	gpm	0.48	0.40
Influent Data			
Maximum TPH	ppmv	48,220	76,100
Average TPH	ppmv	40,444	56,674
Minimum TPH	ppmv	29,330	31,850
Initial TPH	ppmv	45,950	45,510
Final TPH	ppmv	44,260	76,100
Average CO_2	%	2.61	2.24
Average CO	%	0.70	1.64
Average O_2	%	13.4	10.5
Average H_2S	ppm	0	0

Summary Recovery Data
Table #2

Event		2A	2B
WELL NO.		**MW-1**	**MW-8**
Recovery Data- Current Event			
Total Liquid Volume Recovered	gals	207	313
Total Liquid LNAPL Recovered	gals	10	0
Total Liquid LNAPL Recovered / Total Liquid	%	4.8	0
Total Liquid LNAPL Recovered / Total LNAPL	%	12.1	0
Total Vapor LNAPL Recovered	gals	72.3	40.1
Total Vapor LNAPL Recovered / Total LNAPL	%	87.9	100.0
Total Vapor and Liquid LNAPL Recovered	gals	82.3	40.1
Average LNAPL Recovery	gals/hr	1.14	0.56
Total LNAPL Recovered	lbs	576	281
Total Volume of Well Vapors	cu. ft	49,637	19,656
Recovery Data- Cumulative			
Total Liquid Volume Recovered	gals	228	358
Total Liquid LNAPL Recovered	gals	10	0
Total Vapor LNAPL Recovered	gals	84.5	48.2
Total Vapor and Liquid LNAPL Recovered	gals	94.5	48.2
Average LNAPL Recovery	gals/hr	1.18	0.60
Total LNAPL Recovered	lbs	662	337
Total Volume of Well Vapors	cu. ft	58,056	30,547

AcuVac Remediation

OPERATING DATA – EVENT # 3A **PAGE # 1** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/23/17					
		Time	0700	0730	0800	0830	0900	0930
		Hr Meter	8093.0	8093.5	8094.0	8094.5	8095.0	8095.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	125	125	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	10	10	10	10	10	10
	Gas Flow Fuel/Propane	cfh	110	105	105	100	100	100
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	30	30	30	30	45
	Extraction Well Flow	scfm	18.02	18.02	22.52	22.52	22.52	29.55
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	50	52	54	55	57	57
	Barometric Pressure	"Hg	29.70	29.70	29.80	29.80	29.80	29.80
VAPOR / INFLUENT	TPH	ppmv	-	14,400	-	-	18,440	-
	CO_2	%	-	9.72	-	-	9.88	-
	CO	%	-	0	-	-	0	-
	O_2	%	-	6.9	-	-	7.2	-
	H_2S	ppm		2.4	-	-	43.6	-

NOTES

ARRIVED ON SITE AT 0620 HRS. HELD TAILGATE SAFETY MEETING. EVENT STARTED AT 0700 HRS. INITIAL WELL VAC 30" H_2O W/A WVF OF 18.02 SCFM. AT 0800 WVF ↑ 22.52 SCFM. INITIAL TPH CONCENTRATION AT 14,440 PPMV WHICH IS LOWER THAN THE FINAL TPH READING OF EV #2C - 20,210 PPMV 0900 H_2S ↑ 43.6 PPM. WELL VAC ↑ 45 "H_2O AT 0930 RESULTING IN A WVF OF 29.55 SCFM. GW PUMPING STARTED AT APPROX 0715 HRS AFTER THE VACUUM AND FLOW STABALIZED. LIQUID RECOVERY MOSTLY STEADY DURING PERIOD.

RECOVERY	Totalizer	gals	1468.90	1489.30	1503.10	1514.24	1524.48	1534.50
	Pump Rate	gals/min	-	.46	.37	.34	.33	.42
	Total Volume	gals	-	20.40	34.20	45.34	55.58	65.60
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL	-					
	Extraction Well	DTGW	38.62					

NAPL ∅

AcuVac Remediation

OPERATING NOTES - EVENT # 2A **PAGE # 2** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers:** Faucher / Hendley

Date:

NOTES

09/22/17 1000 Hrs. Arrived on site. Positioned the AcuVac system near well MW-1. Gauged well no NAPL present, DTGW 38.62 ft BTOC. TD of well MW-1 is 47.0 ft BGS or 49.0 ft BTOC - 2 ft stick up. Positioned in-well pump at 47 ft BTOC or 2.0 ft above the well bottom.

Connected in-well pump to totalizer flow meter and then to standby collection tank.

Connected the vacuum hose to the AcuVac system and the well manifold.

Performed all safety checks - all ok

9/22/17 1030Hr Secured AcuVac system, departed site

AcuVac Remediation

OPERATING DATA – EVENT # 3A PAGE # 3 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/23/17					
		Time	1000	1030	1100	1130	1200	1230
		Hr Meter	8096.0	8096.5	8097.0	8097.5	8098.0	8098.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900			
	Oil Pressure	psi	50	50	50			
	Water Temp	°F	130	130	135			
	Alternator	Volts	14	14	14			
	Intake Vacuum	"Hg	8	8	8			
	Gas Flow Fuel/Propane	cfh	90	90	90			
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	45	45	45			
	Extraction Well Flow	scfm	30.39	30.39	30.39			
	Influent Vapor Temp.	°F	60	60	60			
	Air Temp	°F	61	63	RAIN 59			
	Barometric Pressure	"Hg	29.80	29.80	29.80			
VAPOR / INFLUENT	TPH	ppmv	-	-	13,900			
	CO_2	%	-	-	7.88			
	CO	%	-	-	0			
	O_2	%	-	-	7.8			
	H_2S	ppm	-	-	18.7			

STOP WORK ISSUED AT 11:06

NOTES

AT 1000 HRS WVF ↑ 3039 SCFM. AT 1045 HRS A FRONT MOVED INTO THE AREA. AT 1100 HRS RAIN STARTED. RAIN INTENSITY INCREASED AT 1105 HRS A STOP WORK WAS ISSUED. DEPARTED SITE AND DROVE TO A LOCATION APPROX 5 MILES CLOSER TO MAIN ROAD (173) WAITED APPROX 45 MIN TO DETERMINE COURSE OF ACTION. STARTED TO RAIN AT THAT LOCATION. DETERMINED RAIN WAS THROUGHOUT THE AREA AND WAS FORECASTED TO LAST UNTIL 1700 HRS. STANTEC REP DETERMINED STOP WORK WAS APPROPRIATE COURSE OF ACTION.

RECOVERY	Totalizer	gals	1547.00	1559.0	1571.0	1572.41		
	Pump Rate	gals/min	.40	.40				
	Total Volume	gals	78.10	90.10	102.10			
	NAPL	% Vol	-	-	-	-		
	NAPL	Gals	-	-	-	-		
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0		
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

OPERATING DATA – EVENT # 3R | PAGE # 1 | ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM | **Project Managers:** Faucher / Hendley

Well # MW-1		Date	9/29/17					
		Time	0700	0730	0800	0830	0900	0930
		Hr Meter	8097.5	8098.0	8098.5	8099.0	8099.5	8100.0
ENGINE / BLOWER	Engine Speed	RPM	2000	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	120	120	120	120	120	120
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	12	12	12	12	12	12
	Gas Flow Fuel/Propane	cfh	130	130	110	110	110	95
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	45	45	45	45	50
	Extraction Well Flow	scfm	20.44	28.70	28.70	29.55	29.55	33.47
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	32	32	34	37	41	46
	Barometric Pressure	"Hg	29.90	29.90	29.90	29.90	29.90	29.90
VAPOR / INFLUENT	TPH	ppmv	–	6720	–	–	13220	–
	CO_2	%	–	9.00	–	–	8.26	–
	CO	%	–	0	–	–	0	–
	O_2	%	–	9.2	–	–	10.3	–
	H_2S	ppm	–	3.8	–	–	6.9	–

NOTES

ARRIVED ON SITE AT 0620 HRS. GAUGED WELL MW-1 DTNAPL 39.03 BTOC, DTGW 39.04, BTOC, NAPL 0.01 FT. IN-WELL PUMP POSITIONED AT 47.0 FT BTOC. INITIAL WELL VAC 30" H_2O W/A WVF OF 20.44 SCFM. WELL VAC ↑ 45" H_2O AT 0830 HRS, WVF ↑ 28.70 SCFM. WELL VAC ↑ 50" H_2O AT 0930 HRS, WVF @ 33.47 SCFM. INITIAL WELL VAPOR SAMPLE LOWER THAN 0900 HR SAMPLE COULD BE A RESULT OF THE LOW AMBIENT AIR TEMP. GW PUMPING STARTED AT APPROX 0715 HRS. INITIAL RECOVERY RATE HIGH DUE TO WATER COLUMN IN WELL, THE DECREASING TO .46 TO .49 GPM. NO MEASURABLE NAPL PRESENT

RECOVERY	Totalizer	gals	1572.41	1595.49	1610.30	1623.70	1636.90	1648.76
	Pump Rate	gals/min	.77	.49	.49	.44	.40	.43
	Total Volume	gals	–	23.08	37.89	51.29	64.49	76.35
	NAPL	% Vol	–	–	–	–	–	–
	NAPL	Gals	–	–	–	–	–	–
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL	39.03					
	Extraction Well	DTGW	39.04					

.01

AcuVac Remediation

OPERATING DATA – EVENT # 38 PAGE # 2 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1		Date	9/24/17					
		Time	1000	1030	1100	1200	1300	1400
		Hr Meter	8100.5	8101.0	8101.5	8102.5	8103.5	8104.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	130	130	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	12	10	10	10	10	10
	Gas Flow Fuel/Propane	cfh	95	90	90	90	85	70
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	50	50	50	58	60	60
	Extraction Well Flow	scfm	33.47	34.31	35.15	39.39	40.06	41.09
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	52	54	57	61	61	64
	Barometric Pressure	"Hg	29.90	29.90	29.90	29.90	29.90	29.90
VAPOR / INFLUENT	TPH	ppmv	-	-	13,870	-	8310	-
	CO_2	%	-	-	5.12	-	4.68	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	12.7	-	13.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

AT 1200 HRS WELL VAC ↑ TO 58" H_2O, WVF ↑ 39.39 SCFM

AT 1300 HRS WELL VAC ↑ TO 60" H_2O, WVF ↑ 40.06, AT 1400 HRS WVF ↑ 41.09

TPH VAPORS ON A DECREASING TREND SINCE 0900 HRS.

GW RECOVERY MOSTLY STEADY DURING PERIOD. NO MEASURABLE NAPL

RECOVERY								
	Totalizer	gals	1661.61	1673.72	1686.72	1711.00	1736.20	1761.30
	Pump Rate	gals/min	.40	.43	.40	.42	.42	.41
	Total Volume	gals	89.20	101.31	114.31	138.59	163.79	188.89
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

OPERATING DATA – EVENT # 3B **PAGE # 3** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1	Date	9/24/17						
	Time	1500	1600	1700				
	Hr Meter	8105.5	8106.5	8107.5				
ENGINE / BLOWER	Engine Speed RPM	1900	1900	1900				
	Oil Pressure psi	50	50	50				
	Water Temp °F	130	130	130				
	Alternator Volts	14	14	14				
	Intake Vacuum "Hg	10	10	10				
	Gas Flow Fuel/Propane cfh	70	70	70				
ATMOSPHERE VACUUM / AIR	Extraction Well Vac. "H_2O	60	60	60				
	Extraction Well Flow scfm	41.09	41.09	41.09				
	Influent Vapor Temp. °F	60	60	60				
	Air Temp °F	66	66	66				
	Barometric Pressure "Hg	29.80	29.80	29.80				
VAPOR / INFLUENT	TPH ppmv	13,120	10,610	-				
	CO_2 %	5.40	4.62	-				
	CO %	0	0	-				
	O_2 %	15.1	15.1	-				
	H_2S ppm	0	0	-				
NOTES	WELL VAC AND WVF STEADY DURING PERIOD. TPH VAPOR CONCENTRATIONS ON A DECREASING TREND DURING PERIOD. GW RECOVERY MOSTLY STEADY DURING PERIOD. AT 1700 HRS EVENT CONCLUDED. GAUGED WELL AND REPLACED THE PUMP IN THE WELL. SECURED THE SITE AND DEPARTED.							
RECOVERY	Totalizer gals	1785.88	1810.40	1831.38				
	Pump Rate gals/min	.41	.35	-				
	Total Volume gals	213.47	237.99	258.97				
	NAPL % Vol	—	-	-				
	NAPL Gals	-	-	-				
	GW Depression ft	-8.0	-8.0	-8.0				
	Extraction Well DTNAPL							
	Extraction Well DTGW							

