

VIA ELECTRONIC SUBMITTAL

August 10, 2017

Mr. Randy Bayliss
New Mexico Oil Conservation Division
1220 S. Francis Street
Santa Fe, New Mexico 87505

RE: Groundwater Monitoring Report and Request for Site Closure
Hammond #41A Site
NMOCD Case No. 3RP-186-0
METER CODE: 89894
T27N, R8W, Sec25, Unit O
Latitude: 36.540090 Longitude: -107.631944

Dear Mr. Bayliss:

MWH now part of Stantec (Stantec), on behalf of El Paso CGP Company, LLC (EPCGP), requests regulatory closure of the Hammond #41A site (NMOCD Case No. 3RP-186-0). This correspondence documents the analytical results from the final site monitoring event, completed in accordance with the Remediation Plan approved by the New Mexico Oil Conservation Division (OCD) on November 30, 1995. EPCGP is requesting closure of the Hammond #41A site (the Site) based on the data obtained and the closure criteria outlined in the Remediation Plan.

Site Background

The Site is located on Federal land managed by the Bureau of Land Management (BLM). Currently, the Site is operated by M&G Drilling Company and is active. Monitoring wells were installed in 1997 (MW-1), 1999 (MW-2 and MW-3), 2003 (MW-4), and 2016 (MW-1R, MW-2R, MW-3R, MW-5, MW-6, and MW-7). Site groundwater monitoring activities have been conducted periodically since 1995. Monitoring wells MW-1, MW-2, and MW-3 were plugged and abandoned on May 20, 2016, as they had gone dry. The monitoring well construction logs are provided in Attachment A.

Free product has not been observed at the Site. Soil sampling was completed in May 2016 during the advancement of monitoring wells MW-1R, MW-2R, MW-3R, and MW-5 through MW-7. The soil sample results are summarized on Table 1.

Groundwater monitoring has been conducted at the Site on a quarterly basis beginning in the fourth quarter of 2016. Benzene, toluene, ethylbenzene, and total xylene (BTEX) concentrations in the site wells have been below the New Mexico Water Quality Control Commission (NMWQCC) standards in the past four calendar quarters. BTEX concentrations have not exceeded NMWQCC standards in groundwater samples collected from the Site since February 2011. The results of quarterly groundwater sampling completed in the fourth calendar quarter of 2016 were presented in the Annual Groundwater Sampling Report, submitted in March 2017.

2017 Groundwater Monitoring Data

Quarterly groundwater monitoring events were completed on March 27, June 7, and July 28, 2017. Prior to collecting groundwater samples, the site monitoring wells were gauged with an oil-water interface probe to verify the absence of free product and determine groundwater elevations. Measureable free product was not detected in any of the monitoring wells gauged, as presented on Table 2. The groundwater elevation data indicate a groundwater flow direction to the northwest, as presented on Figures 2, 4, and 6, which is consistent with previous gauging data.

Since June 2013, groundwater samples have been collected using HydraSleeve™ no-purge groundwater sampling devices (HydraSleeves). HydraSleeve sampling devices provide no-purge groundwater samples from the undisturbed water column, and have been proven in independent testing to provide groundwater quality data comparable to low-flow groundwater sampling methods. The HydraSleeves were set during the previous sampling events approximately 0.5 foot above termination depth of the monitoring wells, using a suspension tether and stainless steel weights. On the following sample event, field personnel returned to the Site and collected a direct, undisturbed sample from the water column in the screened interval of each well by pulling the HydraSleeve from the well. 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 constituents. The groundwater results are summarized on Table 3, and depicted in Figures 1, 3, and 5. The laboratory analytical reports for the three sampling events are provided in Attachment B. Purged groundwater generated during the 2017 sampling events were disposed at Basin Disposal, Inc. in Bloomfield, New Mexico. Disposal documentation is provided in Attachment C.

Request for Site Closure

Groundwater samples have been obtained at concentrations below the NMOCD standards for four consecutive quarters, as required in the Remediation Work Plan. Based on the results of previous assessment, corrective action, and monitoring activities, EPCGP respectfully requests the NMOCD grant site closure for this case.

If you have any comments or questions concerning this correspondence, please contact me or Joseph Wiley with EPCGP at (713) 420-3475.

Sincerely,

Stantec Consulting Services, Inc.



Sarah Gardner
Environmental Scientist
Phone: (303) 291-2239
sarah.gardner@stantec.com



Stephen Varsa, P.G.
Project Manager
Phone: (515) 251-1020
steve.varsa@stantec.com

/slg:svr:imd

cc: Joseph Wiley, EPCGP
Brandon Powell, NMOCD
Jillian Aragon, BLM

Tables:

Table 1 – Soil Analytical Results
Table 2 – Groundwater Elevation Results
Table 3 – Groundwater BTEX Analytical Results

Figures:

Figure 1 – Groundwater Analytical Results March 28, 2017
Figure 2 – Groundwater Elevation Map March 28, 2017
Figure 3 – Groundwater Analytical Results June 7, 2017
Figure 4 – Groundwater Elevation Map June 7, 2017
Figure 5 – Groundwater Analytical Results July 28, 2017
Figure 6 – Groundwater Elevation Map July 28, 2017

Attachments:

Attachment A – Soil Boring Logs and Monitoring Well Construction Reports
Attachment B – Laboratory Analytical Reports
Attachment C – Groundwater Disposal Documentation

TABLES

TABLE 1 – SOIL ANALYTICAL RESULTS

TABLE 2 – GROUNDWATER ELEVATION RESULTS

TABLE 3 – GROUNDWATER BTEX ANALYTICAL RESULTS

TABLE 1 - SOIL ANALYTICAL RESULTS

Hammond #41A											
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-1R (13.5-14.5)	05/18/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-2R (13-14)	05/18/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	39
MW-3R(12-13)	05/20/16	BRL	BRL	BRL	BRL	BRL	0.39	54	BRL	54.39	35
MW-5 (13.5-14.5)	05/18/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-6 (14-15)	05/18/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	26
MW-7 (14-15)	05/19/16	0.029	0.25	0.16	0.44	0.879	25	BRL	BRL	25	28
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											

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	05/21/97	5978.20	18.79	NR		5959.41
MW-1	06/09/97	5978.20	18.89	NR		5959.31
MW-1	09/17/97	5978.20	18.79	NR		5959.41
MW-1	12/09/97	5978.20	18.47	NR		5959.73
MW-1	03/20/98	5978.20	18.05	NR		5960.15
MW-1	06/04/98	5978.20	18.54	NR		5959.66
MW-1	09/10/98	5978.20	18.19	NR		5960.01
MW-1	12/17/98	5978.20	17.42	NR		5960.78
MW-1	03/23/99	5978.20	17.56	NR		5960.64
MW-1	06/11/99	5978.20	17.80	NR		5960.40
MW-1	09/20/99	5978.20	17.36	NR		5960.84
MW-1	12/09/99	5978.20	17.42	NR		5960.78
MW-1	03/31/00	5978.20	17.15	NR		5961.05
MW-1	06/09/00	5978.20	17.64	NR		5960.56
MW-1	09/21/00	5978.20	18.10	NR		5960.10
MW-1	12/05/00	5978.20	17.91	NR		5960.29
MW-1	06/04/01	5978.20	18.09	NR		5960.11
MW-1	08/07/01	5978.20	18.62	NR		5959.58
MW-1	11/27/01	5978.20	18.06	NR		5960.14
MW-1	02/25/02	5978.20	17.86	NR		5960.34
MW-1	05/21/02	5978.20	18.16	NR		5960.04
MW-1	08/21/02	5978.20	18.70	NR		5959.50
MW-1	09/05/02	5978.20	18.82	NR		5959.38
MW-1	11/15/03	5978.20	18.26	ND		5959.94
MW-1	02/29/04	5978.20	17.75	ND		5960.45
MW-1	05/11/04	5978.20	17.88	ND		5960.32
MW-1	08/19/04	5978.20	19.06	ND		5959.14
MW-1	11/16/04	5978.20	18.83	ND		5959.37
MW-1	02/21/05	5978.20	18.29	ND		5959.91
MW-1	05/18/05	5978.20	18.21	ND		5959.99
MW-1	08/23/05	5978.20	19.03	ND		5959.17
MW-1	11/08/05	5978.20	18.76	ND		5959.44
MW-1	02/23/06	5978.20	18.48	ND		5959.72
MW-1	05/23/06	5978.20	18.77	ND		5959.43
MW-1	11/08/06	5978.20	17.86	ND		5960.34
MW-1	05/24/07	5978.20	17.50	ND		5960.70
MW-1	08/21/07	5978.20	18.19	ND		5960.01
MW-1	11/13/07	5978.20	18.13	ND		5960.07
MW-1	02/12/08	5978.20	17.66	ND		5960.54
MW-1	08/26/08	5978.20	18.46	ND		5959.74
MW-1	02/17/09	5978.20	17.92	ND		5960.28
MW-1	08/25/09	5978.20	18.06	ND		5960.14

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	02/16/10	5978.20	18.37	ND		5959.83
MW-1	02/01/11	5978.20	18.36	ND		5959.84
MW-1	09/23/11	5978.20	DRY	ND		DRY
MW-1	02/22/12	5978.20	18.35	ND		5959.85
MW-1	06/05/13	5978.20	DRY	ND		DRY
MW-1	09/11/13	5978.20	DRY	ND		DRY
MW-1	12/11/13	5978.20	DRY	ND		DRY
MW-1	04/04/14	5978.20	DRY	ND		DRY
MW-1	10/24/14	5978.20	DRY	ND		DRY
MW-1	05/31/15	5978.20	DRY	ND		DRY
MW-1	11/21/15	5978.20	DRY	ND		DRY
MW-1	04/17/16	5978.20	DRY	ND		DRY
MW-1 was abandoned and replaced with MW-1R on May 20, 2016						

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	10/15/99	5977.47	14.12	NR		5963.35
MW-2	08/28/00	5977.47	17.32	NR		5960.15
MW-2	06/04/01	5977.47	17.54	NR		5959.93
MW-2	08/07/01	5977.47	18.08	NR		5959.39
MW-2	11/27/01	5977.47	17.47	NR		5960.00
MW-2	02/25/02	5977.47	17.30	NR		5960.17
MW-2	05/21/02	5977.47	17.62	NR		5959.85
MW-2	08/21/02	5977.47	18.19	NR		5959.28
MW-2	10/08/02	5977.47	17.80	NR		5959.67
MW-2	11/15/03	5977.47	17.69	ND		5959.78
MW-2	02/29/04	5977.47	17.16	ND		5960.31
MW-2	05/11/04	5977.47	17.30	ND		5960.17
MW-2	08/19/04	5977.47	18.51	ND		5958.96
MW-2	11/16/04	5977.47	18.30	ND		5959.17
MW-2	02/21/05	5977.47	17.72	ND		5959.75
MW-2	05/18/05	5977.47	17.65	ND		5959.82
MW-2	08/23/05	5977.47	18.48	ND		5958.99
MW-2	11/08/05	5977.47	18.20	ND		5959.27
MW-2	02/23/06	5977.47	19.95	ND		5957.52
MW-2	05/23/06	5977.47	18.28	ND		5959.19
MW-2	11/08/06	5977.47	17.18	ND		5960.29
MW-2	05/24/07	5977.47	16.90	ND		5960.57
MW-2	08/21/07	5977.47	17.56	ND		5959.91
MW-2	11/13/07	5977.47	17.60	ND		5959.87
MW-2	02/12/08	5977.47	17.13	ND		5960.34
MW-2	08/26/08	5977.47	17.51	ND		5959.96
MW-2	02/17/09	5977.47	17.33	ND		5960.14
MW-2	08/25/09	5977.47	17.40	ND		5960.07
MW-2	02/16/10	5977.47	17.75	ND		5959.72
MW-2	09/27/10	5977.47	DRY	ND		DRY
MW-2	02/01/11	5977.47	17.66	ND		5959.81
MW-2	09/23/11	5977.47	DRY	ND		DRY
MW-2	02/22/12	5977.47	DRY	ND		DRY
MW-2	06/05/13	5977.47	DRY	ND		DRY
MW-2	09/11/13	5977.47	DRY	ND		DRY
MW-2	12/11/13	5977.47	DRY	ND		DRY
MW-2	04/04/14	5977.47	DRY	ND		DRY
MW-2	10/24/14	5977.47	DRY	ND		DRY
MW-2	05/31/15	5977.47	DRY	ND		DRY
MW-2	11/21/15	5977.47	DRY	ND		DRY
MW-2	04/17/16	5977.47	17.45	ND		5960.02
MW-2 was abandoned and replaced with MW-2R on May 20, 2016						