AcuVac Remediation

OPERATING DATA – EVENT # 3C **PAGE # 1** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/25/17					
		Time	0645	0715	0745	0815	0845	0915
		Hr Meter	8108.0	8108.5	8109.0	8109.5	8110.0	8110.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	120	120	126	120	120	125
	Alternator	Volts	14	14	14	14	10	10
	Intake Vacuum	"Hg	16	16	16	16	10	10
	Gas Flow Fuel/Propane	cfh	140	130	130	100	95	55
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	40	60	64	64	64
	Extraction Well Flow	scfm	21.66	25.55	31.23	43.35	43.35	43.35
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	32	34	34	36	36	40
	Barometric Pressure	"Hg	30.00	30.00	30.00	30.00	30.00	30.00
VAPOR / INFLUENT	TPH	ppmv	-	-	6120	-	7020	-
	CO_2	%	-	-	5.24	-	5.72	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	13.8	-	14.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

ARRIVED ON SITE AT 0615 HRS. GAUGED WELL DTNAPL 39.24 FT BTOC, DTGW 39.25 FT BTOC, .01 FT NAPL. IN-WELL POSITIONED AT 42.00 FT BTOC. - SAME AS EV #2B. WELL VAC STARTED AT 0645 HRS 30" H_2O, WVF 21.66 SCFM. WELL VAC ON INCREASING TREND. MAX WELL VAC 64" H_2O, WVF 43.35 SCFM. GW PUMPING STARTED AT 0815 DUE TO FROZEN HOSES. THAWED HOSES AS SOON AS POSSIBLE. INITIAL WELL VAPOR SAMPLE TPH CONCENTRATION CONSISTENT W/EV #3A.

RECOVERY

Totalizer	gals	1831.42	1831.42	1831.42	1831.42	1855.80	1872.71
Pump Rate	gals/min	-	-	-	.81	.56	.50
Total Volume	gals	-	-	-	-	24.38	41.29
NAPL	% Vol	-	-	-	-	-	-
NAPL	Gals	-	-	-	-	-	-
GW Depression	ft	-	-	-	-7.5	-7.5	-7.5
Extraction Well	DTNAPL	39.24					
Extraction Well	DTGW	39.25					

NAPL .01

AcuVac Remediation

OPERATING DATA – EVENT # 3C **PAGE # 2** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/25/17					
		Time	0945	1015	1045	1145	1245	1345
		Hr Meter	8111.0	8111.5	8112.0	8113.0	8114.0	8115.0
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	125	125	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	10	10	10	12	12	12
	Gas Flow Fuel/Propane	cfh	90	90	85	85	85	85
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	64	64	64	64	64	64
	Extraction Well Flow	scfm	43.35	43.76	45.19	45.19	46.02	46.02
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	48	53	54.0	57	61	63
	Barometric Pressure	"Hg	30.00	30.00	30.00	30.00	30.00	30.00
VAPOR / INFLUENT	TPH	ppmv	-	-	8760	-	12,060	-
	CO_2	%	-	-	4.80	-	5.60	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	15.1	-	14.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

WELL VAC STEADY DURING PERIOD. WVF ON AN INCREASING TREND DURING PERIOD. TPH CONCENTRATIONS OF WELL VAPORS CONTINUE ON AN INCREASING TREND. GW RECOVERY RATE MOSTLY STEADY BETWEEN .39 GPM AND .48 GPM. NO MEASURABLE NAPL PRESENT.

RECOVERY	Totalizer	gals	1887.70	1902.20	1916.23	1943.60	1967.23	1991.30
	Pump Rate	gals/min	.48	.47	.46	.39	.40	.40
	Total Volume	gals	56.28	70.78	84.81	112.18	135.81	159.88
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

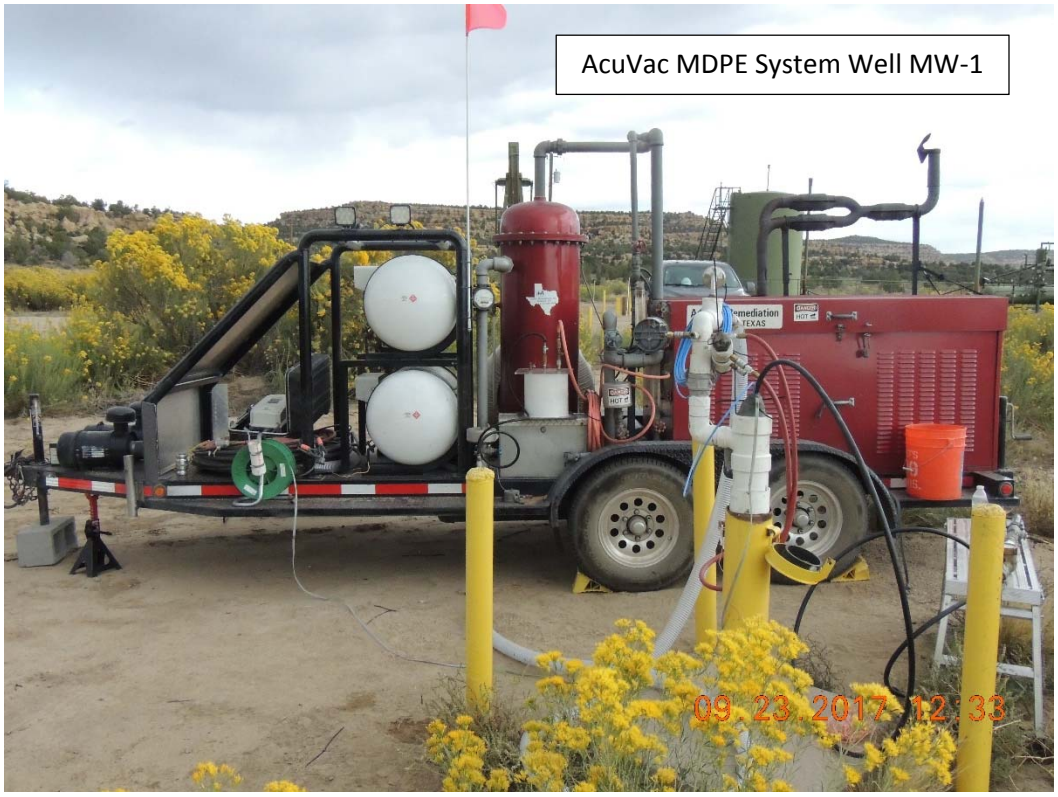
OPERATING DATA – EVENT # 3C PAGE # 3 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1		Date	9/25/17					
		Time	1445	1545	1645			
		Hr Meter	8116.0	8117.0	8118.0			
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900			
	Oil Pressure	psi	50	50	50			
	Water Temp	°F	140	140	140			
	Alternator	Volts	14	14	14			
	Intake Vacuum	"Hg	12	12	12			
	Gas Flow Fuel/Propane	cfh	85	85	85			
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	64	64	64			
	Extraction Well Flow	scfm	46.02	46.02	46.02			
	Influent Vapor Temp.	°F	60	60	60			
	Air Temp	°F	66	68	68			
	Barometric Pressure	"Hg	29.90	29.80	29.80			
VAPOR / INFLUENT	TPH	ppmv	12,300	11,710	–			
	CO_2	%	5.20	4.16	–			
	CO	%	0	0	–			
	O_2	%	15.5	16.3	–			
	H_2S	ppm	0	0	–			
NOTES	WELL VAC AND WVF STEADY DURING PERIOD AT 64"H_2O AND 46.02 SCFM, RESPECTIVELY TPH VAPOR CONCENTRATIONS ↑ TO 12,300 PPMV AT 1445 HRS AND THEN ↓ TO 11,710 AT 1545 HRS.							
RECOVERY	Totalizer	gals	2015.0	2039.10	2059.17			
	Pump Rate	gals/min	183.88	207.68	227.75			
	Total Volume	gals	.40	.33	–			
	NAPL	% Vol	–	–	–			
	NAPL	Gals	–	–	–			
	GW Depression	ft	-7.5	-7.5	-7.5			
	Extraction Well	DTNAPL			47.45			
	Extraction Well	DTGW			42.49			

NAPL .04

JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM

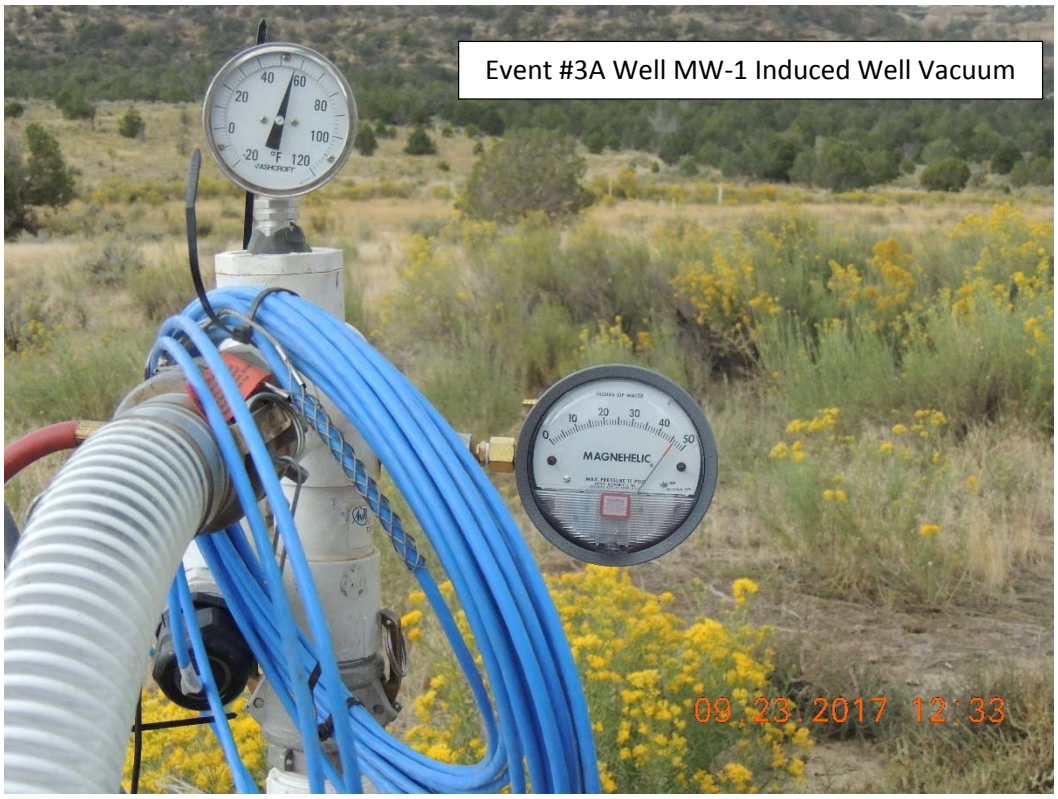


AcuVac MDPE System Well MW-1

AcuVac MDPE System Well MW-1

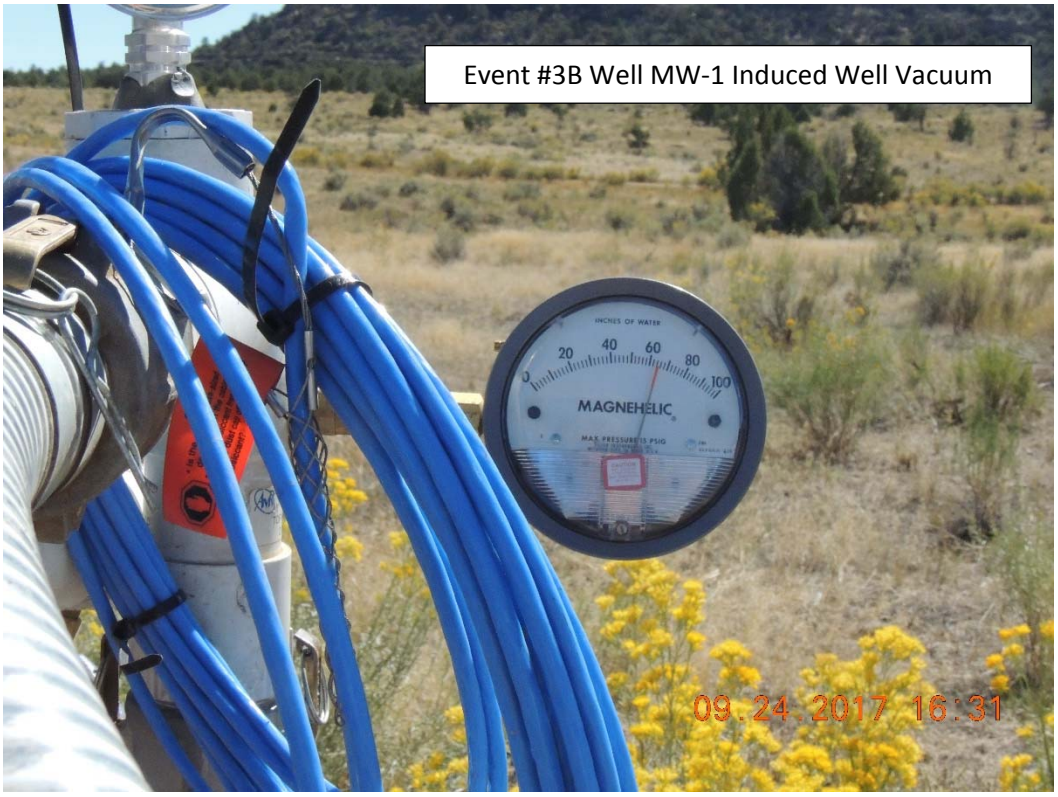
JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM