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	10/15/99	5979.22	16.43	NR		5962.79
MW-3	08/28/00	5979.22	18.96	NR		5960.26
MW-3	06/04/01	5979.22	19.05	NR		5960.17
MW-3	08/07/01	5979.22	19.58	NR		5959.64
MW-3	11/27/01	5979.22	19.02	NR		5960.20
MW-3	02/25/02	5979.22	18.81	NR		5960.41
MW-3	05/21/02	5979.22	19.10	NR		5960.12
MW-3	08/21/02	5979.22	19.67	NR		5959.55
MW-3	10/08/02	5979.22	19.38	NR		5959.84
MW-3	11/15/03	5979.22	19.23	ND		5959.99
MW-3	02/29/04	5979.22	18.72	ND		5960.50
MW-3	05/11/04	5979.22	18.84	ND		5960.38
MW-3	08/19/04	5979.22	19.84	ND		5959.38
MW-3	11/16/04	5979.22	19.77	ND		5959.45
MW-3	02/21/05	5979.22	19.24	ND		5959.98
MW-3	05/18/05	5979.22	19.15	ND		5960.07
MW-3	08/23/05	5979.22	19.99	ND		5959.23
MW-3	11/08/05	5979.22	19.71	ND		5959.51
MW-3	02/23/06	5979.22	19.40	ND		5959.82
MW-3	05/23/06	5979.22	19.70	ND		5959.52
MW-3	11/08/06	5979.22	18.85	ND		5960.37
MW-3	05/24/07	5979.22	18.48	ND		5960.74
MW-3	08/21/07	5979.22	18.77	ND		5960.45
MW-3	11/13/07	5979.22	19.24	ND		5959.98
MW-3	02/12/08	5979.22	18.36	ND		5960.86
MW-3	08/26/08	5979.22	18.57	ND		5960.65
MW-3	02/17/09	5979.22	18.63	ND		5960.59
MW-3	08/25/09	5979.22	18.55	ND		5960.67
MW-3	02/16/10	5979.22	18.75	ND		5960.47
MW-3	09/27/10	5979.22	DRY	ND		DRY
MW-3	02/01/11	5979.22	DRY	ND		DRY
MW-3	09/23/11	5979.22	DRY	ND		DRY
MW-3	02/22/12	5979.22	DRY	ND		DRY
MW-3	06/05/13	5979.22	DRY	ND		DRY
MW-3	09/11/13	5979.22	DRY	ND		DRY
MW-3	12/11/13	5979.22	DRY	ND		DRY
MW-3	04/04/14	5979.22	DRY	ND		DRY
MW-3	10/24/14	5979.22	DRY	ND		DRY
MW-3	05/31/15	5979.22	DRY	ND		DRY
MW-3	11/21/15	5979.22	DRY	ND		DRY
MW-3	04/17/16	5979.22	15.65	ND		5963.57
MW-3 was abandoned and replaced with MW-3R on May 20, 2016						

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	08/13/03	5976.22	17.22	ND		5959.00
MW-4	11/15/03	5976.22	16.40	ND		5959.82
MW-4	02/17/04	5976.22	16.01	ND		5960.21
MW-4	02/29/04	5976.22	15.89	ND		5960.33
MW-4	05/11/04	5976.22	16.03	ND		5960.19
MW-4	08/19/04	5976.22	17.24	ND		5958.98
MW-4	11/16/04	5976.22	17.00	ND		5959.22
MW-4	02/21/05	5976.22	16.43	ND		5959.79
MW-4	05/18/05	5976.22	16.35	ND		5959.87
MW-4	08/23/05	5976.22	17.18	ND		5959.04
MW-4	11/08/05	5976.22	16.91	ND		5959.31
MW-4	02/23/06	5976.22	16.23	ND		5959.99
MW-4	05/23/06	5976.22	16.92	ND		5959.30
MW-4	11/08/06	5976.22	15.97	ND		5960.25
MW-4	02/24/07	5976.22	15.66	ND		5960.56
MW-4	05/24/07	5976.22	15.66	ND		5960.56
MW-4	08/21/07	5976.22	16.33	ND		5959.89
MW-4	11/13/07	5976.22	16.30	ND		5959.92
MW-4	02/12/08	5976.22	16.81	ND		5959.41
MW-4	08/26/08	5976.22	16.62	ND		5959.60
MW-4	02/17/09	5976.22	17.06	ND		5959.16
MW-4	08/25/09	5976.22	17.17	ND		5959.05
MW-4	02/16/10	5976.22	16.55	ND		5959.67
MW-4	09/27/10	5976.22	17.15	ND		5959.07
MW-4	02/01/11	5976.22	16.51	ND		5959.71
MW-4	09/23/11	5976.22	17.30	ND		5958.92
MW-4	02/22/12	5976.22	16.53	ND		5959.69
MW-4	02/23/06	5976.22	15.57	ND		5960.65
MW-4	05/23/06	5976.22	15.04	ND		5961.18
MW-4	05/24/07	5976.22	NA	ND		NA
MW-4	08/26/08	5976.22	17.23	ND		5958.99
MW-4	02/17/09	5976.22	18.70	ND		5957.52
MW-4	08/25/09	5976.22	14.45	ND		5961.77
MW-4	09/23/11	5976.22	14.62	ND		5961.60
MW-4	06/05/13	5976.22	16.51	ND		5959.71
MW-4	09/11/13	5976.22	16.52	ND		5959.70
MW-4	12/11/13	5976.22	15.87	ND		5960.35
MW-4	04/04/14	5976.22	15.71	ND		5960.51
MW-4	10/24/14	5976.22	17.24	ND		5958.98
MW-4	05/31/15	5976.22	15.89	ND		5960.33
MW-4	11/21/15	5976.22	15.76	ND		5960.46
MW-4	04/17/16	5976.22	16.75	ND		5959.47

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Hammond #41A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	10/15/16	5976.22	16.29	ND		5959.93
MW-4	03/28/17	5976.22	15.46	ND		5960.76
MW-4	06/07/17	5976.22	15.84	ND		5960.38
MW-4	07/28/17	5976.22	16.51	ND		5959.71
MW-1R	10/15/16	5978.06	17.12	ND		5960.94
MW-1R	03/28/17	5978.06	16.93	ND		5961.13
MW-1R	06/07/17	5978.06	17.28	ND		5960.78
MW-1R	07/28/17	5978.06	17.89	ND		5960.17
MW-2R	10/15/16	5976.83	16.68	ND		5960.15
MW-2R	03/28/17	5976.83	15.85	ND		5960.98
MW-2R	06/07/17	5976.83	16.23	ND		5960.60
MW-2R	07/28/17	5976.83	16.88	ND		5959.95
MW-3R	10/15/16	5978.48	18.23	ND		5960.25
MW-3R	03/28/17	5978.48	17.42	ND		5961.06
MW-3R	06/07/17	5978.48	17.79	ND		5960.69
MW-3R	07/28/17	5978.48	18.43	ND		5960.05
MW-5	10/15/16	5977.74	17.55	ND		5960.19
MW-5	03/28/17	5977.74	16.88	ND		5960.86
MW-5	06/07/17	5977.74	17.22	ND		5960.52
MW-5	07/28/17	5977.74	17.86	ND		5959.88
MW-6	10/15/16	5978.44	18.05	ND		5960.39
MW-6	03/28/17	5978.44	17.24	ND		5961.20
MW-6	06/07/17	5978.44	17.59	ND		5960.85
MW-6	07/28/17	5978.44	18.22	ND		5960.22
MW-7	10/15/16	5978.63	18.17	ND		5960.46
MW-7	03/28/17	5978.63	17.35	ND		5961.28
MW-7	06/07/17	5978.63	17.71	ND		5960.92
MW-7	07/28/17	5978.63	18.38	ND		5960.25

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

TABLE 3 - GROUNDWATER ANYALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	05/21/97	150	60.1	56.7	484
MW-1	06/09/97	190	12.3	36.9	181
MW-1	09/17/97	1230	<5	263	830
MW-1	12/09/97	685	<1	141	261
MW-1	03/20/98	662	3.06	78.7	292
MW-1	06/04/98	286	2.43	38.4	140
MW-1	09/10/98	391	<1	34	144
MW-1	12/17/98	330	1.6	30	150
MW-1	03/23/99	197	<1	15.8	74.1
MW-1	06/11/99	260	3.3	42	270
MW-1	09/20/99	460	16	78	440
MW-1	12/09/99	110	3.9	13	53
MW-1	03/31/00	98	3.4	19	59
MW-1	06/09/00	290	9.7	49	290
MW-1	09/21/00	110	1.7	16	44
MW-1	12/05/00	10	<0.5	3.6	4.3
MW-1	06/04/01	39	0.6	5.5	16
MW-1	08/07/01	33	<0.5	2.8	4.9
MW-1	11/27/01	3.2	<0.5	0.6	<0.5
MW-1	02/25/02	3.9	<0.5	0.5	<1
MW-1	05/21/02	4.4	<0.5	<0.5	<1
MW-1	08/21/02	NS	NS	NS	NS
MW-1	09/05/02	2.7	0.5	2.2	1.4
MW-1	11/15/03	NS	NS	NS	NS
MW-1	02/29/04	NS	NS	NS	NS
MW-1	05/11/04	NS	NS	NS	NS
MW-1	08/19/04	NS	NS	NS	NS
MW-1	11/16/04	NS	NS	NS	NS
MW-1	02/21/05	NS	NS	NS	NS
MW-1	05/18/05	NS	NS	NS	NS
MW-1	08/23/05	NS	NS	NS	NS
MW-1	11/08/05	NS	NS	NS	NS
MW-1	02/23/06	NS	NS	NS	NS
MW-1	05/23/06	NS	NS	NS	NS
MW-1	11/08/06	NS	NS	NS	NS
MW-1	05/24/07	26.6	106	77.4	446
MW-1	08/21/07	NS	NS	NS	NS
MW-1	11/13/07	NS	NS	NS	NS
MW-1	02/12/08	NS	NS	NS	NS
MW-1	08/26/08	NS	NS	NS	NS
MW-1	02/17/09	NS	NS	NS	NS
MW-1	08/25/09	NS	NS	NS	NS

TABLE 3 - GROUNDWATER ANALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	02/16/10	NS	NS	NS	NS
MW-1	02/01/11	NS	NS	NS	NS
MW-1	09/23/11	NS	NS	NS	NS
MW-1	02/22/12	NS	NS	NS	NS
MW-1	06/05/13	NS	NS	NS	NS
MW-1	09/11/13	NS	NS	NS	NS
MW-1	12/11/13	NS	NS	NS	NS
MW-1	04/04/14	NS	NS	NS	NS
MW-1	10/24/14	NS	NS	NS	NS
MW-1	05/31/15	NS	NS	NS	NS
MW-1	11/21/15	NS	NS	NS	NS
MW-1	04/17/16	NS	NS	NS	NS
MW-1 was abandoned and replaced with MW-1R on May 20, 2016					

TABLE 3 - GROUNDWATER ANALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-2	10/15/99	<0.5	<0.5	<0.5	<0.5
MW-2	08/28/00	69	1.3	9.4	28
MW-2	06/04/01	<0.5	<0.5	<0.5	<0.5
MW-2	08/07/01	<0.5	<0.5	<0.5	<0.5
MW-2	11/27/01	<0.5	<0.5	<0.5	<0.5
MW-2	02/25/02	<0.5	<0.5	<0.5	<1
MW-2	05/21/02	<0.5	<0.5	<0.5	<1
MW-2	08/21/02	NS	NS	NS	NS
MW-2	10/08/02	<0.5	<0.5	<0.5	0.5
MW-2	11/15/03	NS	NS	NS	NS
MW-2	02/29/04	NS	NS	NS	NS
MW-2	05/11/04	NS	NS	NS	NS
MW-2	08/19/04	NS	NS	NS	NS
MW-2	11/16/04	NS	NS	NS	NS
MW-2	02/21/05	NS	NS	NS	NS
MW-2	05/18/05	NS	NS	NS	NS
MW-2	08/23/05	NS	NS	NS	NS
MW-2	11/08/05	NS	NS	NS	NS
MW-2	02/23/06	NS	NS	NS	NS
MW-2	05/23/06	NS	NS	NS	NS
MW-2	11/08/06	NS	NS	NS	NS
MW-2	05/24/07	NS	NS	NS	NS
MW-2	08/21/07	NS	NS	NS	NS
MW-2	11/13/07	NS	NS	NS	NS
MW-2	02/12/08	NS	NS	NS	NS
MW-2	08/26/08	NS	NS	NS	NS
MW-2	02/17/09	NS	NS	NS	NS
MW-2	08/25/09	NS	NS	NS	NS
MW-2	02/16/10	NS	NS	NS	NS
MW-2	09/27/10	NS	NS	NS	NS
MW-2	02/01/11	NS	NS	NS	NS
MW-2	09/23/11	NS	NS	NS	NS
MW-2	02/22/12	NS	NS	NS	NS
MW-2	06/05/13	NS	NS	NS	NS
MW-2	09/11/13	NS	NS	NS	NS
MW-2	12/11/13	NS	NS	NS	NS
MW-2	04/04/14	NS	NS	NS	NS
MW-2	10/24/14	NS	NS	NS	NS
MW-2	05/31/15	NS	NS	NS	NS
MW-2	11/21/15	NS	NS	NS	NS
MW-2	04/17/16	NS	NS	NS	NS
MW-2 was abandoned and replaced with MW-2R on May 20, 2016					

TABLE 3 - GROUNDWATER ANALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-3	10/15/99	<0.5	<0.5	<0.5	<0.5
MW-3	08/28/00	<0.5	<0.5	<0.5	<0.5
MW-3	06/04/01	NS	NS	NS	NS
MW-3	08/07/01	<0.5	<0.5	<0.5	<0.5
MW-3	11/27/01	NS	NS	NS	NS
MW-3	02/25/02	NS	NS	NS	NS
MW-3	05/21/02	NS	NS	NS	NS
MW-3	08/21/02	NS	NS	NS	NS
MW-3	10/08/02	<0.5	<0.5	<0.5	0.6
MW-3	11/15/03	NS	NS	NS	NS
MW-3	02/29/04	NS	NS	NS	NS
MW-3	05/11/04	NS	NS	NS	NS
MW-3	08/19/04	NS	NS	NS	NS
MW-3	11/16/04	NS	NS	NS	NS
MW-3	02/21/05	NS	NS	NS	NS
MW-3	05/18/05	NS	NS	NS	NS
MW-3	08/23/05	NS	NS	NS	NS
MW-3	11/08/05	NS	NS	NS	NS
MW-3	02/23/06	NS	NS	NS	NS
MW-3	05/23/06	NS	NS	NS	NS
MW-3	11/08/06	NS	NS	NS	NS
MW-3	05/24/07	NS	NS	NS	NS
MW-3	08/21/07	NS	NS	NS	NS
MW-3	11/13/07	NS	NS	NS	NS
MW-3	02/12/08	NS	NS	NS	NS
MW-3	08/26/08	NS	NS	NS	NS
MW-3	02/17/09	NS	NS	NS	NS
MW-3	08/25/09	NS	NS	NS	NS
MW-3	02/16/10	NS	NS	NS	NS
MW-3	09/27/10	NS	NS	NS	NS
MW-3	02/01/11	NS	NS	NS	NS
MW-3	09/23/11	NS	NS	NS	NS
MW-3	02/22/12	NS	NS	NS	NS
MW-3	06/05/13	NS	NS	NS	NS
MW-3	09/11/13	NS	NS	NS	NS
MW-3	12/11/13	NS	NS	NS	NS
MW-3	04/04/14	NS	NS	NS	NS
MW-3	10/24/14	NS	NS	NS	NS
MW-3	05/31/15	NS	NS	NS	NS
MW-3	11/21/15	NS	NS	NS	NS
MW-3	04/17/16	NS	NS	NS	NS
MW-3 was abandoned and replaced with MW-3R on May 20, 2016					

TABLE 3 - GROUNDWATER ANALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-4	08/13/03	7.3	128	44.8	625
MW-4	11/15/03	19.2	113	84.6	1200
MW-4	02/17/04	22.3	109	83.2	774
MW-4	02/29/04	NS	NS	NS	NS
MW-4	05/11/04	27.2	255	56.6	685
MW-4	08/19/04	3.1	<0.5	2.6	5.6
MW-4	11/16/04	55.2	53.3	70.7	306
MW-4	02/21/05	11.2	20.2	28.9	196
MW-4	05/18/05	140	398	252	1710
MW-4	08/23/05	<1	<1	<1	5.6
MW-4	11/08/05	13.9	20.1	20.1	149
MW-4	02/23/06	64.2	195	118	641
MW-4	05/23/06	49.2	188	85.1	304
MW-4	11/08/06	1.7	1.8	2.2	4.7
MW-4	02/24/07	NS	NS	NS	NS
MW-4	05/24/07	25.8	103	74.3	399
MW-4	08/21/07	15.9	81	59.6	322
MW-4	11/13/07	21.7	83	93.4	343
MW-4	02/12/08	24.2	74.5	99.1	362
MW-4	08/26/08	15.9	60.6	73.5	255
MW-4	02/17/09	14.3	50.6	85.3	246
MW-4	08/25/09	2.7	23.4	28.3	127
MW-4	02/16/10	13.8	1.2	52.9	79.9
MW-4	09/27/10	2.6	<2	3.2	4.2 J
MW-4	02/01/11	11.8	0.88 J	82.7	249
MW-4	09/23/11	<1	<1	<1	<3
MW-4	02/22/12	8.5	0.34 J	69.4	88.7
MW-4	02/23/06	<1	<1	<1	<2
MW-4	05/23/06	<1	<1	<1	<2
MW-4	05/24/07	<1	<1	<1	<2
MW-4	08/26/08	<1	<1	<1	<3
MW-4	02/17/09	<1	<1	<1	<2
MW-4	08/25/09	<1	<1	<1	<2
MW-4	09/23/11	<1	<1	<1	1.8 J
MW-4	06/05/13	0.73	<0.30	16	4
MW-4	09/11/13	<0.14	<0.20	<0.30	<0.23
MW-4	12/11/13	<0.20	<0.38	2	11
MW-4	04/04/14	<0.20	<0.38	16	23
MW-4	10/24/14	<0.38	<0.70	0.53 J	<1.6
MW-4	05/31/15	0.64 J	<5.0	2.6	3.0 J
MW-4	11/21/15	2.8	<1.0	4	<3.0
MW-4	04/17/16	<1.0	<5.0	15	7

TABLE 3 - GROUNDWATER ANALYTICAL RESULTS

Hammond #41A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-4	10/15/16	2.0	<5.0	18	<5.0
MW-4	03/28/17	<1.0	<5.0	18	12
MW-4	06/07/17	<1.0	<5.0	8.7	<5.0
MW-4	07/28/17	<1.0	<5.0	1.3	<5.0
MW-1R	10/15/16	<1.0	<5.0	<1.0	<5.0
MW-1R	03/28/17	<1.0	<5.0	<1.0	<5.0
MW-1R	06/07/17	<1.0	<5.0	<1.0	<5.0
MW-1R	07/28/17	<1.0	<5.0	<1.0	<5.0
MW-2R	10/15/16	<1.0	<5.0	<1.0	<5.0
MW-2R	03/28/17	<1.0	<5.0	<1.0	<5.0
MW-2R	06/07/17	<1.0	<5.0	<1.0	<5.0
MW-2R	07/28/17	<1.0	<5.0	<1.0	<5.0
MW-3R	10/15/16	<1.0	<5.0	<1.0	<5.0
MW-3R	03/28/17	<1.0	<5.0	<1.0	<5.0
MW-3R	06/07/17	<1.0	<5.0	<1.0	<5.0
MW-3R	07/28/17	<1.0	<5.0	<1.0	<5.0
MW-5	10/15/16	<1.0	<5.0	1.9	5.0
MW-5	03/28/17	<1.0	<5.0	1.2	<5.0
MW-5	06/07/17	<1.0	<5.0	3.7	12.0
MW-5	07/28/17	<1.0	<5.0	4.2	11.0
MW-6	10/15/16	<1.0	<5.0	<1.0	<5.0
MW-6	03/28/17	<1.0	<5.0	<1.0	<5.0
MW-6	06/07/17	<1.0	<5.0	<1.0	<5.0
MW-6	07/28/17	<1.0	<5.0	<1.0	<5.0
MW-7	10/15/16	<1.0	<5.0	<1.0	<5.0
MW-7	03/28/17	<1.0	<5.0	<1.0	<5.0
MW-7	06/07/17	<1.0	<5.0	<1.0	<5.0
MW-7	07/28/17	<1.0	<5.0	<1.0	<5.0

Notes:

µg/L = micrograms per liter

Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission (NMWQCC) standards.

"J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result is an approximate value.

"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

"NS" = Monitoring well not sampled

FIGURES

FIGURE 1 - GROUNDWATER ANALYTICAL RESULTS MARCH 28, 2017

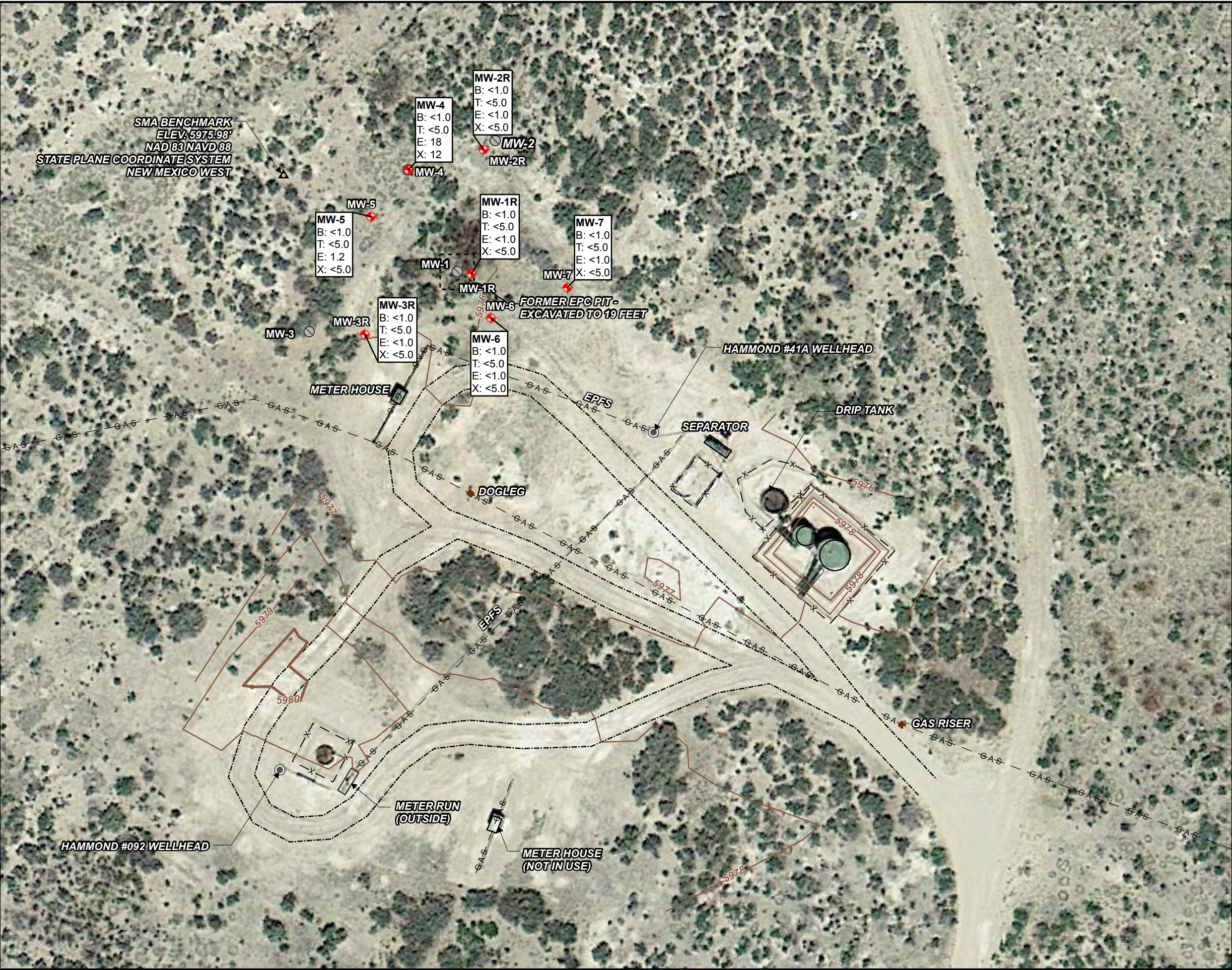
FIGURE 2 - GROUNDWATER ELEVATION MAP MARCH 28, 2017

FIGURE 3 - GROUNDWATER ANALYTICAL RESULTS JUNE 7, 2017

FIGURE 4 - GROUNDWATER ELEVATION MAP JUNE 7, 2017

FIGURE 5 - GROUNDWATER ANALYTICAL RESULTS JULY 28, 2017

FIGURE 6 - GROUNDWATER ELEVATION MAP JULY 28, 2017

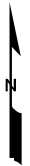


LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- MONITORING WELL
- ABANDONED MONITORING WELL
- WELLHEAD
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:
RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
µg/L = MICROGRAMS PER LITER
<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



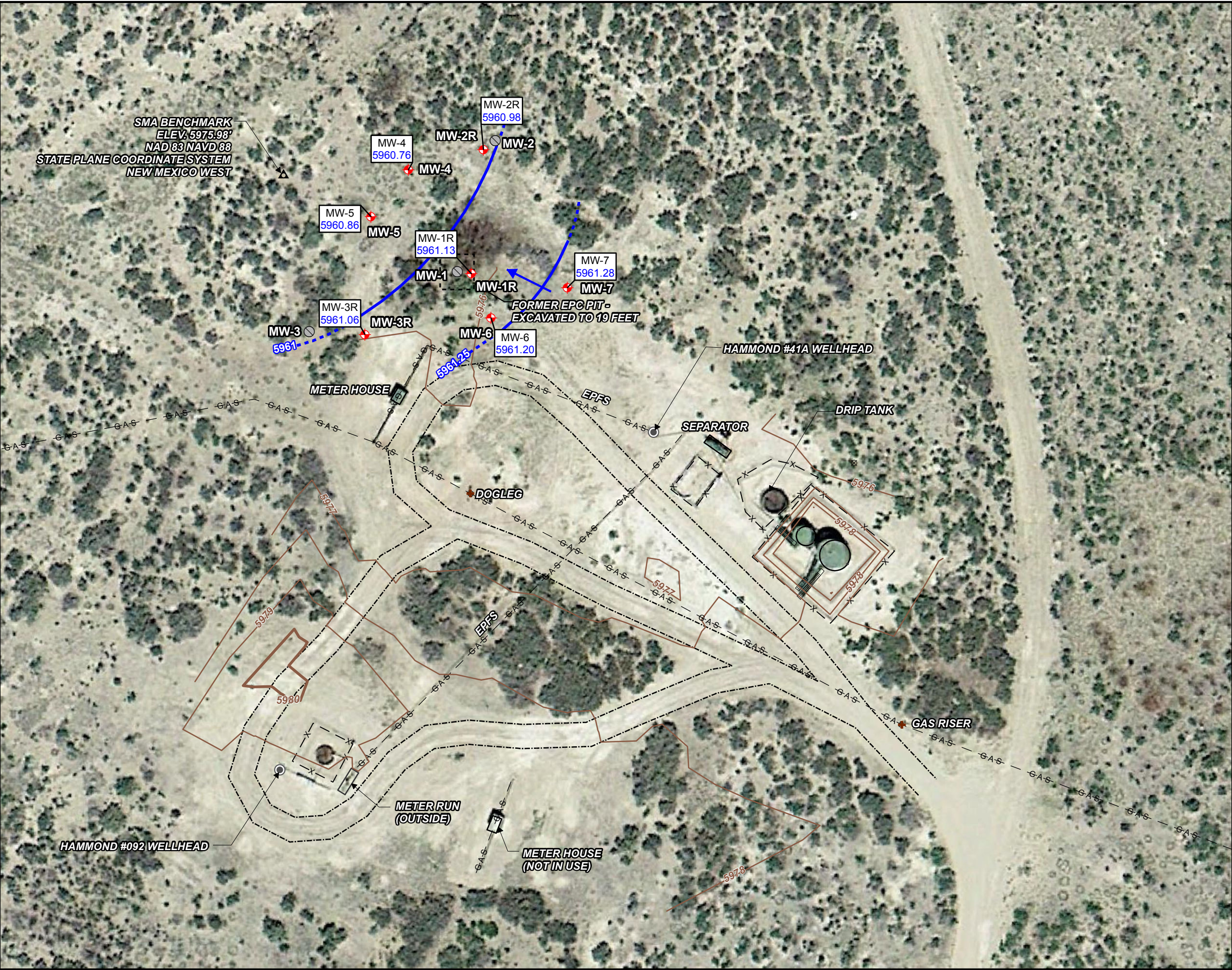
REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	4/13/2017	SLG	SLG	SRV