Well MW-1 and Standby Collection Tank



Event #3A Well MW-1 Induced Well Vacuum

JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM



AcuVac Remediation

OPERATING DATA – EVENT # 3A **PAGE # 1** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/23/17					
		Time	0700	0730	0800	0830	0900	0930
		Hr Meter	8093.0	8093.5	8094.0	8094.5	8095.0	8095.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	125	125	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	10	10	10	10	10	10
	Gas Flow Fuel/Propane	cfh	110	105	105	100	100	100
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	30	30	30	30	45
	Extraction Well Flow	scfm	18.02	18.02	22.52	22.52	22.52	29.55
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	50	52	54	55	57	57
	Barometric Pressure	"Hg	29.70	29.70	29.80	29.80	29.80	29.80
VAPOR / INFLUENT	TPH	ppmv	-	14,400	-	-	18,440	-
	CO_2	%	-	9.72	-	-	9.88	-
	CO	%	-	0	-	-	0	-
	O_2	%	-	6.9	-	-	7.2	-
	H_2S	ppm		2.4	-	-	43.6	-

NOTES

ARRIVED ON SITE AT 0620 HRS. HELD TAILGATE SAFETY MEETING. EVENT STARTED AT 0700 HRS. INITIAL WELL VAC 30" H_2O W/A WVF OF 18.02 SCFM. AT 0800 WVF ↑ 22.52 SCFM. INITIAL TPH CONCENTRATION AT 14,440 PPMV WHICH IS LOWER THAN THE FINAL TPH READING OF EV #2C - 20,210 PPMV 0900 H_2S ↑ 43.6 PPM. WELL VAC ↑ 45 "H_2O AT 0930 RESULTING IN A WVF OF 29.55 SCFM. GW PUMPING STARTED AT APPROX 0715 HRS AFTER THE VACUUM AND FLOW STABALIZED. LIQUID RECOVERY MOSTLY STEADY DURING PERIOD.

RECOVERY	Totalizer	gals	1468.90	1489.30	1503.10	1514.24	1524.48	1534.50
	Pump Rate	gals/min	-	.46	.37	.34	.33	.42
	Total Volume	gals	-	20.40	34.20	45.34	55.58	65.60
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL	-					
	Extraction Well	DTGW	38.62					

NAPL ∅

AcuVac Remediation

OPERATING NOTES - EVENT # 2A **PAGE # 2** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers:** Faucher / Hendley

Date:

NOTES

09/22/17 1000 Hrs. Arrived on site. Positioned the AcuVac system near well MW-1. Gauged well no NAPL present, DTGW 38.62 ft BTOC. TD of well MW-1 is 47.0 ft BGS or 49.0 ft BTOC - 2 ft stick up. Positioned in-well pump at 47 ft BTOC or 2.0 ft above the well bottom.

Connected in-well pump to totalizer flow meter and then to standby collection tank.

Connected the vacuum hose to the AcuVac system and the well manifold.

Performed all safety checks - all ok

9/22/17 1030Hr Secured AcuVac system, departed site

AcuVac Remediation

OPERATING DATA – EVENT # 3A PAGE # 3 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/23/17					
		Time	1000	1030	1100	1130	1200	1230
		Hr Meter	8096.0	8096.5	8097.0	8097.5	8098.0	8098.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900			
	Oil Pressure	psi	50	50	50			
	Water Temp	°F	130	130	135			
	Alternator	Volts	14	14	14			
	Intake Vacuum	"Hg	8	8	8			
	Gas Flow Fuel/Propane	cfh	90	90	90			
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	45	45	45			
	Extraction Well Flow	scfm	30.39	30.39	30.39			
	Influent Vapor Temp.	°F	60	60	60			
	Air Temp	°F	61	63	RAIN 59			
	Barometric Pressure	"Hg	29.80	29.80	29.80			
VAPOR / INFLUENT	TPH	ppmv	-	-	13,900			
	CO_2	%	-	-	7.88			
	CO	%	-	-	0			
	O_2	%	-	-	7.8			
	H_2S	ppm	-	-	18.7			

STOP WORK ISSUED AT 11:06

NOTES

AT 1000 HRS WVF ↑ 3039 SCFM. AT 1045 HRS A FRONT MOVED INTO THE AREA. AT 1100 HRS RAIN STARTED. RAIN INTENSITY INCREASED AT 1105 HRS A STOP WORK WAS ISSUED. DEPARTED SITE AND DROVE TO A LOCATION APPROX 5 MILES CLOSER TO MAIN ROAD (173) WAITED APPROX 45 MIN TO DETERMINE COURSE OF ACTION. STARTED TO RAIN AT THAT LOCATION. DETERMINED RAIN WAS THROUGHOUT THE AREA AND WAS FORECASTED TO LAST UNTIL 1700 HRS. STANTEC REP DETERMINED STOP WORK WAS APPROPRIATE COURSE OF ACTION.

RECOVERY	Totalizer	gals	1547.00	1559.0	1571.0	1572.41		
	Pump Rate	gals/min	.40	.40				
	Total Volume	gals	78.10	90.10	102.10			
	NAPL	% Vol	-	-	-	-		
	NAPL	Gals	-	-	-	-		
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0		
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

OPERATING DATA – EVENT # 3R | PAGE # 1 | ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM | **Project Managers:** Faucher / Hendley

Well # MW-1		Date	9/29/17					
		Time	0700	0730	0800	0830	0900	0930
		Hr Meter	8097.5	8098.0	8098.5	8099.0	8099.5	8100.0
ENGINE / BLOWER	Engine Speed	RPM	2000	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	120	120	120	120	120	120
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	12	12	12	12	12	12
	Gas Flow Fuel/Propane	cfh	130	130	110	110	110	95
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	45	45	45	45	50
	Extraction Well Flow	scfm	20.44	28.70	28.70	29.55	29.55	33.47
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	32	32	34	37	41	46
	Barometric Pressure	"Hg	29.90	29.90	29.90	29.90	29.90	29.90
VAPOR / INFLUENT	TPH	ppmv	–	6720	–	–	13220	–
	CO_2	%	–	9.00	–	–	8.26	–
	CO	%	–	0	–	–	0	–
	O_2	%	–	9.2	–	–	10.3	–
	H_2S	ppm	–	3.8	–	–	6.9	–

NOTES

ARRIVED ON SITE AT 0620 HRS. GAUGED WELL MW-1 DTNAPL 39.03 BTOC, DTGW 39.04, BTOC, NAPL 0.01 FT. IN-WELL PUMP POSITIONED AT 47.0 FT BTOC. INITIAL WELL VAC 30" H_2O W/A WVF OF 20.44 SCFM. WELL VAC ↑ 45" H_2O AT 0830 HRS, WVF ↑ 28.70 SCFM. WELL VAC ↑ 50" H_2O AT 0930 HRS, WVF @ 33.47 SCFM. INITIAL WELL VAPOR SAMPLE LOWER THAN 0900 HR SAMPLE COULD BE A RESULT OF THE LOW AMBIENT AIR TEMP. GW PUMPING STARTED AT APPROX 0715 HRS. INITIAL RECOVERY RATE HIGH DUE TO WATER COLUMN IN WELL, THE DECREASING TO .46 TO .49 GPM. NO MEASURABLE NAPL PRESENT

RECOVERY	Totalizer	gals	1572.41	1595.49	1610.30	1623.70	1636.90	1648.76
	Pump Rate	gals/min	.77	.49	.49	.44	.40	.43
	Total Volume	gals	–	23.08	37.89	51.29	64.49	76.35
	NAPL	% Vol	–	–	–	–	–	–
	NAPL	Gals	–	–	–	–	–	–
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL	39.03					
	Extraction Well	DTGW	39.04					

.01

AcuVac Remediation

OPERATING DATA – EVENT # 38 PAGE # 2 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1		Date	9/24/17					
		Time	1000	1030	1100	1200	1300	1400
		Hr Meter	8100.5	8101.0	8101.5	8102.5	8103.5	8104.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	130	130	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	12	10	10	10	10	10
	Gas Flow Fuel/Propane	cfh	95	90	90	90	85	70
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	50	50	50	58	60	60
	Extraction Well Flow	scfm	33.47	34.31	35.15	39.39	40.06	41.09
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	52	54	57	61	61	64
	Barometric Pressure	"Hg	29.90	29.90	29.90	29.90	29.90	29.90
VAPOR / INFLUENT	TPH	ppmv	-	-	13,870	-	8310	-
	CO_2	%	-	-	5.12	-	4.68	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	12.7	-	13.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

AT 1200 HRS WELL VAC ↑ TO 58" H_2O, WVF ↑ 39.39 SCFM

AT 1300 HRS WELL VAC ↑ TO 60" H_2O, WVF ↑ 40.06, AT 1400 HRS WVF ↑ 41.09

TPH VAPORS ON A DECREASING TREND SINCE 0900 HRS.

GW RECOVERY MOSTLY STEADY DURING PERIOD. NO MEASURABLE NAPL

RECOVERY								
	Totalizer	gals	1661.61	1673.72	1686.72	1711.00	1736.20	1761.30
	Pump Rate	gals/min	.40	.43	.40	.42	.42	.41
	Total Volume	gals	89.20	101.31	114.31	138.59	163.79	188.89
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-8.0	-8.0	-8.0	-8.0	-8.0	-8.0
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

OPERATING DATA – EVENT # 3B **PAGE # 3** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1	Date	9/24/17						
	Time	1500	1600	1700				
	Hr Meter	8105.5	8106.5	8107.5				
ENGINE / BLOWER	Engine Speed RPM	1900	1900	1900				
	Oil Pressure psi	50	50	50				
	Water Temp °F	130	130	130				
	Alternator Volts	14	14	14				
	Intake Vacuum "Hg	10	10	10				
	Gas Flow Fuel/Propane cfh	70	70	70				
ATMOSPHERE VACUUM / AIR	Extraction Well Vac. "H_2O	60	60	60				
	Extraction Well Flow scfm	41.09	41.09	41.09				
	Influent Vapor Temp. °F	60	60	60				
	Air Temp °F	66	66	66				
	Barometric Pressure "Hg	29.80	29.80	29.80				
VAPOR / INFLUENT	TPH ppmv	13,120	10,610	-				
	CO_2 %	5.40	4.62	-				
	CO %	0	0	-				
	O_2 %	15.1	15.1	-				
	H_2S ppm	0	0	-				
NOTES	WELL VAC AND WVF STEADY DURING PERIOD. TPH VAPOR CONCENTRATIONS ON A DECREASING TREND DURING PERIOD. GW RECOVERY MOSTLY STEADY DURING PERIOD. AT 1700 HRS EVENT CONCLUDED. GAUGED WELL AND REPLACED THE PUMP IN THE WELL. SECURED THE SITE AND DEPARTED.							
RECOVERY	Totalizer gals	1785.88	1810.40	1831.38				
	Pump Rate gals/min	.41	.35	-				
	Total Volume gals	213.47	237.99	258.97				
	NAPL % Vol	—	-	-				
	NAPL Gals	-	-	-				
	GW Depression ft	-8.0	-8.0	-8.0				
	Extraction Well DTNAPL							
	Extraction Well DTGW							