TITLE:
**GROUNDWATER ANALYTICAL RESULTS
MARCH 28, 2017**

PROJECT: **HAMMOND #41A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:
1

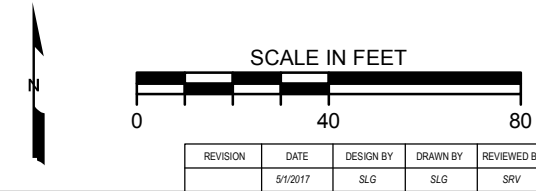


LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- MONITORING WELL
- ABANDONED MONITORING WELL
- WELLHEAD
- SMA BENCHMARK

NOTES:

- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED, FEET ABOVE MEAN SEA LEVEL)
- DIRECTION OF APPARENT GROUNDWATER FLOW



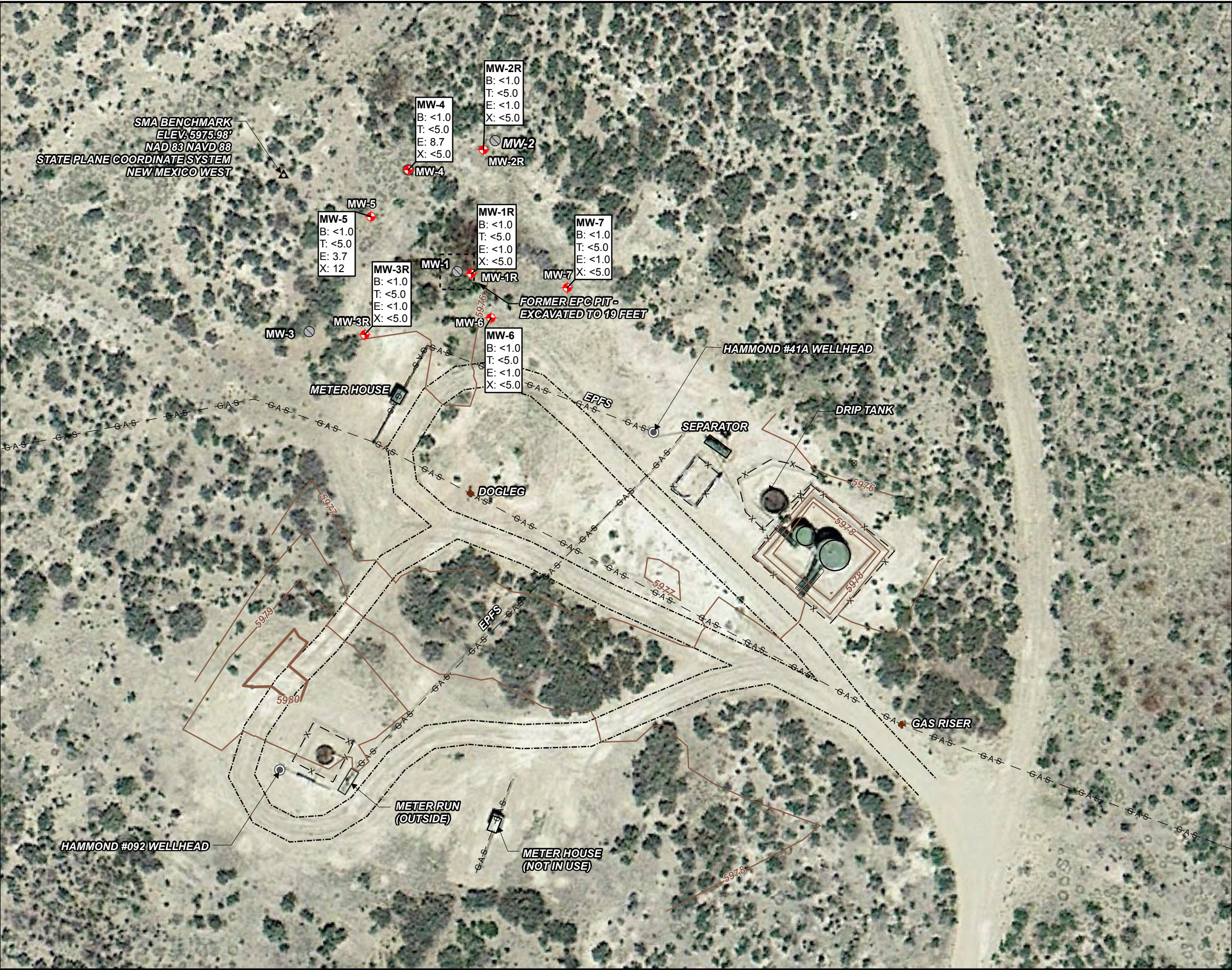
TITLE: **GROUNDWATER ELEVATION MAP
MARCH 28, 2017**

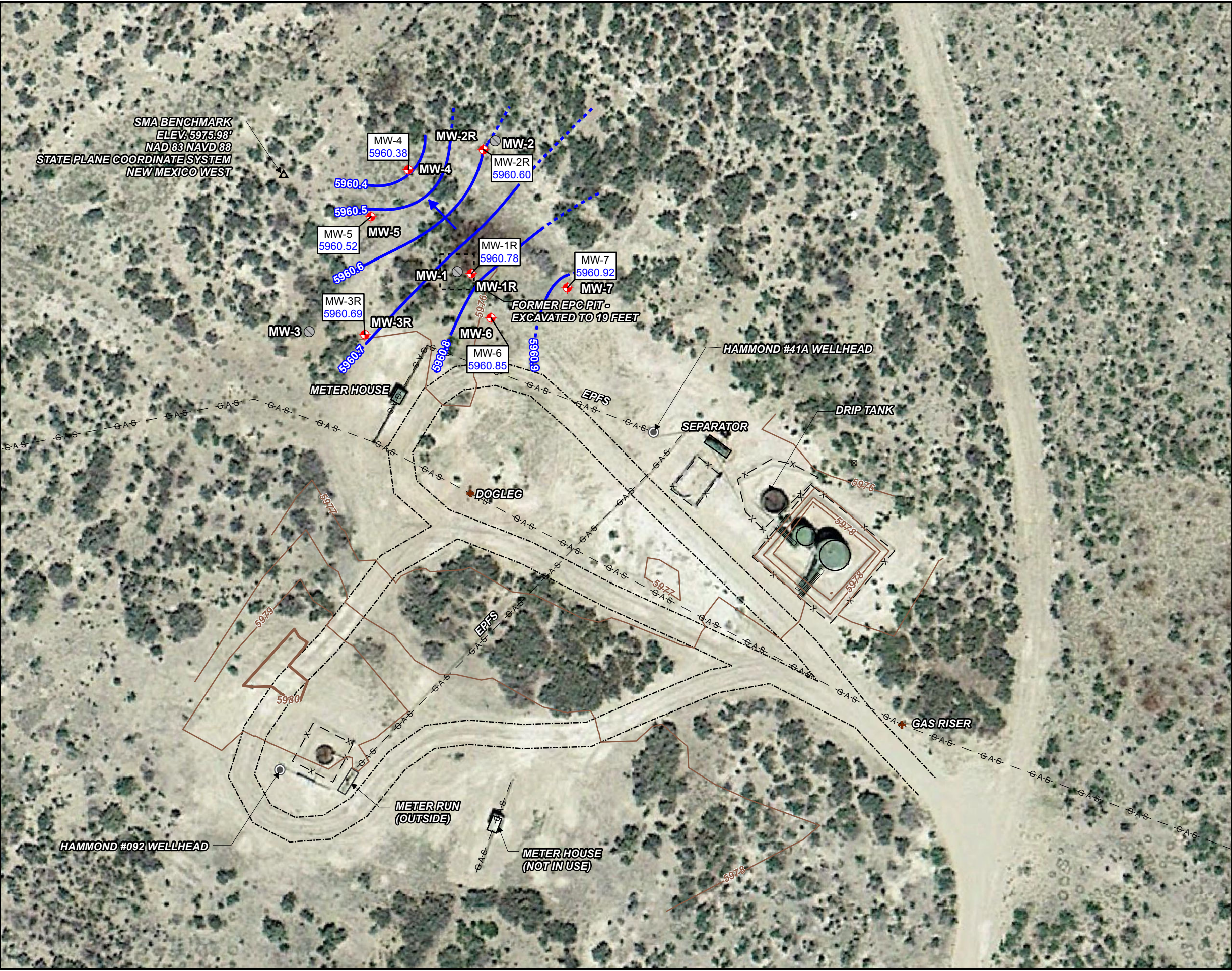
PROJECT: **HAMMOND #41A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

2



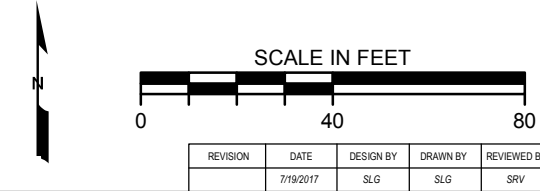


LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- MONITORING WELL
- ABANDONED MONITORING WELL
- WELLHEAD
- SMA BENCHMARK

NOTES:

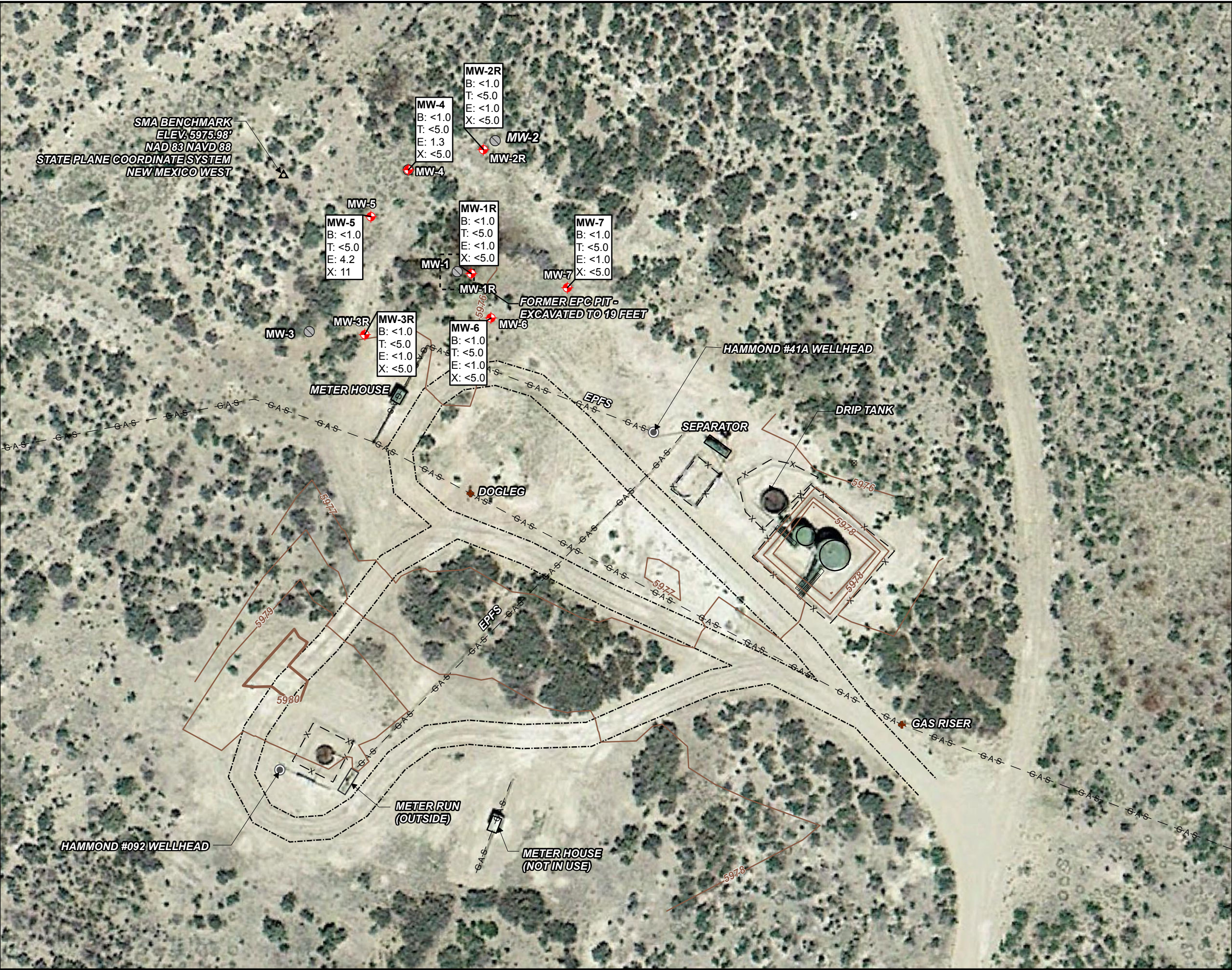
- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED, FEET ABOVE MEAN SEA LEVEL)
- DIRECTION OF APPARENT GROUNDWATER FLOW



TITLE: **GROUNDWATER ELEVATION MAP**
JUNE 7, 2017

PROJECT: **HAMMOND #41A**
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

Stantec
Figure No.: **4**

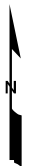


LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- MONITORING WELL
- ABANDONED MONITORING WELL
- WELLHEAD
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:
RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
µg/L = MICROGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT

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



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	8/7/2017	SLG	SLG	SRV

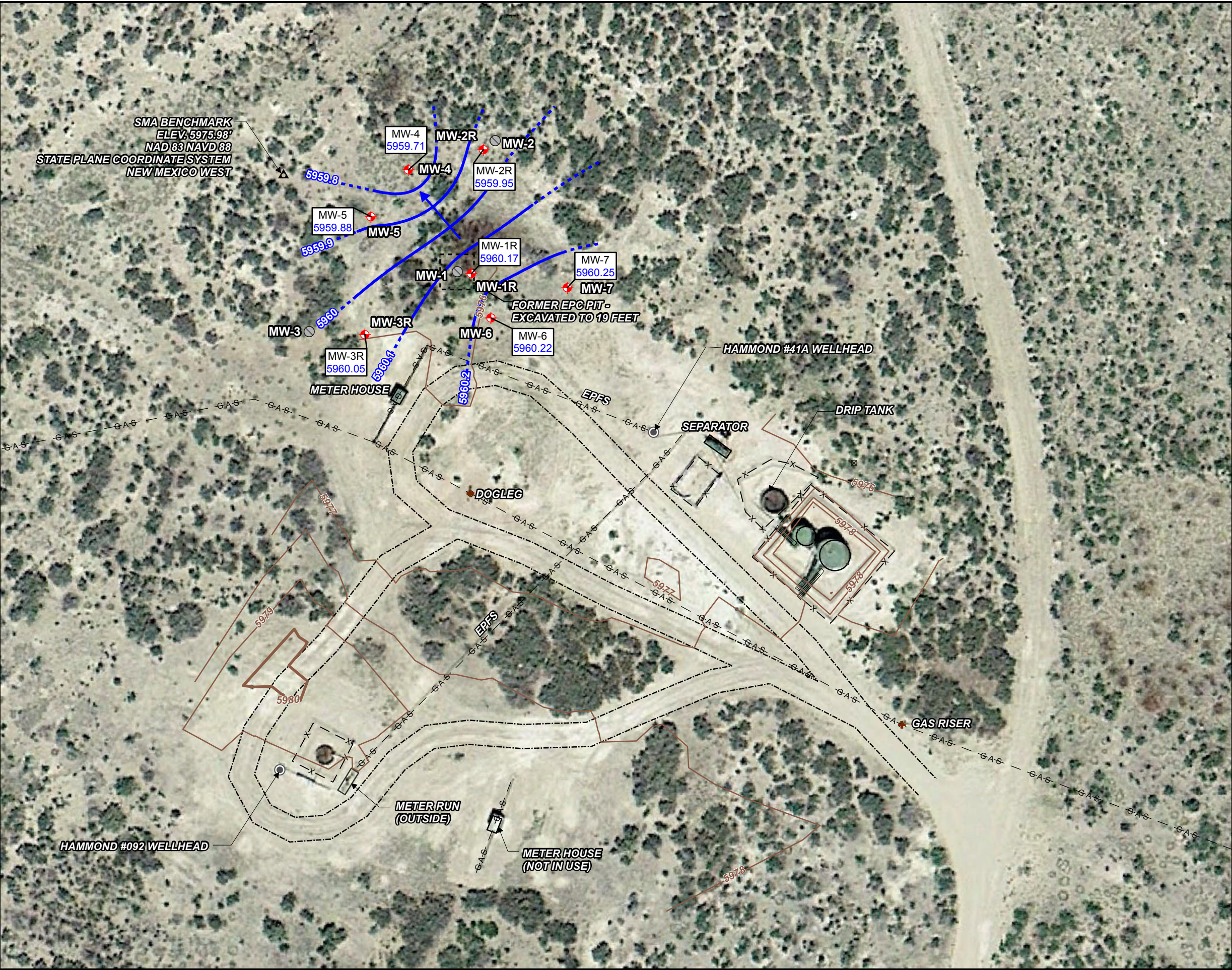
TITLE:
**GROUNDWATER ANALYTICAL RESULTS
JULY 28, 2017**

PROJECT:
**HAMMOND #41A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

5

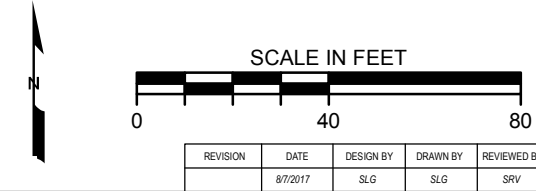


LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- MONITORING WELL
- ABANDONED MONITORING WELL
- WELLHEAD
- SMA BENCHMARK

NOTES:

- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED, FEET ABOVE MEAN SEA LEVEL)
- DIRECTION OF APPARENT GROUNDWATER FLOW



TITLE: **GROUNDWATER ELEVATION MAP
JULY 28, 2017**

PROJECT: **HAMMOND #41A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

6

ATTACHMENT A

SOIL BORING LOGS AND MONITORING WELL CONSTRUCTION REPORTS

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1

Well # MW-1

Page 1 of

Project Name EPFS GW PITS

Project Number 17520 Phase 6001

Project Location Hammond 4/A 89894

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site

Client Personnel On-Site

Drilling Method 1/4 ID HSA

Air Monitoring Method PID

Elevation

Borehole Location T27-R8-S25-LtrO

GWL Depth

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 5/5/97 - 1000

Date/Time Completed 5/5/97 - 1000

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5										
10										
15				BACKFILL to 19'						-GW@ 16.1' BGS
20				Gry saturated clayey SAND						
25										
30				TOB26						
35										
40										

Comments:

No samples collected. Backfill to GW. Will drill to 26' & set well.
Slight hydrocarbon odor on EWLI.

Geologist Signature

Tom Chance

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1

Well # MW-1

Page 1 of 1

Project Name EPFS GW

Project Number 17520

Phase 6002

Site Location Hammond 4/A 89894

On-Site Geologist

CM CHANCE

Personnel On-Site

D CHARLEY

Contractors On-Site

Client Personnel On-Site

Elevation

Well Location T27S25 R8 LTR0

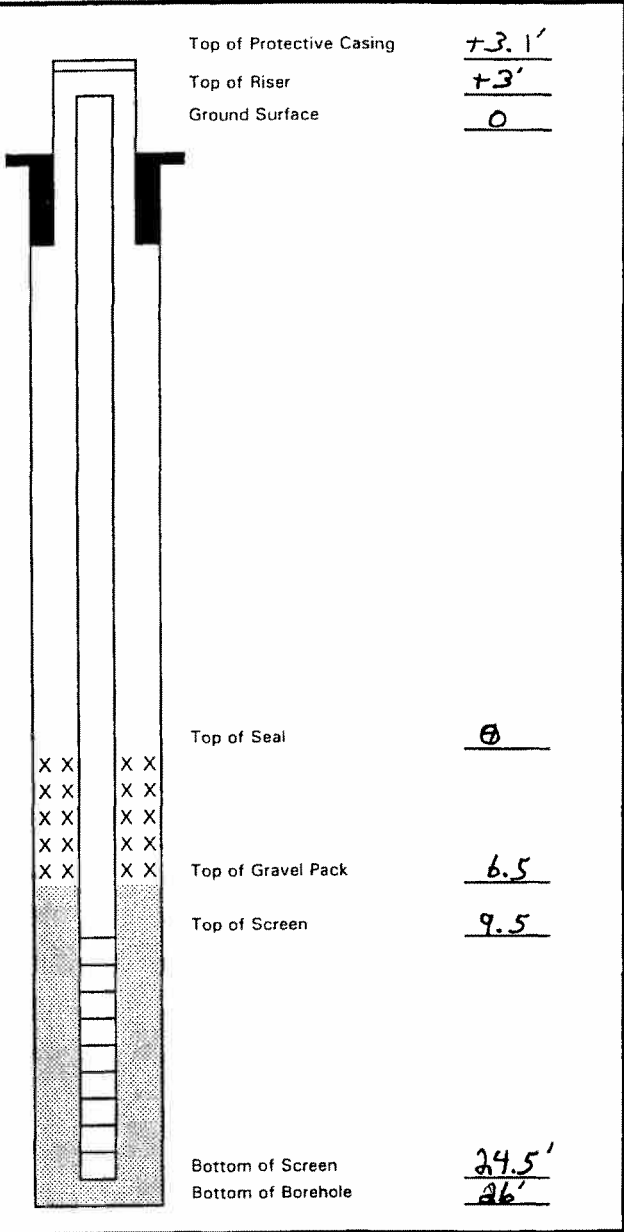
GWL Depth 16.3' 865

Installed By K Padilla

Date/Time Started 5/5/97 - 1100

Date/Time Completed 5/5/97 - 1220

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing	8" steel well vault	+3.1'
Bottom of Protective Casing		2.0'
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		N/A
Bottom of Concrete		N/A
Top of Grout	Type I/II Portland cement	N/A
Bottom of Grout	Powder Bentonite	N/A
Top of Well Riser	4" SCH 40 PVC	13'
Bottom of Well Riser	FLUSH THREAD	9.5'
Top of Well Screen	4" SCH 40 PVC	9.5'
Bottom of Well Screen	0.01 SLOT FLUSH THREAD	24.5'
Top of Peltonite Seal	ENVIROPLUG	6.5'
Bottom of Peltonite Seal		9.5'
Top of Gravel Pack	10-20 SILICA SAND	9.5'
Bottom of Gravel Pack		24.5'
Top of Natural Cave-In		24.5'
Bottom of Natural Cave-In		26'
Top of Groundwater		16.3'
Total Depth of Borehole		26'



Comments: Bent. seal hydrated w/ 10 gal potable water. Hydrocarbon odor on FWLT

CM Chance

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Albuquerque, New Mexico 87401

505-228-2282 FAX (505) 326-2388

Borehole #

Well #

Page

1 MW 2

1 of 2

Project Name

Project Number

Project Location

EPFS: GROUNDWATER

Phase

HAMMOND HIA

Well Logged By

Personnel On-Site

Contractors On-Site

Client Personnel On-Site

C. CULLICOTT

R. PADILLA & D. PADILLA

Drilling Method

Air Monitoring Method

AUGER

PID

Location

Borehole Location

GWL Depth

Logged By

Drilled By

Date/Time Started

Date/Time Completed

T27N R8W S25 D

15.25'

C. CULLICOTT

R. PADILLA & D. PADILLA

9/10/99 10:00 AM

9/10/99

MW 1 89894

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ BH S			Drilling Conditions & Blow Counts
0									
5	① 5-6'		① POOR RECOVERY ~3" CONSOLIDATED BROWN SILT W/ TREE ROOTS + CALCIF. CLEAN.						① 14 BLOWS SS 0.0 ppm
10	② 10-12'		② FULL RECOVERY 10-10 1/2 - LOOSE BROWN FINE SAND. 10 1/2 - 11' BROWN SILTY SAND, STIFFER THAN ABOVE. REST LOOSE FINE TO MED SAND. ALL DRY, NO STAIN OR ODOR.						② 24 BLOWS SS 0.0 ppm
15	③ 15-17'		③ FULL RECOVERY. FINE SAND, WATER SATURATED. UNIFORM CLEAN						③ 9 BLOWS SS 0.0 ppm
20			15'-25' SAND WITH SLIGHTLY MORE CLAY CONTENT THAN #3.						
25			T.D. 25'						
30									
35									
40									

T27-R8

89894

Comments:

SUNNY, BREEZY, WARM

DTW 14.3' IN MW 1

Geologist Signature

Cathy Cullicott

MONITORING WELL INSTALLATION RECORD

Phillip Environmental Services Corp.

1000 Road

New Mexico 87401

505 376-2262 FAX (505) 326-2388

Borehole # 1

Well # MW2

Page 2 of 2

Project Name EPFS GROUNDWATER

Project Number 62800018 Phase

Project Location HAMMOND 41A

On-Site Geologist C. CULLICOTT

Personnel On-Site K. PADILLA & D. PADILLA

Contractors On-Site

Client Personnel On-Site

Elevation

Well Location

SWL Depth 15.25'

Installed By K. PADILLA & D. PADILLA

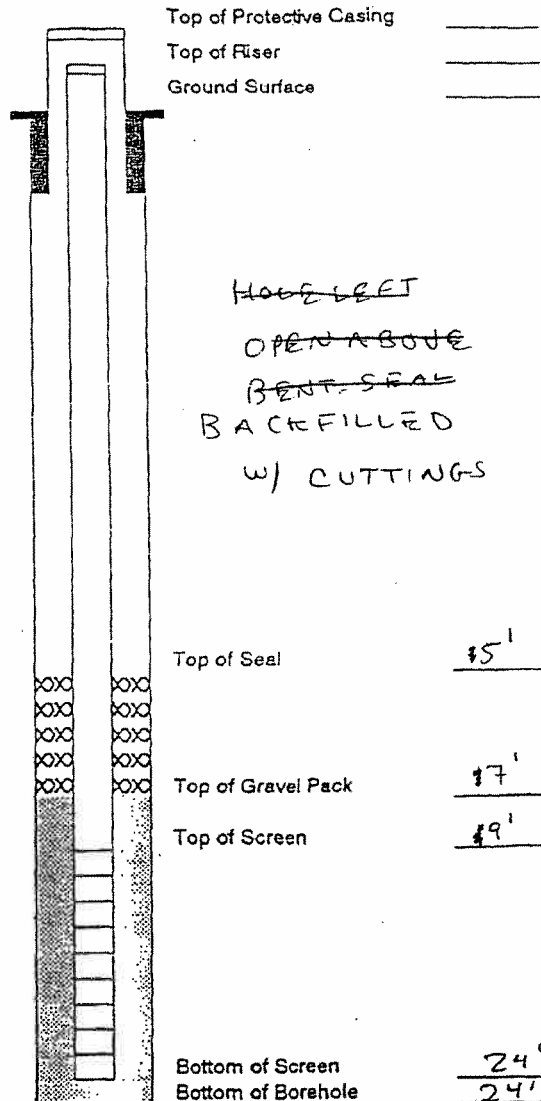
Date/Time Started 9/10/99 10am

Date/Time Completed 9/10/99 12:10pm

meter 89894

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	2"	+1'
Bottom of Well Riser	2"	17'
Top of Well Screen	2"	19'
Bottom of Well Screen	2"	24'
Top of Peltonite Seal	BENT.	15'
Bottom of Peltonite Seal	CHIPS	17'
Top of Gravel Pack	CO SAND	17'
Bottom of Gravel Pack	CO SAND	24'
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		24'



Comments: WELL DRILLED TO 25', AUGER FILLED WITH INFLOWING SAND, ABLE TO GET PIPE TO ~24' TO SET WELL

Well Developed w/ 7 gallons removed, 1:05-1:30pm WATER

Geologist Signature

Cathy Cullicott

LEVEL AFTER PURGING IS WITHIN

1/10' OF LEVEL BEFORE PURGE EXCELLENT PRODUCER

WATER IS TURBID, BUT HAS NO OBVIOUS ODOR.

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Albuquerque, New Mexico 87401

505-228-2282 FAX (505) 328-2388

Borehole #

Well #

Page

2
MW3
1 of 2

Project Name

Project Number

Project Location

EPFS G-W
02800018 Phase
HAMMOND HIA

Well Logged By

Personnel On-Site

Contractors On-Site

Client Personnel On-Site

C. CULLICOTT
K. PADILLA & D. PADILLA
Ø
Ø

Drilling Method

Air Monitoring Method

AUGER
PID

Location

Borehole Location

GWL Depth

Logged By

Drilled By

Date/Time Started

Date/Time Completed

T27N R8W S250
13.15'
C. CULLICOTT
K. PADILLA & D. PADILLA
9/10/99 12:15 PM
9/10/99 1:45 PM
MTC 89894

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
						BZ	BH	S	
0									
5	① 5-7		① 12" RECOVERY 6" STIFF BROWN SANDY SILT WITH VISIBLE LAYERING. THEN 6" OF LOOSE, FINE SAND. BOTH ARE BROWN, DRY, & CLEAN.						① 45 BLOWS SS 0.0ppm
10	② 10-12								② 32 BLOWS SS 0.0ppm
15	③ 15-17		② FULL RECOVERY UPPER 6" STIFF BROWN SILT. THEN 12" FINE TO MEDIUM SAND, LOOSE BOTTOM 6" STIFF BROWN CLAYEY SILT, DAMP, w/ TREE ROOTS & PIECES OF WOOD. ALL ARE CLEAN.						③ 9 BLOWS SS 0.0ppm
20									
25			③ WATER SATURATED FINE TO MEDIUM SAND, GRAY, CLEAN. Higher in fine sand @ TOP OF SPOON, COARSENS downward.						
30									
35									
40			TD 25'						

Comments:

SUNNY, BREEZY, WARM

Geologist Signature

Cathy Cullcott

MONITORING WELL INSTALLATION RECORD

Slip Environmental Services Corp.

1000 Road

New Mexico 87401

TEL 505-2262 FAX (505) 326-2388

Borehole # 2
Well # MW3
Page 2 of 2

Project Name EPFS.GW

Project Number 62800018 Phase
Project Location HAMMOND 41A

On-Site Geologist C. CULLICOTT
Personnel On-Site F. PADILLA & D. PADILLA
Contractors On-Site 8
Client Personnel On-Site 8

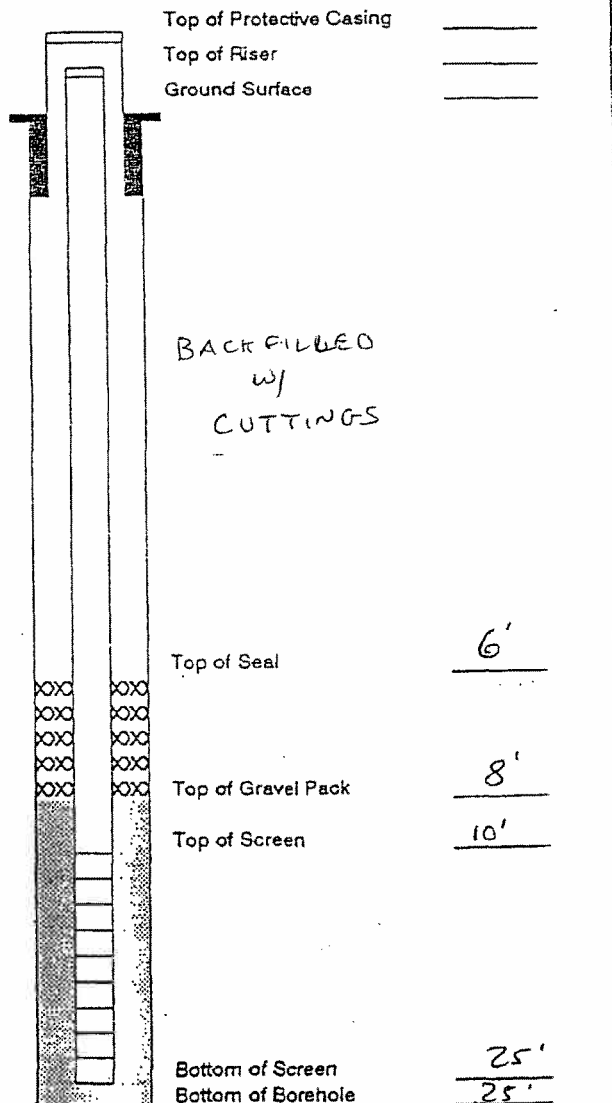
Elevation
Well Location T27N R8W S25 O
Well Depth 13.15'
Installed By F. PADILLA & D. PADILLA

Date/Time Started 9/10/99 12:15pm
Date/Time Completed 9/10/99 1:45pm

METER 89894

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	2"	+1
Bottom of Well Riser	2"	10'
Top of Well Screen	2"	10'
Bottom of Well Screen	2"	25'
Top of Peltonite Seal	BENT	6'
Bottom of Peltonite Seal	CHIPS	8'
Top of Gravel Pack	CO	8'
Bottom of Gravel Pack	SAND	25'
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		25'



Notes:

7 gallons bailed 1:55-2:15pm DTW AFTER BURGING
14.20' WATER IS TURBID, BUT HAS NO ODOR.

Geologist Signature

Cathy Cullicott

MONITORING WELL LOG FORM

Appears to be
MW-4

BORING LOCATION *Temp Well* *Bo. Well* *Hammer*

Project: *Hammer* Project No: *Temp Well II* Boring ID: *Temp Well*

Date Drilled: *8/6/03* Date Completed: *8/6/03* Northing: _____ Easting: _____

Logged By: *L. Benavente* Ground Surface Elevation (ft.): _____

Water Elevation (ft.): _____ Measuring Point (MP) Elevation (ft.): _____

Date Measured: _____ MP is Top of PVC Casing Datum: NGVD (1929)

Total Depth (ft.): *27.9* Drilling Contractor: *Envirotech*

Diameter (in.): *2"* Drilling Method: *HSA*

Screen: Diameter *2"* Depth _____ Slot Size *0.10*

Casing: Diameter *2"* Length _____ Type _____

Sand _____ Bentonite Seal _____ Cement Grout Seal _____

DEPTH (FEET)	GRAIN SIZE			MAX. PID READING (ppm)	BLOWS (8 IN.)	SAMPLE TYPE	SAMPLE RECOVERY	USCS/ASTM CLASSIFICATION	GRAPHIC LOG	LITHOLOGIC DESCRIPTION (USCS name; color; size and angularity of each component or plasticity; density; moisture content; additional facts)	ELEVATION (FEET)
	% GRAVEL	% SAND	% FINES								
0										0-5 Sandy Silt light brown	
5						c				5-10 sand w/ little silt light brown	
10						c				sand w/ fine gravels	
15						c				10-15 Light brown	
17						*c				17" ground water, sand	
20						c				15-20 sand w/ 50% gravel Gray	
25						c				20-25 sand w/ 50-60% gravel Gray	
27.9						c				25-27 SANDY Clay Gray	
30						c				Well set at 27.9 bgs	

PROJECT NO. _____

* C California Split Spoon Sampler (2.5" I.D.)
 S Standard penetration test sampler
 c Cuttings
 ▽ Elevation of ground water

PAGE 1 OF 1

MONITORING WELL COMPLETION FORM

Project No: Hammond
 Drilling Company: EnviroTech
 On Base: ☐ Off Base: ☐

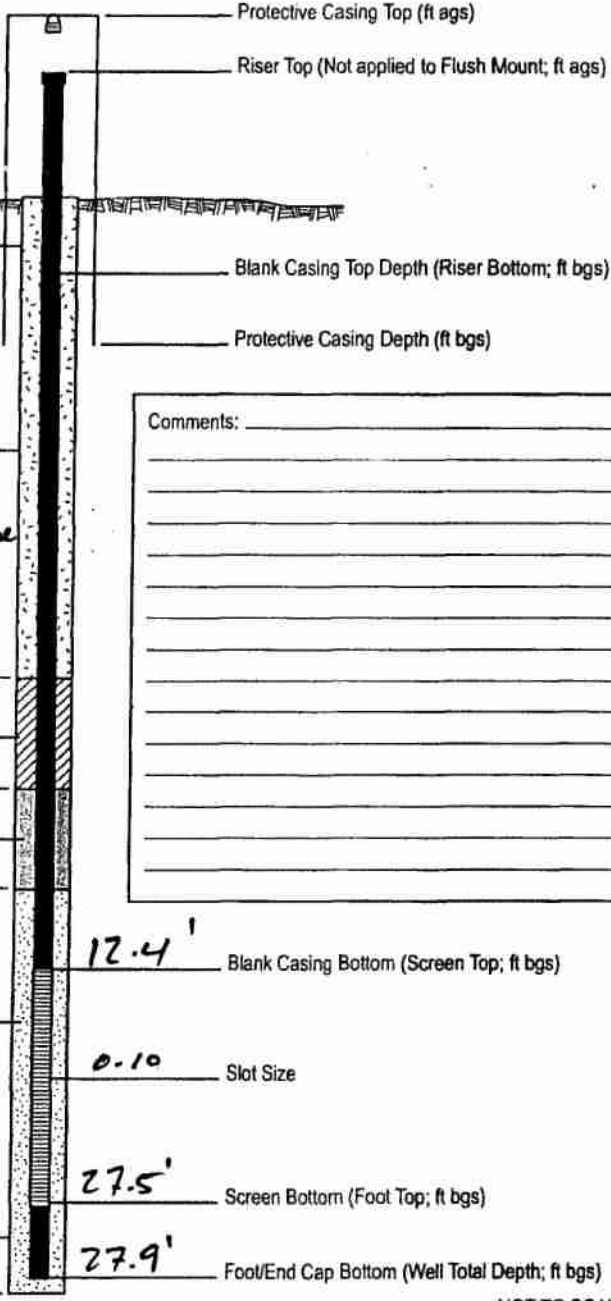
*Monitor well
 set as temporary*

*2 added hole plug
 Boys 1 hole plug
 added because
 of rain*
*Approx
 top of Bentonite*

Grout Bottom Depth (Seal Top Depth; ft bgs) 9.9
 Seal Material Bentonite
 Filter Pack Top (Seal Bottom Depth; ft bgs) 11.8
 Fine Sand Size -
 Bottom Fine Sand (ft bgs; if applicable) -

Coarse Sand Size 60/40

Filter Pack Bottom (ft bgs) 27.9
 Borehole Depth (ft bgs) 27.9



Comments:

NOT TO SCALE

Loc ID/Well ID Temp Well #1 Blank Casing Material/Diameter PVC 2"
 Geologist L. Bandy Screen Material/Diameter PVC 2"
 Date Construction Started Aug 6, 2003 Protective Casing Type -
 Date Construction Completed Aug 6, 2003 Borehole Diameter 2 inches
 LOC Type (i.e. Monitoring Well) Monitor Well Above Ground Completion ☐ Flush Mount ☐ Temp Well
 Riser Material/Diameter - USCS Classification of Screened Interval -

PROJECT NO.



MWH

Drilling Log

Monitoring Well

MW-1R

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC
 Location San Juan County, New Mexico Project Number 10509071
 Surface Elev. 5975.93 ft North 2016022 East 2782197
 Top of Casing 5978.06 ft Water Level Initial 5960.52 05/18/16 00:00 Static 5960.86 05/21/16 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 NA Type PVC
 Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica
 Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton
 Start Date 5/18/2016 Completion Date 5/21/2016 Checked By S. Varsa

COMMENTS

Adjacent to MW-1. Surface is dirt with vegetation, a tree nearby.

Bentonite Chips Bentonite Granules Grout Bentonite Pellets Sand Pack PP 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						Sand, silty, brown, dry, loose, fine to med. sand, subrounded, no hydrocarbon odor, water at 14.5', discoloration (black/dark gray) with hydrocarbon staining and sl. odor at 16', soil compacted in core liner. (0-8' cleared with a hydro-vac).	
2	0.0						
4	0.0	100%					
6	0.0						
8	0.0				SM		
10	0.0	100%					
12	0.0						
14	0.0	100% MW1R 13.5-14.5'					
16	2.1						
16	8.6				CH	Fat clay, with sand, wet, very stiff, high plasticity, fine sand, slight hydrocarbon odor, dark brown with black/gray hydrocarbon staining, soil compacted in core liner.	
18	0.5						
18	0.3	100%			SP	Poorly-graded sand, light brown, wet, loose, fine sand, minor medium sand, no hydrocarbon odor, subrounded sand, soil compacted in core liner.	
20	0.0						

Continued Next Page

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH JA GDT 12/19/16



MWH

Drilling Log

Monitoring Well

MW-1R

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
22	0.0	100%			SP	Fat clay, with sand (continues), brown, color changes to olive-brown at 29', medium stiff to stiff, very stiff at 25.5', becoming softer at 29', wet, high plasticity, no hydrocarbon odor.	
24	0.0				CH		
26	0.0						
28	0.0	100%					
30	0.0						
32						Total sampled depth = 30'. Boring overdrilled to 32' to set well.	
34							
36							
38							
40							
42							
44							
46							



MWH

Drilling Log

Monitoring Well

MW-2R

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico Project Number 10509071

Surface Elev. 5974.20 ft North 2016073 East 2782203

Top of Casing 5976.83 ft Water Level Initial 5960.2 05/18/16 00:00 Static 5960.68 05/20/16 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 NA Type PVC

Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica

Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton

Start Date 5/18/2016 Completion Date 5/20/2016 Checked By S. Varsa

COMMENTS
 Adjacent to MW-2. Surface is dirt with minor vegetation (sagebrush).