AcuVac Remediation

OPERATING DATA – EVENT # 3C **PAGE # 1** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/25/17					
		Time	0645	0715	0745	0815	0845	0915
		Hr Meter	8108.0	8108.5	8109.0	8109.5	8110.0	8110.5
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	120	120	126	120	120	125
	Alternator	Volts	14	14	14	14	10	10
	Intake Vacuum	"Hg	16	16	16	16	10	10
	Gas Flow Fuel/Propane	cfh	140	130	130	100	95	55
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	30	40	60	64	64	64
	Extraction Well Flow	scfm	21.66	25.55	31.23	43.35	43.35	43.35
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	32	34	34	36	36	40
	Barometric Pressure	"Hg	30.00	30.00	30.00	30.00	30.00	30.00
VAPOR / INFLUENT	TPH	ppmv	-	-	6120	-	7020	-
	CO_2	%	-	-	5.24	-	5.72	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	13.8	-	14.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

ARRIVED ON SITE AT 0615 HRS. GAUGED WELL DTNAPL 39.24 FT BTOC, DTGW 39.25 FT BTOC, .01 FT NAPL. IN-WELL POSITIONED AT 42.00 FT BTOC. - SAME AS EV #2B. WELL VAC STARTED AT 0645 HRS 30" H_2O, WVF 21.66 SCFM. WELL VAC ON INCREASING TREND. MAX WELL VAC 64" H_2O, WVF 43.35 SCFM. GW PUMPING STARTED AT 0815 DUE TO FROZEN HOSES. THAWED HOSES AS SOON AS POSSIBLE. INITIAL WELL VAPOR SAMPLE TPH CONCENTRATION CONSISTENT W/EV #3A.

RECOVERY

Totalizer	gals	1831.42	1831.42	1831.42	1831.42	1855.80	1872.71
Pump Rate	gals/min	-	-	-	.81	.56	.50
Total Volume	gals	-	-	-	-	24.38	41.29
NAPL	% Vol	-	-	-	-	-	-
NAPL	Gals	-	-	-	-	-	-
GW Depression	ft	-	-	-	-7.5	-7.5	-7.5
Extraction Well	DTNAPL	39.24					
Extraction Well	DTGW	39.25					

NAPL .01

AcuVac Remediation

OPERATING DATA – EVENT # 3C **PAGE # 2** **ACUVAC MDP SYSTEM**

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1

		Date	9/25/17					
		Time	0945	1015	1045	1145	1245	1345
		Hr Meter	8111.0	8111.5	8112.0	8113.0	8114.0	8115.0
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900	1900	1900	1900
	Oil Pressure	psi	50	50	50	50	50	50
	Water Temp	°F	125	125	125	130	130	130
	Alternator	Volts	14	14	14	14	14	14
	Intake Vacuum	"Hg	10	10	10	12	12	12
	Gas Flow Fuel/Propane	cfh	90	90	85	85	85	85
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	64	64	64	64	64	64
	Extraction Well Flow	scfm	43.35	43.76	45.19	45.19	46.02	46.02
	Influent Vapor Temp.	°F	60	60	60	60	60	60
	Air Temp	°F	48	53	54.0	57	61	63
	Barometric Pressure	"Hg	30.00	30.00	30.00	30.00	30.00	30.00
VAPOR / INFLUENT	TPH	ppmv	-	-	8760	-	12,060	-
	CO_2	%	-	-	4.80	-	5.60	-
	CO	%	-	-	0	-	0	-
	O_2	%	-	-	15.1	-	14.5	-
	H_2S	ppm	-	-	0	-	0	-

NOTES

WELL VAC STEADY DURING PERIOD. WVF ON AN INCREASING TREND DURING PERIOD. TPH CONCENTRATIONS OF WELL VAPORS CONTINUE ON AN INCREASING TREND. GW RECOVERY RATE MOSTLY STEADY BETWEEN .39 GPM AND .48 GPM. NO MEASURABLE NAPL PRESENT.

RECOVERY	Totalizer	gals	1887.70	1902.20	1916.23	1943.60	1967.23	1991.30
	Pump Rate	gals/min	.48	.47	.46	.39	.40	.40
	Total Volume	gals	56.28	70.78	84.81	112.18	135.81	159.88
	NAPL	% Vol	-	-	-	-	-	-
	NAPL	Gals	-	-	-	-	-	-
	GW Depression	ft	-7.5	-7.5	-7.5	-7.5	-7.5	-7.5
	Extraction Well	DTNAPL						
	Extraction Well	DTGW						

AcuVac Remediation

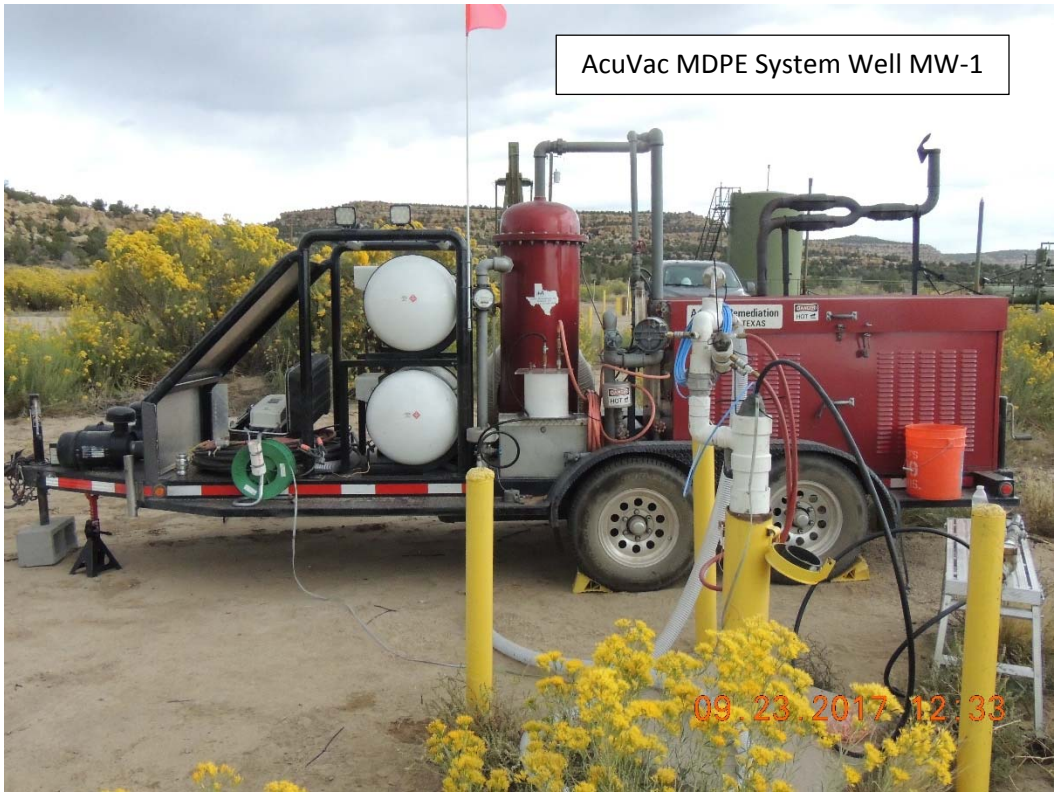
OPERATING DATA – EVENT # 3C PAGE # 3 ACUVAC MDP SYSTEM

Location: Johnston Federal #6A, San Juan County, NM **Project Managers: Faucher / Hendley**

Well # MW-1		Date	9/25/17					
		Time	1445	1545	1645			
		Hr Meter	8116.0	8117.0	8118.0			
ENGINE / BLOWER	Engine Speed	RPM	1900	1900	1900			
	Oil Pressure	psi	50	50	50			
	Water Temp	°F	140	140	140			
	Alternator	Volts	14	14	14			
	Intake Vacuum	"Hg	12	12	12			
	Gas Flow Fuel/Propane	cfh	85	85	85			
ATMOSPHERE VACUUM / AIR	Extraction Well Vac.	"H_2O	64	64	64			
	Extraction Well Flow	scfm	46.02	46.02	46.02			
	Influent Vapor Temp.	°F	60	60	60			
	Air Temp	°F	66	68	68			
	Barometric Pressure	"Hg	29.90	29.80	29.80			
VAPOR / INFLUENT	TPH	ppmv	12,300	11,710	–			
	CO_2	%	5.20	4.16	–			
	CO	%	0	0	–			
	O_2	%	15.5	16.3	–			
	H_2S	ppm	0	0	–			
NOTES	WELL VAC AND WVF STEADY DURING PERIOD AT 64"H_2O AND 46.02 SCFM, RESPECTIVELY TPH VAPOR CONCENTRATIONS ↑ TO 12,300 PPMV AT 1445 HRS AND THEN ↓ TO 11,710 AT 1545 HRS.							
RECOVERY	Totalizer	gals	2015.0	2039.10	2059.17			
	Pump Rate	gals/min	183.88	207.68	227.75			
	Total Volume	gals	.40	.33	–			
	NAPL	% Vol	–	–	–			
	NAPL	Gals	–	–	–			
	GW Depression	ft	-7.5	-7.5	-7.5			
	Extraction Well	DTNAPL			47.45			
	Extraction Well	DTGW			42.49			