Bentonite Chips Bentonite Granules Grout Bentonite Pellets Sand Pack PP 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						Sand, silty, dry, brown, loose, fine to medium sand, no hydrocarbon odor. (0-8' cleared with a hydro-vac).	
2							
4		100%					
6					SM		
8							
10		100%					
12							
14		100%			CH	Fat clay, with sand, dark brown with gray mottling, high plasticity, very moist to wet-water at 14', soft.	
16							
18		100%			SP	Poorly-graded sand, fine sand with minor medium sand, wet, loose, no hydrocarbon odor, slight black discoloration at 17', some large gravel at base/crushed in core liner.	
20					CH	Fat clay, with sand (continues), very stiff, very moist, high plasticity, no hydrocarbon odor, light brown becoming light gray with depth.	

Continued Next Page

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH JA GDT 12/19/16



MWH

Drilling Log

Monitoring Well

MW-2R

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
22	0.0	100%			CH		
24	0.0					No recovery.	
26	0.0	100%			CH	Fat clay, with sand (continues), very stiff, brown, color changes to olive-brown/gray with depth, very moist, high plasticity, no hydrocarbon odor. Overdrilled to approximately 32' before setting well.	
28	0.0						
30	0.0						
32						Total sampled depth = 30'. Boring overdrilled to 32' to set well.	
34							
36							
38							
40							
42							
44							
46							



MWH

Drilling Log

Monitoring Well

MW-3R

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico Project Number 10509071

Surface Elev. 5976.06 ft North 2015997 East 2782153

Top of Casing 5978.48 ft Water Level Initial 5961.06 05/20/16 00:00 Static 5960.88 05/21/16 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 NA Type PVC

Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica

Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton

Start Date 5/20/2016 Completion Date 5/21/2016 Checked By S. Varsa

COMMENTS
 Approx. 10' E of MW-3. Surface is dirt with minor vegetation (sagebrush). NM = Not measured.

☒ Bentonite Chips ☒ Bentonite Granules ☐ Grout ☐ Bentonite Pellets ☐ Sand Pack ☐ PP 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						Sand, silty, some clay present with content increasing at 12', brown, dry, slightly moist at 11.5', water at 15', loose, fine to medium sand, subrounded sand, slight hydrocarbon odor from 12-13'. (0-8' cleared with a hydro-vac).	
2	0.0						
4	0.0	100%					
6	0.0						
8	0.0				SM		
10	0.0	100%					
12	321						
14	1.2						
16	0.0					Poorly-graded sand, brown, becoming light gray to light brown at 19.5', loose, fine sand, minor medium sand, minor fines, wet, no hydrocarbon odor, soil compacted in liner from 15-20'.	
18	0.0	100%			SP		
20	0.0						

Continued Next Page

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH I.A.GDT 12/19/16



MWH

Drilling Log

Monitoring Well

MW-3R

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
	NM					No recovery due to "sand lock". Augered from 20-30'.	
22	NM						
	NM						
24	NM						
	NM						
26	NM						
	NM						
28	NM						
	NM						
30	NM						
32						Total sampled depth = 30'. Boring overdrilled to 32' to set well.	
34							
36							
38							
40							
42							
44							
46							



MWH

Drilling Log

Monitoring Well

MW-5

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico Project Number 10509071

Surface Elev. 5975.34 ft North 2016045 East 2782156

Top of Casing 5977.74 ft Water Level Initial 5960.64 05/18/16 00:00 Static 5960.49 05/21/16 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 NA Type PVC

Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica

Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton

Start Date 5/18/2016 Completion Date 5/21/2016 Checked By S. Varsa

COMMENTS

Surface is dirt with minor vegetation (sagebrush).

Bentonite Chips Bentonite Granules Grout Bentonite Pellets Sand Pack PP 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						Sand, silty, brown, discolored dark gray/black at 14.5', water at 14.5', loose, fine to medium sand, subrounded sand, hydrocarbon staining and very slight odor at 14.5', soil compacted in liner from 10-15'. (0-8' cleared with a hydro-vac).	
2							
4		100%					
6							
8					SM		
10		100%					
12							
14							
16						Poorly-graded sand, dark gray (hydrocarbon-stained) to light brown at 20', loose, fine sand, minor medium sand, subrounded, moderate to very slight hydrocarbon odor, hydrocarbon staining and odor stops at 20', wet, soil compacted in liner from 15-20'.	
18		100%			SP		
20							

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH JA GDT 12/19/16

Continued Next Page



MWH

Drilling Log

Monitoring Well

MW-5

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
22	0.0	100%			CH	Fat clay with fine sand, very stiff, wet, high plasticity, dark brown, no hydrocarbon odor.	
24	0.0					Poorly-graded sand, brown, loose, wet, fine sand, minor medium sand, no hydrocarbon odor, subrounded sand.	
26	0.0				SP		
28	0.0	100%					
30	0.0				CH	Fat clay with fine sand, dark brown, very stiff, very moist, high plasticity.	
32						Total sampled depth = 30'. Boring overdrilled to 33' to set well.	
34							
36							
38							
40							
42							
44							
46							



MWH

Drilling Log

Monitoring Well

MW-6

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico Project Number 10509071

Surface Elev. 5976.31 ft North 2016004 East 2782205

Top of Casing 5978.44 ft Water Level Initial 5960.61 05/18/16 00:00 Static 5960.97 05/20/16 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 NA Type PVC

Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica

Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton

Start Date 5/18/2016 Completion Date 5/20/2016 Checked By S. Varsa

COMMENTS
Surface is dirt with minor vegetation (sagebrush).

Bentonite Chips Bentonite Granules Grout Bentonite Pellets Sand Pack PP 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						Sand, silty, brown, water at 15', loose, minor clay content increasing with depth, low plasticity clay, fine sand, no hydrocarbon odor, soil compacted in liner from 10-15'. (0-8' cleared with a hydro-vac).	
2							
4		100%					
6							
8					SM		
10		100%					
12							
14							
16							
18		100%			CL	Silty sand/clay with sand, saturated, very slight hydrocarbon odor, minor black/gray hydrocarbon staining present, low to medium plasticity, fine sand.	
20					SP	Poorly-graded sand, light gray to light brown, wet/saturated, no hydrocarbon odor, loose, fine sand, minor medium sand, subrounded, trace coarse sand.	

Continued Next Page

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH JA GDT 12/19/16



MWH

Drilling Log

Monitoring Well

MW-6

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
22		100%			SP		
24							
26							
28		100%			CH	Fat clay with sand, fine sand, high plasticity, very moist, stiff to very stiff at 29', soft to medium stiff at 29.5', dark brown and gray to live-brown with gray at 29.5', no hydrocarbon odor.	
30							
32						Total sampled depth = 30'. Boring overdrilled to 32' to set well.	
34							
36							
38							
40							
42							
44							
46							



MWH

Drilling Log

Monitoring Well

MW-7

Page: 1 of 2

Project Hammond #41A Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico Project Number 10509071

Surface Elev. 5976.40 ft North 2016016 East 2782237

Top of Casing 5978.63 ft Water Level Initial 5961.15 05/17/16 00:00 Static 5961.11 05/20/16 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 NA Type PVC

Drill Co. Vista Geoscience Drilling Method Direct Push/Hollow-stem Auger Sand Pack 10/20 CO Silica

Driller Chase Cain Driller Reg. # WD-1705 Log By Brad Barton

Start Date 5/17/2016 Completion Date 5/20/2016 Checked By S. Varsa

COMMENTS

Soil boring advanced 1' E of this location to collect sample MW-7 14-15'. Surface is dirt with minor vegetation (sagebrush).

Bentonite Chips Bentonite Granules Grout Bentonite Pellets Sand Pack PP 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						Silty sand, brown, loose, dry, fine sand, minor clay content, no hydrocarbon odor.	
2					SM		
4		100%			CL	Clay, brown, dry, soft, medium to high plasticity, no hydrocarbon odor. (0-8' cleared with a hydro-vac).	
6							
8		100%					
10							
12		100%			CH	Fat clay, dark brown, medium stiff, slightly moist increasing with depth, none to slight hydrocarbon odor, gray and black hydrocarbon staining at 14', high plasticity, soil compacted slightly in the core liner from 10-15'.	
14							
16						Poorly-graded sand, wet, loose, fine sand, trace medium sand, brown, no hydrocarbon odor, soil compacted slightly in the core liner from 20-25'.	
18		100%			SP		
20							

Drilling Log 2016 HAMMOND #41A LOGS.GPJ MWH JA GDT 12/19/16

Continued Next Page



MWH

Drilling Log

Monitoring Well

MW-7

Page: 2 of 2

Project Hammond #41A

Owner El Paso CGP Company, LLC

Location San Juan County, New Mexico

Project Number 10509071

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
20						<i>Continued</i>	
22		100%			SP		
24							
26						Fat clay with sand, brown, medium stiff to stiff, high plasticity, fine sand, very moist to wet.	
28		100%			CH		
30							
32						Total sampled depth = 30'. Boring overdrilled to 32' to set well.	
34							
36							
38							
40							
42							
44							
46							

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS

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: 400-135829-1

Client Project/Site: El Paso CGP Company, LLC - Hammond
#41A

Revision: 1

For:

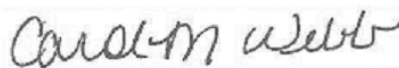
Stantec Consulting Services Inc

1560 Broadway

Suite 1800

Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:

4/11/2017 3:37:18 PM

Carol Webb, Project Manager II

(850)471-6250

carol.webb@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	15
QC Sample Results	16
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	22



Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Glossary

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

Case Narrative

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Job ID: 400-135829-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-135829-1

Comments

No additional comments.

Receipt

The samples were received on 3/30/2017 8:47 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

GC 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, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-1R

Lab Sample ID: 400-135829-1

No Detections.

Client Sample ID: MW-2R

Lab Sample ID: 400-135829-2

No Detections.

Client Sample ID: MW-3R

Lab Sample ID: 400-135829-3

No Detections.

Client Sample ID: MW-4

Lab Sample ID: 400-135829-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	18		1.0	ug/L	1		8021B	Total/NA
Xylenes, Total	12		5.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 400-135829-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.2		1.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 400-135829-6

No Detections.

Client Sample ID: MW-7

Lab Sample ID: 400-135829-7

No Detections.

Client Sample ID: TRIP BLANK (3/28/17)

Lab Sample ID: 400-135829-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-135829-1	MW-1R	Water	03/28/17 15:10	03/30/17 08:47
400-135829-2	MW-2R	Water	03/28/17 15:04	03/30/17 08:47
400-135829-3	MW-3R	Water	03/28/17 14:45	03/30/17 08:47
400-135829-4	MW-4	Water	03/28/17 14:58	03/30/17 08:47
400-135829-5	MW-5	Water	03/28/17 14:54	03/30/17 08:47
400-135829-6	MW-6	Water	03/28/17 15:18	03/30/17 08:47
400-135829-7	MW-7	Water	03/28/17 15:24	03/30/17 08:47
400-135829-8	TRIP BLANK (3/28/17)	Water	03/28/17 14:30	03/30/17 08:47

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-1R

Date Collected: 03/28/17 15:10

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-1

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			04/03/17 17:41	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 17:41	1
Toluene	<5.0		5.0	ug/L			04/03/17 17:41	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 17:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	109		78 - 124				04/03/17 17:41	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-2R

Date Collected: 03/28/17 15:04

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-2

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			04/03/17 18:40	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 18:40	1
Toluene	<5.0		5.0	ug/L			04/03/17 18:40	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 18:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124				04/03/17 18:40	1

TestAmerica Pensacola

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-3R

Date Collected: 03/28/17 14:45

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-3

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			04/03/17 19:39	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 19:39	1
Toluene	<5.0		5.0	ug/L			04/03/17 19:39	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 19:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124				04/03/17 19:39	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-4
Date Collected: 03/28/17 14:58
Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-4
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			04/03/17 20:39	1
Ethylbenzene	18		1.0	ug/L			04/03/17 20:39	1
Toluene	<5.0		5.0	ug/L			04/03/17 20:39	1
Xylenes, Total	12		5.0	ug/L			04/03/17 20:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	108		78 - 124				04/03/17 20:39	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-5
Date Collected: 03/28/17 14:54
Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			04/03/17 21:38	1
Ethylbenzene	1.2		1.0	ug/L			04/03/17 21:38	1
Toluene	<5.0		5.0	ug/L			04/03/17 21:38	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 21:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>a,a,a-Trifluorotoluene (pid)</i>	107		78 - 124				04/03/17 21:38	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-6

Date Collected: 03/28/17 15:18

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-6

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			04/03/17 23:36	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 23:36	1
Toluene	<5.0		5.0	ug/L			04/03/17 23:36	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 23:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	108		78 - 124				04/03/17 23:36	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-7
Date Collected: 03/28/17 15:24
Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-7
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			04/03/17 14:43	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 14:43	1
Toluene	<5.0		5.0	ug/L			04/03/17 14:43	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 14:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	106		78 - 124				04/03/17 14:43	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: TRIP BLANK (3/28/17)

Lab Sample ID: 400-135829-8

Date Collected: 03/28/17 14:30

Matrix: Water

Date Received: 03/30/17 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			04/03/17 13:44	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 13:44	1
Toluene	<5.0		5.0	ug/L			04/03/17 13:44	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124		04/03/17 13:44	1

QC Association Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

GC VOA

Analysis Batch: 348206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-135829-1	MW-1R	Total/NA	Water	8021B	
400-135829-2	MW-2R	Total/NA	Water	8021B	
400-135829-3	MW-3R	Total/NA	Water	8021B	
400-135829-4	MW-4	Total/NA	Water	8021B	
400-135829-5	MW-5	Total/NA	Water	8021B	
400-135829-6	MW-6	Total/NA	Water	8021B	
400-135829-7	MW-7	Total/NA	Water	8021B	
400-135829-8	TRIP BLANK (3/28/17)	Total/NA	Water	8021B	
MB 400-348206/3	Method Blank	Total/NA	Water	8021B	
LCS 400-348206/1002	Lab Control Sample	Total/NA	Water	8021B	
400-135829-7 MS	MW-7	Total/NA	Water	8021B	
400-135829-7 MSD	MW-7	Total/NA	Water	8021B	