NAPL .04

JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM

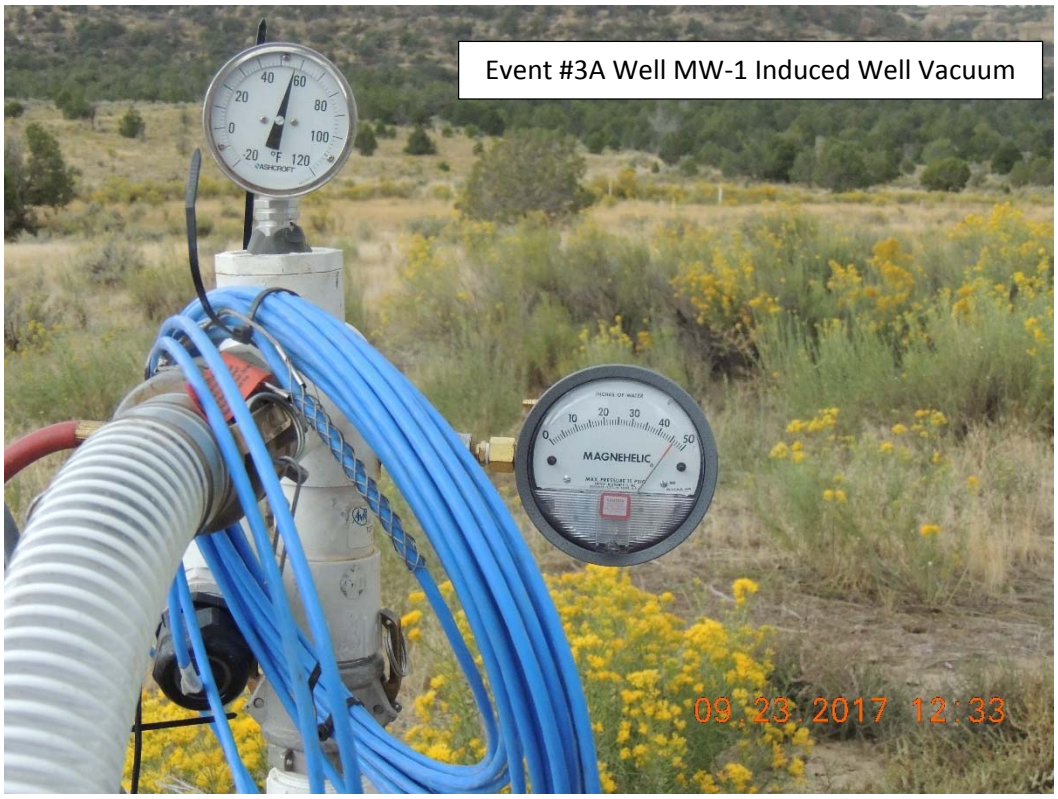


AcuVac MDPE System Well MW-1

AcuVac MDPE System Well MW-1

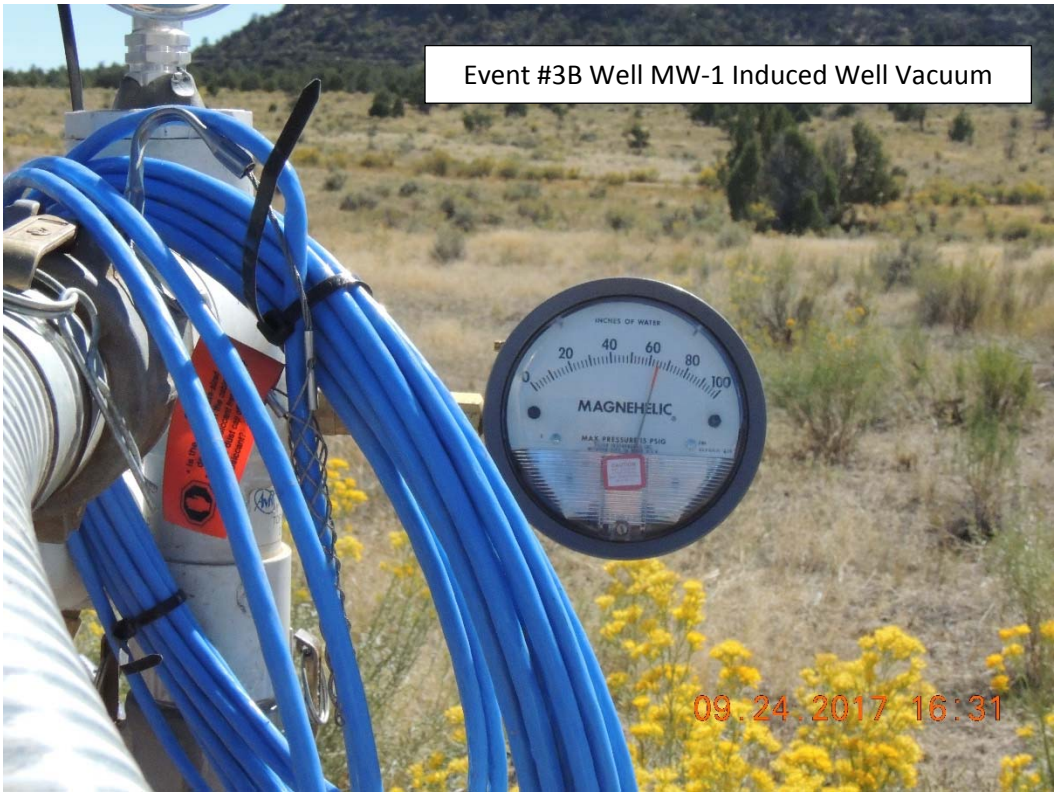
JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM

Well MW-1 and Standby Collection Tank



Event #3A Well MW-1 Induced Well Vacuum

JOHNSTON FEDERAL #6A
SAN JUAN COUNTY, NM



APPENDIX F

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: 400-139216-1
Client Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

For:
Stantec Consulting Services Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
6/22/2017 11:15:50 AM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

Carol Webb, Project Manager II
(850)471-6250
carol.webb@testamericainc.com

Table of Contents

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Job ID: 400-139216-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-139216-1

Comments
No additional comments.

Receipt
The samples were received on 6/13/2017 8:53 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3º C.

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

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

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-2 — Lab Sample ID: 400-139216-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-139216-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	30		2.0		ug/L	2		8021B	Total/NA
Ethylbenzene	400		2.0		ug/L	2		8021B	Total/NA
Xylenes, Total	91		10		ug/L	2		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-139216-3

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 400-139216-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	220		20		ug/L	20		8021B	Total/NA
Ethylbenzene	22		20		ug/L	20		8021B	Total/NA
Toluene	260		100		ug/L	20		8021B	Total/NA
Xylenes, Total	2300		100		ug/L	20		8021B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 400-139216-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1100		20		ug/L	20		8021B	Total/NA
Ethylbenzene	1200		20		ug/L	20		8021B	Total/NA
Toluene	4500		100		ug/L	20		8021B	Total/NA
Xylenes, Total	10000		100		ug/L	20		8021B	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 400-139216-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	920		20		ug/L	20		8021B	Total/NA
Ethylbenzene	1600		20		ug/L	20		8021B	Total/NA
Toluene	1300		100		ug/L	20		8021B	Total/NA
Xylenes, Total	10000		100		ug/L	20		8021B	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 400-139216-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	150		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	130		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	66		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 400-139216-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1600		50		ug/L	50		8021B	Total/NA
Ethylbenzene	1800		50		ug/L	50		8021B	Total/NA
Toluene	4900		250		ug/L	50		8021B	Total/NA
Xylenes, Total	17000		250		ug/L	50		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-11 — Lab Sample ID: 400-139216-9

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	4000		50		ug/L	50		8021B	Total/NA
Ethylbenzene	1400		50		ug/L	50		8021B	Total/NA
Toluene	12000		250		ug/L	50		8021B	Total/NA
Xylenes, Total	13000		250		ug/L	50		8021B	Total/NA

Client Sample ID: MW-12 — Lab Sample ID: 400-139216-10

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-139216-11

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-139216-1	MW-2	Water	06/10/17 13:00	06/13/17 08:53
400-139216-2	MW-3	Water	06/10/17 13:20	06/13/17 08:53
400-139216-3	MW-4	Water	06/10/17 12:50	06/13/17 08:53
400-139216-4	MW-5	Water	06/10/17 14:00	06/13/17 08:53
400-139216-5	MW-6	Water	06/10/17 13:50	06/13/17 08:53
400-139216-6	MW-7	Water	06/10/17 13:45	06/13/17 08:53
400-139216-7	MW-9	Water	06/10/17 13:35	06/13/17 08:53
400-139216-8	MW-10	Water	06/10/17 14:10	06/13/17 08:53
400-139216-9	MW-11	Water	06/10/17 14:05	06/13/17 08:53
400-139216-10	MW-12	Water	06/10/17 12:40	06/13/17 08:53
400-139216-11	TRIP BLANK	Water	06/10/17 12:30	06/13/17 08:53

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-2
Date Collected: 06/10/17 13:00
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-1
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			06/15/17 19:48	1
Ethylbenzene	<1.0		1.0		ug/L			06/15/17 19:48	1
Toluene	<5.0		5.0		ug/L			06/15/17 19:48	1
Xylenes, Total	<5.0		5.0		ug/L			06/15/17 19:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*06/15/17 19:48*	*1*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-3
Date Collected: 06/10/17 13:20
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**30**		2.0		ug/L			06/15/17 20:17	2
Ethylbenzene	**400**		2.0		ug/L			06/15/17 20:17	2
Toluene	<10		10		ug/L			06/15/17 20:17	2
Xylenes, Total	**91**		10		ug/L			06/15/17 20:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*90*		*78 - 124*		*06/15/17 20:17*	*2*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-4
Date Collected: 06/10/17 12:50
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-3
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			06/15/17 20:43	1
Ethylbenzene	<1.0		1.0		ug/L			06/15/17 20:43	1
Toluene	<5.0		5.0		ug/L			06/15/17 20:43	1
Xylenes, Total	<5.0		5.0		ug/L			06/15/17 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*06/15/17 20:43*	*1*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-5
Date Collected: 06/10/17 14:00
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	220		20		ug/L			06/15/17 21:09	20
Ethylbenzene	22		20		ug/L			06/15/17 21:09	20
Toluene	260		100		ug/L			06/15/17 21:09	20
Xylenes, Total	2300		100		ug/L			06/15/17 21:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/15/17 21:09*	*20*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-6
Date Collected: 06/10/17 13:50
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1100		20		ug/L			06/15/17 21:34	20
Ethylbenzene	1200		20		ug/L			06/15/17 21:34	20
Toluene	4500		100		ug/L			06/15/17 21:34	20
Xylenes, Total	10000		100		ug/L			06/15/17 21:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*06/15/17 21:34*	*20*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-7
Date Collected: 06/10/17 13:45
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	920		20		ug/L			06/15/17 22:00	20
Ethylbenzene	1600		20		ug/L			06/15/17 22:00	20
Toluene	1300		100		ug/L			06/15/17 22:00	20
Xylenes, Total	10000		100		ug/L			06/15/17 22:00	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/15/17 22:00*	*20*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-9
Date Collected: 06/10/17 13:35
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-7
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**150**		1.0		ug/L			06/19/17 23:59	1
Ethylbenzene	**130**		1.0		ug/L			06/19/17 23:59	1
Toluene	<5.0		5.0		ug/L			06/19/17 23:59	1
Xylenes, Total	**66**		5.0		ug/L			06/19/17 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*06/19/17 23:59*	*1*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-10
Date Collected: 06/10/17 14:10
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-8
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1600		50		ug/L			06/15/17 23:46	50
Ethylbenzene	1800		50		ug/L			06/15/17 23:46	50
Toluene	4900		250		ug/L			06/15/17 23:46	50
Xylenes, Total	17000		250		ug/L			06/15/17 23:46	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/15/17 23:46*	*50*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-11
Date Collected: 06/10/17 14:05
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-9
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4000		50		ug/L			06/16/17 00:12	50
Ethylbenzene	1400		50		ug/L			06/16/17 00:12	50
Toluene	12000		250		ug/L			06/16/17 00:12	50
Xylenes, Total	13000		250		ug/L			06/16/17 00:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*06/16/17 00:12*	*50*

Client Sample ID: MW-12
Lab Sample ID: 400-139216-10
Date Collected: 06/10/17 12:40
Matrix: Water
Date Received: 06/13/17 08:53

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			06/16/17 00:38	1
Ethylbenzene	<1.0		1.0		ug/L			06/16/17 00:38	1
Toluene	<5.0		5.0		ug/L			06/16/17 00:38	1
Xylenes, Total	<5.0		5.0		ug/L			06/16/17 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*06/16/17 00:38*	*1*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: TRIP BLANK
Date Collected: 06/10/17 12:30
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-11
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			06/16/17 01:03	1
Ethylbenzene	<1.0		1.0		ug/L			06/16/17 01:03	1
Toluene	<5.0		5.0		ug/L			06/16/17 01:03	1
Xylenes, Total	<5.0		5.0		ug/L			06/16/17 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*06/16/17 01:03*	*1*

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

GC VOA

Analysis Batch: 357175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139216-1	MW-2	Total/NA	Water	8021B	
400-139216-2	MW-3	Total/NA	Water	8021B	
400-139216-3	MW-4	Total/NA	Water	8021B	
400-139216-4	MW-5	Total/NA	Water	8021B	
400-139216-5	MW-6	Total/NA	Water	8021B	
400-139216-6	MW-7	Total/NA	Water	8021B	
400-139216-8	MW-10	Total/NA	Water	8021B	
400-139216-9	MW-11	Total/NA	Water	8021B	
400-139216-10	MW-12	Total/NA	Water	8021B	
400-139216-11	TRIP BLANK	Total/NA	Water	8021B	
MB 400-357175/2	Method Blank	Total/NA	Water	8021B	
LCS 400-357175/1001	Lab Control Sample	Total/NA	Water	8021B	
400-139063-A-6 MS	Matrix Spike	Total/NA	Water	8021B	
400-139063-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 357549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139216-7	MW-9	Total/NA	Water	8021B	
MB 400-357549/4	Method Blank	Total/NA	Water	8021B	
LCS 400-357549/1003	Lab Control Sample	Total/NA	Water	8021B	
400-139224-A-3 MS	Matrix Spike	Total/NA	Water	8021B	
400-139224-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-357175/2
Matrix: Water
Analysis Batch: 357175

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			06/15/17 17:50	1
Ethylbenzene	<1.0		1.0		ug/L			06/15/17 17:50	1
Toluene	<5.0		5.0		ug/L			06/15/17 17:50	1
Xylenes, Total	<5.0		5.0		ug/L			06/15/17 17:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/15/17 17:50*	*1*

Lab Sample ID: LCS 400-357175/1001
Matrix: Water
Analysis Batch: 357175

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	45.9		ug/L		92	85 - 115		
Ethylbenzene			50.0	45.1		ug/L		90	85 - 115		
Toluene			50.0	46.0		ug/L		92	85 - 115		
Xylenes, Total			150	132		ug/L		88	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*

Lab Sample ID: 400-139063-A-6 MS
Matrix: Water
Analysis Batch: 357175

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	1.4		50.0	56.3		ug/L		110	44 - 150		
Ethylbenzene	<1.0		50.0	56.2		ug/L		112	70 - 142		
Toluene	<5.0		50.0	55.8		ug/L		112	69 - 136		
Xylenes, Total	<5.0		150	170		ug/L		111	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*

Lab Sample ID: 400-139063-A-6 MSD
Matrix: Water
Analysis Batch: 357175

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	1.4		50.0	59.4		ug/L		116	44 - 150	5	16
Ethylbenzene	<1.0		50.0	58.9		ug/L		118	70 - 142	5	16
Toluene	<5.0		50.0	58.5		ug/L		117	69 - 136	5	16
Xylenes, Total	<5.0		150	177		ug/L		116	68 - 142	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*

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

Lab Sample ID: MB 400-357549/4
Matrix: Water
Analysis Batch: 357549

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			06/19/17 13:57	1
Ethylbenzene	<1.0		1.0		ug/L			06/19/17 13:57	1
Toluene	<5.0		5.0		ug/L			06/19/17 13:57	1
Xylenes, Total	<5.0		5.0		ug/L			06/19/17 13:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*106*		*78 - 124*		*06/19/17 13:57*	*1*

Lab Sample ID: LCS 400-357549/1003
Matrix: Water
Analysis Batch: 357549

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			20.0	17.8		ug/L		89	85 - 115		
Ethylbenzene			20.0	18.3		ug/L		92	85 - 115		
Toluene			20.0	18.0		ug/L		90	85 - 115		
Xylenes, Total			60.0	56.2		ug/L		94	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*

Lab Sample ID: 400-139224-A-3 MS
Matrix: Water
Analysis Batch: 357549

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	2.2		50.0	62.4		ug/L		120	44 - 150		
Ethylbenzene	<1.0		50.0	61.9		ug/L		124	70 - 142		
Toluene	<5.0		50.0	60.4		ug/L		121	69 - 136		
Xylenes, Total	<5.0		150	189		ug/L		126	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*108*		*78 - 124*

Lab Sample ID: 400-139224-A-3 MSD
Matrix: Water
Analysis Batch: 357549

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	2.2		50.0	59.9		ug/L		116	44 - 150	4	16
Ethylbenzene	<1.0		50.0	59.6		ug/L		119	70 - 142	4	16
Toluene	<5.0		50.0	58.1		ug/L		116	69 - 136	4	16
Xylenes, Total	<5.0		150	182		ug/L		122	68 - 142	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*108*		*78 - 124*

Client Sample ID: MW-2 — **Lab Sample ID: 400-139216-1**
Date Collected: 06/10/17 13:00 — **Matrix: Water**
Date Received: 06/13/17 08:53

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	357175	06/15/17 19:48	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-3 — **Lab Sample ID: 400-139216-2**
Date Collected: 06/10/17 13:20 — **Matrix: Water**
Date Received: 06/13/17 08:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		2	5 mL	5 mL	357175	06/15/17 20:17	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-4 — **Lab Sample ID: 400-139216-3**
Date Collected: 06/10/17 12:50 — **Matrix: Water**
Date Received: 06/13/17 08:53

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	357175	06/15/17 20:43	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-5 — **Lab Sample ID: 400-139216-4**
Date Collected: 06/10/17 14:00 — **Matrix: Water**
Date Received: 06/13/17 08:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		20	5 mL	5 mL	357175	06/15/17 21:09	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-6 — **Lab Sample ID: 400-139216-5**
Date Collected: 06/10/17 13:50 — **Matrix: Water**
Date Received: 06/13/17 08:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		20	5 mL	5 mL	357175	06/15/17 21:34	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-7 — **Lab Sample ID: 400-139216-6**
Date Collected: 06/10/17 13:45 — **Matrix: Water**
Date Received: 06/13/17 08:53

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		20	5 mL	5 mL	357175	06/15/17 22:00	GRK	TAL PEN
	Instrument ID: CH_RITA									

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

Client Sample ID: MW-9

Date Collected: 06/10/17 13:35
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-7

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	357549	06/19/17 23:59	CMW	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: MW-10

Date Collected: 06/10/17 14:10
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-8

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		50	5 mL	5 mL	357175	06/15/17 23:46	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-11

Date Collected: 06/10/17 14:05
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-9

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		50	5 mL	5 mL	357175	06/16/17 00:12	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-12

Date Collected: 06/10/17 12:40
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-10

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	357175	06/16/17 00:38	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: TRIP BLANK

Date Collected: 06/10/17 12:30
Date Received: 06/13/17 08:53

Lab Sample ID: 400-139216-11

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	357175	06/16/17 01:03	GRK	TAL PEN
	Instrument ID: CH_RITA									

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
TestAmerica Job ID: 400-139216-1
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	06-30-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-17
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-17

Method Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC-James F. Bell#1E

TestAmerica Job ID: 400-139216-1

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

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: S. Gardner & J. Garvey	Lab PM: Webb, Carol M	Carrier Tracking No(s):	COC No: 400-65861-26936.2
Client Contact: Ms. Sarah Gardner	Phone: 303 291 2239	E-Mail: carol.webb@testamericainc.com		Page: Page 2 of 2
Company: Stantec Consulting Services Inc				Job #:

Address: 1560 Broadway Suite 1800	Due Date Requested:
City: Denver	TAT Requested (days): Standard
State, Zip: CO, 80202	PO #: Purchase Order Requested
Phone: 303-291-2239(Tel)	WO #:
Email: sarah.gardner@mwhglobal.com	Project #: 40005479
Project Name: James F. Bell #1E	SSOW#:
Site: James F. Bell #1E	

Analysis 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 - Na2S2O3
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:				A		
MW-2	6/10/2017	1300	G	W	N	N	2	2	
MW-3	6/10/2017	1320	G	W	N	N	2	2	
MW-4	6/10/2017	1250	G	W	N	N	2	2	
MW-5	6/10/2017	1400	G	W	N	N	2	2	
MW-6	6/10/2017	1350	G	W	N	N	2	2	
MW-7	6/10/2017	1345	G	W	N	N	2	2	
MW-9	6/10/2017	1335	G	W	N	N	2	2	
MW-10	6/10/2017	1410	G	W	N	N	2	2	
MW-11	6/10/2017	1405	G	W	N	N	2	2	
MW-12	6/10/2017	1240	G	W	N	N	2	2	
TRIP BLANK	6/10/2017	1230	G	W	N	N	2	2	

400-139216 COC

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6/12/2017 800	Stantec	[signature]	6-13-17 0853	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 1.3 IR-2

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6/22/2017

XH PNSA
TRK# 8115 8458 2000
0215
MASTER
1 of 2
TUE - 13 JUN 10:30A
PRIORITY OVERNIGHT
AHS
32514
FL-US
BFM
PENSACOLA FL 32514
(337) 626-0000
10 TESTAMERICA PENSACOLA LAB
SAMPLE CONTROL
3355 MCLEMORE DR
PENSACOLA, FL 325147045
UNITED STATES US
3355 MCLEMORE DR
BILL SENDER
SHIP DATE: 12JUN17
ACTWGT: 42.80 LB
CAD: 7OFFC1802
DIMS: 25x14x13 IN
FedEx

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-139216-1

Login Number: 139216

List Source: TestAmerica Pensacola

List Number: 1

Creator: Franklin, Justin H

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3°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 (excluding tests with immediate HTs)	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: 400-145956-1
Client Project/Site: El Paso CGP Company - James F Bell 1E

For:
Stantec Consulting Services Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
11/20/2017 12:00:38 PM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

Carol Webb, Project Manager II
(850)471-6250
carol.webb@testamericainc.com

Table of Contents

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: 400-145956-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-145956-1

Comments
No additional comments.

Receipt
The samples were received on 11/14/2017 9:01 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.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Per client instructions, method 8260 was used in place of method 8021.

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

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

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-2 — Lab Sample ID: 400-145956-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-145956-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	60		5.0		ug/L	5		8260C	Total/NA
Ethylbenzene	780		5.0		ug/L	5		8260C	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 400-145956-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1100		20		ug/L	20		8260C	Total/NA
Toluene	670		20		ug/L	20		8260C	Total/NA
Ethylbenzene	60		20		ug/L	20		8260C	Total/NA
Xylenes, Total	4400		200		ug/L	20		8260C	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 400-145956-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	980		50		ug/L	50		8260C	Total/NA
Toluene	2900		50		ug/L	50		8260C	Total/NA
Ethylbenzene	930		50		ug/L	50		8260C	Total/NA
Xylenes, Total	8300		500		ug/L	50		8260C	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 400-145956-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1300		50		ug/L	50		8260C	Total/NA
Toluene	770		50		ug/L	50		8260C	Total/NA
Ethylbenzene	1000		50		ug/L	50		8260C	Total/NA
Xylenes, Total	8200		500		ug/L	50		8260C	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 400-145956-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	130		1.0		ug/L	1		8260C	Total/NA
Toluene	1.4		1.0		ug/L	1		8260C	Total/NA
Ethylbenzene	85		1.0		ug/L	1		8260C	Total/NA
Xylenes, Total	11		10		ug/L	1		8260C	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 400-145956-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1200		50		ug/L	50		8260C	Total/NA
Toluene	3000		50		ug/L	50		8260C	Total/NA
Ethylbenzene	860		50		ug/L	50		8260C	Total/NA
Xylenes, Total	9900		500		ug/L	50		8260C	Total/NA

Client Sample ID: MW-11 — Lab Sample ID: 400-145956-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	3100		50		ug/L	50		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-11 (Continued) — Lab Sample ID: 400-145956-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Toluene	2400		50		ug/L	50		8260C	Total/NA
Ethylbenzene	940		50		ug/L	50		8260C	Total/NA
Xylenes, Total	8900		500		ug/L	50		8260C	Total/NA

Client Sample ID: MW-12 — Lab Sample ID: 400-145956-9

No Detections.

Client Sample ID: MW-13 — Lab Sample ID: 400-145956-10

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	160		2.0		ug/L	2		8260C	Total/NA
Ethylbenzene	110		2.0		ug/L	2		8260C	Total/NA
Xylenes, Total	430		20		ug/L	2		8260C	Total/NA

Client Sample ID: MW-14 — Lab Sample ID: 400-145956-11

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-145956-12

No Detections.

Client Sample ID: MW-15 — Lab Sample ID: 400-145956-13

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	69		10		ug/L	10		8260C	Total/NA
Toluene	44		10		ug/L	10		8260C	Total/NA
Ethylbenzene	610		10		ug/L	10		8260C	Total/NA
Xylenes, Total - DL	2300		200		ug/L	20		8260C	Total/NA

Client Sample ID: MW-16 — Lab Sample ID: 400-145956-14

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	3.1		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-17 — Lab Sample ID: 400-145956-15

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	290		2.0		ug/L	2		8260C	Total/NA
Toluene	2.2		2.0		ug/L	2		8260C	Total/NA
Ethylbenzene	22		2.0		ug/L	2		8260C	Total/NA
Xylenes, Total	150		20		ug/L	2		8260C	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-145956-16

No Detections.

Client Sample ID: MW-8 — Lab Sample ID: 400-145956-17

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-8 (Continued)

Lab Sample ID: 400-145956-17

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	2100		100		ug/L	100		8260C	Total/NA
Toluene	7900		100		ug/L	100		8260C	Total/NA
Ethylbenzene	1200		100		ug/L	100		8260C	Total/NA
Xylenes, Total	14000		1000		ug/L	100		8260C	Total/NA

Client Sample ID: MW-1

Lab Sample ID: 400-145956-18

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	4400		100		ug/L	100		8260C	Total/NA
Toluene	14000		100		ug/L	100		8260C	Total/NA
Ethylbenzene	880		100		ug/L	100		8260C	Total/NA
Xylenes, Total	16000		1000		ug/L	100		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-145956-1	MW-2	Water	11/10/17 17:07	11/14/17 09:01
400-145956-2	MW-3	Water	11/10/17 17:00	11/14/17 09:01
400-145956-3	MW-5	Water	11/10/17 17:29	11/14/17 09:01
400-145956-4	MW-6	Water	11/10/17 17:42	11/14/17 09:01
400-145956-5	MW-7	Water	11/10/17 17:48	11/14/17 09:01
400-145956-6	MW-9	Water	11/10/17 17:20	11/14/17 09:01
400-145956-7	MW-10	Water	11/10/17 18:10	11/14/17 09:01
400-145956-8	MW-11	Water	11/10/17 16:53	11/14/17 09:01
400-145956-9	MW-12	Water	11/10/17 16:48	11/14/17 09:01
400-145956-10	MW-13	Water	11/10/17 16:43	11/14/17 09:01
400-145956-11	MW-14	Water	11/10/17 16:38	11/14/17 09:01
400-145956-12	TRIP BLANK	Water	11/10/17 15:45	11/14/17 09:01
400-145956-13	MW-15	Water	11/10/17 18:03	11/14/17 09:01
400-145956-14	MW-16	Water	11/10/17 17:55	11/14/17 09:01
400-145956-15	MW-17	Water	11/10/17 17:36	11/14/17 09:01
400-145956-16	MW-4	Water	11/12/17 17:04	11/14/17 09:01
400-145956-17	MW-8	Water	11/12/17 16:58	11/14/17 09:01
400-145956-18	MW-1	Water	11/12/17 16:48	11/14/17 09:01

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-2
Date Collected: 11/10/17 17:07
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/17/17 09:47	1
Toluene	<1.0		1.0		ug/L			11/17/17 09:47	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 09:47	1
Xylenes, Total	<10		10		ug/L			11/17/17 09:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*104*		*81 - 121*		*11/17/17 09:47*	*1*
4-Bromofluorobenzene	*101*		*78 - 118*		*11/17/17 09:47*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/17/17 09:47*	*1*

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-3
Date Collected: 11/10/17 17:00
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-2
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**60**		5.0		ug/L			11/17/17 13:45	5
Toluene	<5.0		5.0		ug/L			11/17/17 13:45	5
Ethylbenzene	**780**		5.0		ug/L			11/17/17 13:45	5
Xylenes, Total	<50		50		ug/L			11/17/17 13:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*100*		*81 - 121*		*11/17/17 13:45*	*5*
4-Bromofluorobenzene	*99*		*78 - 118*		*11/17/17 13:45*	*5*
Toluene-d8 (Surr)	*100*		*80 - 120*		*11/17/17 13:45*	*5*

Client Sample ID: MW-5
Date Collected: 11/10/17 17:29
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1100		20		ug/L			11/17/17 14:37	20
Toluene	670		20		ug/L			11/17/17 14:37	20
Ethylbenzene	60		20		ug/L			11/17/17 14:37	20
Xylenes, Total	4400		200		ug/L			11/17/17 14:37	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*102*		*81 - 121*		*11/17/17 14:37*	*20*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/17/17 14:37*	*20*
Toluene-d8 (Surr)	*93*		*80 - 120*		*11/17/17 14:37*	*20*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-6
Date Collected: 11/10/17 17:42
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-4
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	980		50		ug/L			11/17/17 15:04	50
Toluene	2900		50		ug/L			11/17/17 15:04	50
Ethylbenzene	930		50		ug/L			11/17/17 15:04	50
Xylenes, Total	8300		500		ug/L			11/17/17 15:04	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*101*		*81 - 121*		*11/17/17 15:04*	*50*
4-Bromofluorobenzene	*105*		*78 - 118*		*11/17/17 15:04*	*50*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/17/17 15:04*	*50*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-7
Date Collected: 11/10/17 17:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-5
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1300		50		ug/L			11/17/17 15:57	50
Toluene	770		50		ug/L			11/17/17 15:57	50
Ethylbenzene	1000		50		ug/L			11/17/17 15:57	50
Xylenes, Total	8200		500		ug/L			11/17/17 15:57	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*104*		*81 - 121*		*11/17/17 15:57*	*50*
4-Bromofluorobenzene	*101*		*78 - 118*		*11/17/17 15:57*	*50*
Toluene-d8 (Surr)	*93*		*80 - 120*		*11/17/17 15:57*	*50*

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-9
Date Collected: 11/10/17 17:20
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-6
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		1.0		ug/L			11/17/17 11:59	1
Toluene	1.4		1.0		ug/L			11/17/17 11:59	1
Ethylbenzene	85		1.0		ug/L			11/17/17 11:59	1
Xylenes, Total	11		10		ug/L			11/17/17 11:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*102*		*81 - 121*		*11/17/17 11:59*	*1*
4-Bromofluorobenzene	*106*		*78 - 118*		*11/17/17 11:59*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/17/17 11:59*	*1*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-10
Date Collected: 11/10/17 18:10
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1200		50		ug/L			11/17/17 16:23	50
Toluene	3000		50		ug/L			11/17/17 16:23	50
Ethylbenzene	860		50		ug/L			11/17/17 16:23	50
Xylenes, Total	9900		500		ug/L			11/17/17 16:23	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*99*		*81 - 121*		*11/17/17 16:23*	*50*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/17/17 16:23*	*50*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/17/17 16:23*	*50*

Client Sample ID: MW-11
Date Collected: 11/10/17 16:53
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3100		50		ug/L			11/17/17 16:49	50
Toluene	2400		50		ug/L			11/17/17 16:49	50
Ethylbenzene	940		50		ug/L			11/17/17 16:49	50
Xylenes, Total	8900		500		ug/L			11/17/17 16:49	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*99*		*81 - 121*		*11/17/17 16:49*	*50*
4-Bromofluorobenzene	*104*		*78 - 118*		*11/17/17 16:49*	*50*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/17/17 16:49*	*50*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-12
Date Collected: 11/10/17 16:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-9
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/17/17 12:25	1
Toluene	<1.0		1.0		ug/L			11/17/17 12:25	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 12:25	1
Xylenes, Total	<10		10		ug/L			11/17/17 12:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*108*		*81 - 121*		*11/17/17 12:25*	*1*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/17/17 12:25*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/17/17 12:25*	*1*

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-13
Date Collected: 11/10/17 16:43
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-10
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**160**		2.0		ug/L			11/18/17 10:37	2
Toluene	<2.0		2.0		ug/L			11/18/17 10:37	2
Ethylbenzene	**110**		2.0		ug/L			11/18/17 10:37	2
Xylenes, Total	**430**		20		ug/L			11/18/17 10:37	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*103*		*81 - 121*		*11/18/17 10:37*	*2*
4-Bromofluorobenzene	*100*		*78 - 118*		*11/18/17 10:37*	*2*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/18/17 10:37*	*2*

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-14
Date Collected: 11/10/17 16:38
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-11
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/17/17 12:52	1
Toluene	<1.0		1.0		ug/L			11/17/17 12:52	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 12:52	1
Xylenes, Total	<10		10		ug/L			11/17/17 12:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*105*		*81 - 121*		*11/17/17 12:52*	*1*
4-Bromofluorobenzene	*101*		*78 - 118*		*11/17/17 12:52*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/17/17 12:52*	*1*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: TRIP BLANK
Date Collected: 11/10/17 15:45
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-12
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/17/17 09:20	1
Toluene	<1.0		1.0		ug/L			11/17/17 09:20	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 09:20	1
Xylenes, Total	<10		10		ug/L			11/17/17 09:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*105*		*81 - 121*		*11/17/17 09:20*	*1*
4-Bromofluorobenzene	*102*		*78 - 118*		*11/17/17 09:20*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/17/17 09:20*	*1*

Client Sample ID: MW-15

Date Collected: 11/10/17 18:03
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-13

Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**69**		10		ug/L			11/18/17 11:01	10
Toluene	**44**		10		ug/L			11/18/17 11:01	10
Ethylbenzene	**610**		10		ug/L			11/18/17 11:01	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*101*		*81 - 121*		*11/18/17 11:01*	*10*
4-Bromofluorobenzene	*97*		*78 - 118*		*11/18/17 11:01*	*10*
Toluene-d8 (Surr)	*92*		*80 - 120*		*11/18/17 11:01*	*10*

Method: 8260C - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**2300**		200		ug/L			11/18/17 17:39	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*102*		*81 - 121*		*11/18/17 17:39*	*20*
4-Bromofluorobenzene	*99*		*78 - 118*		*11/18/17 17:39*	*20*
Toluene-d8 (Surr)	*93*		*80 - 120*		*11/18/17 17:39*	*20*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-16
Date Collected: 11/10/17 17:55
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-14
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/18/17 15:58	1
Toluene	<1.0		1.0		ug/L			11/18/17 15:58	1
Ethylbenzene	**3.1**		1.0		ug/L			11/18/17 15:58	1
Xylenes, Total	<10		10		ug/L			11/18/17 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*103*		*81 - 121*		*11/18/17 15:58*	*1*
4-Bromofluorobenzene	*97*		*78 - 118*		*11/18/17 15:58*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*11/18/17 15:58*	*1*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-17
Date Collected: 11/10/17 17:36
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-15
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	290		2.0		ug/L			11/18/17 17:12	2
Toluene	2.2		2.0		ug/L			11/18/17 17:12	2
Ethylbenzene	22		2.0		ug/L			11/18/17 17:12	2
Xylenes, Total	150		20		ug/L			11/18/17 17:12	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*106*		*81 - 121*		*11/18/17 17:12*	*2*
4-Bromofluorobenzene	*100*		*78 - 118*		*11/18/17 17:12*	*2*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/18/17 17:12*	*2*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-4
Date Collected: 11/12/17 17:04
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-16
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/17/17 13:18	1
Toluene	<1.0		1.0		ug/L			11/17/17 13:18	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 13:18	1
Xylenes, Total	<10		10		ug/L			11/17/17 13:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*100*		*81 - 121*		*11/17/17 13:18*	*1*
4-Bromofluorobenzene	*100*		*78 - 118*		*11/17/17 13:18*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/17/17 13:18*	*1*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-8
Date Collected: 11/12/17 16:58
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-17
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2100		100		ug/L			11/17/17 18:08	100
Toluene	7900		100		ug/L			11/17/17 18:08	100
Ethylbenzene	1200		100		ug/L			11/17/17 18:08	100
Xylenes, Total	14000		1000		ug/L			11/17/17 18:08	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*101*		*81 - 121*		*11/17/17 18:08*	*100*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/17/17 18:08*	*100*
Toluene-d8 (Surr)	*92*		*80 - 120*		*11/17/17 18:08*	*100*

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-1
Date Collected: 11/12/17 16:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-18
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4400		100		ug/L			11/17/17 18:35	100
Toluene	14000		100		ug/L			11/17/17 18:35	100
Ethylbenzene	880		100		ug/L			11/17/17 18:35	100
Xylenes, Total	16000		1000		ug/L			11/17/17 18:35	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*99*		*81 - 121*		*11/17/17 18:35*	*100*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/17/17 18:35*	*100*
Toluene-d8 (Surr)	*91*		*80 - 120*		*11/17/17 18:35*	*100*

GC/MS VOA

Analysis Batch: 376308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145956-1	MW-2	Total/NA	Water	8260C	
400-145956-2	MW-3	Total/NA	Water	8260C	
400-145956-3	MW-5	Total/NA	Water	8260C	
400-145956-4	MW-6	Total/NA	Water	8260C	
400-145956-5	MW-7	Total/NA	Water	8260C	
400-145956-6	MW-9	Total/NA	Water	8260C	
400-145956-7	MW-10	Total/NA	Water	8260C	
400-145956-8	MW-11	Total/NA	Water	8260C	
400-145956-9	MW-12	Total/NA	Water	8260C	
400-145956-11	MW-14	Total/NA	Water	8260C	
400-145956-12	TRIP BLANK	Total/NA	Water	8260C	
400-145956-16	MW-4	Total/NA	Water	8260C	
400-145956-17	MW-8	Total/NA	Water	8260C	
400-145956-18	MW-1	Total/NA	Water	8260C	
MB 400-376308/4	Method Blank	Total/NA	Water	8260C	
LCS 400-376308/1002	Lab Control Sample	Total/NA	Water	8260C	
400-145956-1 MS	MW-2	Total/NA	Water	8260C	
400-145956-1 MSD	MW-2	Total/NA	Water	8260C	

Analysis Batch: 376472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-145956-10	MW-13	Total/NA	Water	8260C	
400-145956-13	MW-15	Total/NA	Water	8260C	
400-145956-13 - DL	MW-15	Total/NA	Water	8260C	
400-145956-14	MW-16	Total/NA	Water	8260C	
400-145956-15	MW-17	Total/NA	Water	8260C	
MB 400-376472/4	Method Blank	Total/NA	Water	8260C	
LCS 400-376472/1002	Lab Control Sample	Total/NA	Water	8260C	
400-145976-A-3 MS	Matrix Spike	Total/NA	Water	8260C	
400-145976-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 400-376308/4
Matrix: Water
Analysis Batch: 376308

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			11/17/17 08:54	1
Toluene	<1.0		1.0		ug/L			11/17/17 08:54	1
Ethylbenzene	<1.0		1.0		ug/L			11/17/17 08:54	1
Xylenes, Total	<10		10		ug/L			11/17/17 08:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*101*		*81 - 121*		*11/17/17 08:54*	*1*
4-Bromofluorobenzene	*101*		*78 - 118*		*11/17/17 08:54*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/17/17 08:54*	*1*

Lab Sample ID: LCS 400-376308/1002
Matrix: Water
Analysis Batch: 376308

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	54.7		ug/L		109	70 - 130		
Toluene			50.0	46.2		ug/L		92	70 - 130		
Ethylbenzene			50.0	47.0		ug/L		94	70 - 130		
Xylenes, Total			100	93.9		ug/L		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane	*106*		*81 - 121*
4-Bromofluorobenzene	*106*		*78 - 118*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: 400-145956-1 MS
Matrix: Water
Analysis Batch: 376308

Client Sample ID: MW-2
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	52.8		ug/L		106	56 - 142		
Toluene	<1.0		50.0	42.7		ug/L		85	65 - 130		
Ethylbenzene	<1.0		50.0	42.1		ug/L		84	58 - 131		
Xylenes, Total	<10		100	84.9		ug/L		85	59 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane	*107*		*81 - 121*
4-Bromofluorobenzene	*105*		*78 - 118*
Toluene-d8 (Surr)	*93*		*80 - 120*

Lab Sample ID: 400-145956-1 MSD
Matrix: Water
Analysis Batch: 376308

Client Sample ID: 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	<1.0		50.0	52.6		ug/L		105	56 - 142	0	30
Toluene	<1.0		50.0	41.8		ug/L		84	65 - 130	2	30

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

Lab Sample ID: 400-145956-1 MSD
Matrix: Water
Analysis Batch: 376308

Client Sample ID: 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
Ethylbenzene	<1.0		50.0	40.8		ug/L		82	58 - 131	3	30
Xylenes, Total	<10		100	81.3		ug/L		81	59 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane	*106*		*81 - 121*
4-Bromofluorobenzene	*105*		*78 - 118*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: MB 400-376472/4
Matrix: Water
Analysis Batch: 376472

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			11/18/17 09:00	1
Toluene	<1.0		1.0		ug/L			11/18/17 09:00	1
Ethylbenzene	<1.0		1.0		ug/L			11/18/17 09:00	1
Xylenes, Total	<10		10		ug/L			11/18/17 09:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*105*		*81 - 121*		*11/18/17 09:00*	*1*
4-Bromofluorobenzene	*100*		*78 - 118*		*11/18/17 09:00*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*11/18/17 09:00*	*1*

Lab Sample ID: LCS 400-376472/1002
Matrix: Water
Analysis Batch: 376472

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	50.9		ug/L		102	70 - 130		
Toluene			50.0	43.2		ug/L		86	70 - 130		
Ethylbenzene			50.0	43.7		ug/L		87	70 - 130		
Xylenes, Total			100	87.5		ug/L		87	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane	*106*		*81 - 121*
4-Bromofluorobenzene	*104*		*78 - 118*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Sample ID: 400-145976-A-3 MS
Matrix: Water
Analysis Batch: 376472

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	53		50.0	106		ug/L		107	56 - 142		
Toluene	<1.0		50.0	43.0		ug/L		86	65 - 130		
Ethylbenzene	3.4		50.0	45.7		ug/L		85	58 - 131		
Xylenes, Total	<10		100	84.2		ug/L		84	59 - 130		

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

Lab Sample ID: 400-145976-A-3 MS
Matrix: Water
Analysis Batch: 376472

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane	*111*		*81 - 121*
4-Bromofluorobenzene	*103*		*78 - 118*
Toluene-d8 (Surr)	*93*		*80 - 120*

Lab Sample ID: 400-145976-A-3 MSD
Matrix: Water
Analysis Batch: 376472

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	53		50.0	101		ug/L		97	56 - 142	5	30
Toluene	<1.0		50.0	38.3		ug/L		77	65 - 130	12	30
Ethylbenzene	3.4		50.0	39.3		ug/L		72	58 - 131	15	30
Xylenes, Total	<10		100	72.6		ug/L		73	59 - 130	15	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane	*107*		*81 - 121*
4-Bromofluorobenzene	*105*		*78 - 118*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-2
Date Collected: 11/10/17 17:07
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-1
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	8260C		1	5 mL	5 mL	376308	11/17/17 09:47	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-3
Date Collected: 11/10/17 17:00
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-2
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	8260C		5	5 mL	5 mL	376308	11/17/17 13:45	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-5
Date Collected: 11/10/17 17:29
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-3
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	8260C		20	5 mL	5 mL	376308	11/17/17 14:37	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-6
Date Collected: 11/10/17 17:42
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-4
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	8260C		50	5 mL	5 mL	376308	11/17/17 15:04	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-7
Date Collected: 11/10/17 17:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-5
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	8260C		50	5 mL	5 mL	376308	11/17/17 15:57	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-9
Date Collected: 11/10/17 17:20
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-6
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	8260C		1	5 mL	5 mL	376308	11/17/17 11:59	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-10
Date Collected: 11/10/17 18:10
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-7
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	8260C		50	5 mL	5 mL	376308	11/17/17 16:23	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-11
Date Collected: 11/10/17 16:53
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-8
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	8260C		50	5 mL	5 mL	376308	11/17/17 16:49	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-12
Date Collected: 11/10/17 16:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-9
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	8260C		1	5 mL	5 mL	376308	11/17/17 12:25	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-13
Date Collected: 11/10/17 16:43
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-10
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	8260C		2	5 mL	5 mL	376472	11/18/17 10:37	WPD	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-14
Date Collected: 11/10/17 16:38
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-11
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	8260C		1	5 mL	5 mL	376308	11/17/17 12:52	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: TRIP BLANK
Date Collected: 11/10/17 15:45
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-12
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	8260C		1	5 mL	5 mL	376308	11/17/17 09:20	SAB	TAL PEN
	Instrument ID: CH_TAN									

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-15
Date Collected: 11/10/17 18:03
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-13
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	8260C		10	5 mL	5 mL	376472	11/18/17 11:01	WPD	TAL PEN
	Instrument ID: CH_TAN									
Total/NA	Analysis	8260C	DL	20	5 mL	5 mL	376472	11/18/17 17:39	WPD	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-16
Date Collected: 11/10/17 17:55
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-14
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	8260C		1	5 mL	5 mL	376472	11/18/17 15:58	WPD	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-17
Date Collected: 11/10/17 17:36
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-15
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	8260C		2	5 mL	5 mL	376472	11/18/17 17:12	WPD	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-4
Date Collected: 11/12/17 17:04
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-16
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	8260C		1	5 mL	5 mL	376308	11/17/17 13:18	SAB	TAL PEN
	Instrument ID: CH_TAN									

Client Sample ID: MW-8
Date Collected: 11/12/17 16:58
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-17
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	8260C		100	5 mL	5 mL	376308	11/17/17 18:08	SAB	TAL PEN
	Instrument ID: CH_TAN									

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Client Sample ID: MW-1
Date Collected: 11/12/17 16:48
Date Received: 11/14/17 09:01

Lab Sample ID: 400-145956-18
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	8260C		100	5 mL	5 mL	376308	11/17/17 18:35	SAB	TAL PEN
	Instrument ID: CH_TAN									

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
TestAmerica Job ID: 400-145956-1
Project/Site: El Paso CGP Company - James F Bell 1E

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-18
Arizona	State Program	9	AZ0710	01-11-18
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-18
Georgia	State Program	4	N/A	06-30-18
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	12-31-17
Kentucky (UST)	State Program	4	53	06-30-18
Kentucky (WW)	State Program	4	98030	12-31-17
L-A-B	ISO/IEC 17025		L2471	02-22-20
Louisiana	NELAP	6	30976	06-30-18
Louisiana (DW)	NELAP	6	LA170005	12-31-17
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-18
Michigan	State Program	5	9912	06-30-18
New Jersey	NELAP	2	FL006	06-30-18
North Carolina (WW/SW)	State Program	4	314	12-31-17
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-18
Rhode Island	State Program	1	LAO00307	12-30-17
South Carolina	State Program	4	96026	06-30-18
Tennessee	State Program	4	TN02907	06-30-18
Texas	NELAP	6	T104704286-17-12	09-30-18
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-18
Washington	State Program	10	C915	05-15-18
West Virginia DEP	State Program	3	136	06-30-18

Method Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company - James F Bell 1E

TestAmerica Job ID: 400-145956-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	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

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: SMS	Lab PM: Webb, Carol M	Carrier Tracking No(s):	COC No: 400-69058-27992.1
Client Contact: Ms. Sarah Gardner	Phone: 515-306-1353	E-Mail: carol.webb@testamericainc.com		Page: Page 1 of 2
Company: Stantec Consulting Services Inc				Job #: 203720281
Address: 1560 Broadway Suite 1800	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Denver	TAT Requested (days): 10 day Std.			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)
State, Zip: CO, 80202	PO #: Purchase Order Requested			
Phone: 303-291-2239(Tel)	WO#: ARF 6W-ERG-STN-05-17-17-SLG-07			
Email: sarah.gardner@mwhglobal.com	Project #: 40005479 James F Bell PIE			
Project Name: James F. Bell #1E Nov 2017	SSOW#:			Other:
Site:				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	80218 - BTEX 8021	Special Instructions/Note:
MW-2	11/10/17	1707	G	W	A 2	Ref ARF
MW-3	11/10/17	1700	G	W	A 2	
MW-5	11/10/17	1729	G	W	A 2	
MW-6	11/10/17	1742	G	W	A 2	
MW-7	11/10/17	1748	G	W	A 2	
MW-9	11/10/17	1720	G	W	A 2	
MW-10	11/10/17	1810	G	W	A 2	
MW-11	11/10/17	1653	G	W	A 2	
MW-12	11/10/17	1648	G	W	A 2	
MW-13	11/10/17	1643	G	W	A 2	
MW-14	11/10/17	1638	G	W	A 2	

600-145956 COC

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
1		11/13/17 1100	Stantec		11.14.17 0901	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 0.0C IR7 NH

Ver: 08/04/2016

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: SMS	Lab PM: Webb, Carol M	Carrier Tracking No(s):	COC No: 400-69058-27992.2
Client Contact: Ms. Sarah Gardner	Phone: 515-306-1353	E-Mail: carol.webb@testamericainc.com		Page: Page 2 of 2
Company: Stantec Consulting Services Inc				Job #: 203720281
Address: 1560 Broadway Suite 1800	Due Date Requested:			
City: Denver	TAT Requested (days): 10 day Std			
State, Zip: CO, 80202	PO #: Purchase Order Requested			
Phone: 303-291-2239(Tel)	~~WO#:~~ ARF W-ERG-STN-05-17-17-546-07 James			
Email: sarah.gardner@mwhglobal.com	Project #: 40005479 F Bell #1E			
Project Name: James F. Bell #1E Nov 2017				
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B - BTEX 8021	Special Instructions/Note:
Trip Blank	11/10/17	1545	G	W	A 2	Per ARF
MW-15	11/10/17	1803			A 2	
MW-16	11/10/17	1755			A 2	
MW-17	11/10/17	1736			A 2	
MW-4	11/12/17	1704			A 2	
MW-8	11/12/17	1658			A 2	
MW-1	11/12/17	1648			A 2	

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 - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 11/13/17 1100	Company Stantec	Received by:	Date/Time: 11.14.17 0901	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: 0.0C IR / NH

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-145956-1

Login Number: 145956
List Number: 1
Creator: Johnson, Jeremy N

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 IR7
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 (excluding tests with immediate HTs)	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	