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-348206/3

Matrix: Water

Analysis Batch: 348206

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			04/03/17 12:45	1
Ethylbenzene	<1.0		1.0	ug/L			04/03/17 12:45	1
Toluene	<5.0		5.0	ug/L			04/03/17 12:45	1
Xylenes, Total	<5.0		5.0	ug/L			04/03/17 12:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	108		78 - 124		04/03/17 12:45	1

Lab Sample ID: LCS 400-348206/1002

Matrix: Water

Analysis Batch: 348206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	52.4		ug/L		105	85 - 115
Ethylbenzene	50.0	54.0		ug/L		108	85 - 115
Toluene	50.0	53.1		ug/L		106	85 - 115
Xylenes, Total	150	164		ug/L		109	85 - 115

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

Lab Sample ID: 400-135829-7 MS

Matrix: Water

Analysis Batch: 348206

Client Sample ID: MW-7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<1.0		50.0	46.5		ug/L		93	44 - 150
Ethylbenzene	<1.0		50.0	47.7		ug/L		95	70 - 142
Toluene	<5.0		50.0	47.3		ug/L		95	69 - 136
Xylenes, Total	<5.0		150	145		ug/L		97	68 - 142

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

Lab Sample ID: 400-135829-7 MSD

Matrix: Water

Analysis Batch: 348206

Client Sample ID: MW-7

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	48.1		ug/L		96	44 - 150	3	16
Ethylbenzene	<1.0		50.0	49.7		ug/L		99	70 - 142	4	16
Toluene	<5.0		50.0	48.9		ug/L		98	69 - 136	3	16
Xylenes, Total	<5.0		150	151		ug/L		101	68 - 142	4	15

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

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-1R

Date Collected: 03/28/17 15:10

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 17:41	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-2R

Date Collected: 03/28/17 15:04

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 18:40	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-3R

Date Collected: 03/28/17 14:45

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 19:39	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-4

Date Collected: 03/28/17 14:58

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 20:39	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-5

Date Collected: 03/28/17 14:54

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 21:38	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-6

Date Collected: 03/28/17 15:18

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 23:36	CMW	TAL PEN
Instrument ID: ETHYL										

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

Client Sample ID: MW-7

Date Collected: 03/28/17 15:24

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-7

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	348206	04/03/17 14:43	CMW	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: TRIP BLANK (3/28/17)

Date Collected: 03/28/17 14:30

Date Received: 03/30/17 08:47

Lab Sample ID: 400-135829-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	348206	04/03/17 13:44	CMW	TAL PEN
Instrument ID: ETHYL										

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

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	06-30-17
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	06-30-17
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	06-30-17
Louisiana (DW)	NELAP Secondary AB	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	05-06-17
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	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

TestAmerica Pensacola

Method Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-135829-1

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

Chain of Custody Record

Client Information		Lab PM: Webb, Carol M		Carrier Tracking No(s):		COC No: 400-64075-21701.1	
Client Contact: Ms. Sarah Gardner		E-Mail: carol.webb@testamericainc.com		Phone: 515-710-7523		Page: 1 of 1	
Company: Stantec Consulting Services Inc		Address: 1560 Broadway Suite 1800		City: Denver		State Zip: CO, 80202	
Phone: 303-291-2239(Tel)		PO #: 303-291-2239(Tel)		Purchase Order Requested		WO #:	
Email: sarah.gardner@mwglobal.com		Project #: 40005479		SSOW#:			
Hammond #41A		Site:					

Analysis Requested				Preservation Codes:	
 400-135829 COC				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 - MCAA L - EDTA M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - pH 4.5 W - MCAA 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=Trace, A=Air)	Field Filtered Sample (Yes/No)	8021B - BTEX 8021	Special Instructions/Note:
MW-1R	3/28/17	1510	G	Water			None
MW-2R		1504	G	Water			
MW-3R		1445	G	Water			
MW-4		1458	G	Water			
MW-5		1454	G	Water			
MW-6		1518	G	Water			
MW-7		1524	G	Water			
Trip Blank		1430	G	Water			

Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological			
Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by:			
Relinquished by: <i>[Signature]</i>		Date/Time: 3/29/17	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.:	

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months	
Special Instructions/QC Requirements:	
Method of Shipment:	
Received by: <i>[Signature]</i> Date/Time: 3/29/17 Company: <i>[Signature]</i>	
Received by: Date/Time: Company:	
Received by: Date/Time: Company:	
Cooler Temperature(s) °C and Other Remarks: 2-62	

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-135829-1

Login Number: 135829

List Source: TestAmerica Pensacola

List Number: 1

Creator: Johnson, Jeremy N

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C IR2
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-139056-1

Client Project/Site: EIPaso CGP Company, LLC - Hammond
#41A

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 11:01:10 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

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	15
QC Sample Results	16
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	22



Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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 - Hammond #41A

TestAmerica Job ID: 400-139056-1

Job ID: 400-139056-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-139056-1

Comments

No additional comments.

Receipt

The samples were received on 6/9/2017 11:11 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.1° 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 - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-1R

Lab Sample ID: 400-139056-1

No Detections.

Client Sample ID: MW-2R

Lab Sample ID: 400-139056-2

No Detections.

Client Sample ID: MW-3R

Lab Sample ID: 400-139056-3

No Detections.

Client Sample ID: MW-4

Lab Sample ID: 400-139056-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	8.7		1.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 400-139056-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	3.7		1.0	ug/L	1		8021B	Total/NA
Xylenes, Total	12		5.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 400-139056-6

No Detections.

Client Sample ID: MW-7

Lab Sample ID: 400-139056-7

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-139056-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-139056-1	MW-1R	Water	06/07/17 16:50	06/09/17 11:11
400-139056-2	MW-2R	Water	06/07/17 17:00	06/09/17 11:11
400-139056-3	MW-3R	Water	06/07/17 17:05	06/09/17 11:11
400-139056-4	MW-4	Water	06/07/17 17:10	06/09/17 11:11
400-139056-5	MW-5	Water	06/07/17 17:20	06/09/17 11:11
400-139056-6	MW-6	Water	06/07/17 17:30	06/09/17 11:11
400-139056-7	MW-7	Water	06/07/17 17:35	06/09/17 11:11
400-139056-8	TRIP BLANK	Water	06/07/17 16:45	06/09/17 11:11

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-1R

Lab Sample ID: 400-139056-1

Date Collected: 06/07/17 16:50

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 15:51	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 15:51	1
Toluene	<5.0		5.0	ug/L			06/14/17 15:51	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 15:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	108		78 - 124				06/14/17 15:51	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-2R

Lab Sample ID: 400-139056-2

Date Collected: 06/07/17 17:00

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 16:21	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 16:21	1
Toluene	<5.0		5.0	ug/L			06/14/17 16:21	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 16:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	106		78 - 124				06/14/17 16:21	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-3R

Lab Sample ID: 400-139056-3

Date Collected: 06/07/17 17:05

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 18:55	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 18:55	1
Toluene	<5.0		5.0	ug/L			06/14/17 18:55	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 18:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	109		78 - 124				06/14/17 18:55	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-4

Lab Sample ID: 400-139056-4

Date Collected: 06/07/17 17:10

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 19:25	1
Ethylbenzene	8.7		1.0	ug/L			06/14/17 19:25	1
Toluene	<5.0		5.0	ug/L			06/14/17 19:25	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 19:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	111		78 - 124				06/14/17 19:25	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-5

Lab Sample ID: 400-139056-5

Date Collected: 06/07/17 17:20

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 19:56	1
Ethylbenzene	3.7		1.0	ug/L			06/14/17 19:56	1
Toluene	<5.0		5.0	ug/L			06/14/17 19:56	1
Xylenes, Total	12		5.0	ug/L			06/14/17 19:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	109		78 - 124				06/14/17 19:56	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-6

Lab Sample ID: 400-139056-6

Date Collected: 06/07/17 17:30

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 20:26	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 20:26	1
Toluene	<5.0		5.0	ug/L			06/14/17 20:26	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 20:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	109		78 - 124				06/14/17 20:26	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-7

Lab Sample ID: 400-139056-7

Date Collected: 06/07/17 17:35

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 20:57	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 20:57	1
Toluene	<5.0		5.0	ug/L			06/14/17 20:57	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 20:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	109		78 - 124				06/14/17 20:57	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-139056-8

Date Collected: 06/07/17 16:45

Matrix: Water

Date Received: 06/09/17 11:11

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			06/14/17 17:53	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 17:53	1
Toluene	<5.0		5.0	ug/L			06/14/17 17:53	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 17:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	110		78 - 124				06/14/17 17:53	1

QC Association Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

GC VOA

Analysis Batch: 356920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-139056-1	MW-1R	Total/NA	Water	8021B	
400-139056-2	MW-2R	Total/NA	Water	8021B	
400-139056-3	MW-3R	Total/NA	Water	8021B	
400-139056-4	MW-4	Total/NA	Water	8021B	
400-139056-5	MW-5	Total/NA	Water	8021B	
400-139056-6	MW-6	Total/NA	Water	8021B	
400-139056-7	MW-7	Total/NA	Water	8021B	
400-139056-8	TRIP BLANK	Total/NA	Water	8021B	
MB 400-356920/2	Method Blank	Total/NA	Water	8021B	
LCS 400-356920/1001	Lab Control Sample	Total/NA	Water	8021B	
400-139062-B-5 MS	Matrix Spike	Total/NA	Water	8021B	
400-139062-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-356920/2

Matrix: Water

Analysis Batch: 356920

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			06/14/17 10:25	1
Ethylbenzene	<1.0		1.0	ug/L			06/14/17 10:25	1
Toluene	<5.0		5.0	ug/L			06/14/17 10:25	1
Xylenes, Total	<5.0		5.0	ug/L			06/14/17 10:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124		06/14/17 10:25	1

Lab Sample ID: LCS 400-356920/1001

Matrix: Water

Analysis Batch: 356920

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	55.6		ug/L		111	85 - 115
Ethylbenzene	50.0	55.2		ug/L		110	85 - 115
Toluene	50.0	54.2		ug/L		108	85 - 115
Xylenes, Total	150	166		ug/L		111	85 - 115

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

Lab Sample ID: 400-139062-B-5 MS

Matrix: Water

Analysis Batch: 356920

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	12		50.0	71.2		ug/L		118	44 - 150
Ethylbenzene	<1.0		50.0	61.5		ug/L		123	70 - 142
Toluene	<5.0		50.0	60.1		ug/L		118	69 - 136
Xylenes, Total	<5.0		150	189		ug/L		124	68 - 142

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	106		78 - 124

Lab Sample ID: 400-139062-B-5 MSD

Matrix: Water

Analysis Batch: 356920

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	12		50.0	71.2		ug/L		118	44 - 150	0	16
Ethylbenzene	<1.0		50.0	62.0		ug/L		124	70 - 142	1	16
Toluene	<5.0		50.0	60.6		ug/L		119	69 - 136	1	16
Xylenes, Total	<5.0		150	191		ug/L		124	68 - 142	1	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	106		78 - 124

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-1R

Date Collected: 06/07/17 16:50

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 15:51	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: MW-2R

Date Collected: 06/07/17 17:00

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 16:21	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: MW-3R

Date Collected: 06/07/17 17:05

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 18:55	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: MW-4

Date Collected: 06/07/17 17:10

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 19:25	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: MW-5

Date Collected: 06/07/17 17:20

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 19:56	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: MW-6

Date Collected: 06/07/17 17:30

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 20:26	CMW	TAL PEN
Instrument ID: CH_PAULA										

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

Client Sample ID: MW-7

Date Collected: 06/07/17 17:35

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-7

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	356920	06/14/17 20:57	CMW	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: TRIP BLANK

Date Collected: 06/07/17 16:45

Date Received: 06/09/17 11:11

Lab Sample ID: 400-139056-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	356920	06/14/17 17:53	CMW	TAL PEN
Instrument ID: CH_PAULA										

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

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	06-30-17
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: El Paso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-139056-1

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

Chain of Custody Record

Client Information Client Contact: Ms. Sarah Gardner Company: Stantec Consulting Services Inc. Address: 1560 Broadway Suite 1800 City: Denver State, Zip: CO, 80202 Phone: 303-291-2239 (Tel) Email: sarah.gardner@mwglobal.com Project Name: Hammond #41A Site: Hammond #41A		Lab PM: Webb, Carol M E-Mail: carol.webb@testamericainc.com Carrier Tracking No(s): COC No: 400-65860-26935.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard PO#: Purchase Order Requested WO#: Project # 40005479 SSOW#:		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Archlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification MW-1R MW-2R MW-3R MW-4 MW-5 MW-6 MW-7 TRIP BLANK		Matrix (W=water, S=solid, O=waste/oli, BT=Trace, As=As) Sample Type (C=comp, G=grab) Sample Date Sample Time Preservation Code: Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8021B - BTEX 8021 Total Number of containers	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained for longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months Special Instructions/QC Requirements:	
Empty Kit Relinquished by: <i>Sarah Gardner</i> Date/Time: 6/9/2017 845 Relinquished by: <i>Sarah Gardner</i> Date/Time: 6-9-17 1111 Relinquished by: <i>Sarah Gardner</i> Date/Time: 6-9-17 1111 Custody Seals Intact: ☒ Yes ☐ No Custody Seal No.:		Received by: <i>Sarah Gardner</i> Date/Time: 6-9-17 1111 Received by: <i>Sarah Gardner</i> Date/Time: 6-9-17 1111 Received by: <i>Sarah Gardner</i> Date/Time: 6-9-17 1111 Cooler Temperature(s) °C and Other Remarks: 3.1°C, 2.7°C IR2	

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-139056-1

Login Number: 139056

List Source: TestAmerica Pensacola

List Number: 1

Creator: Johnson, Jeremy N

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.1°C 2.7°C IR2
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-141181-1

Client Project/Site: EIPaso CGP Company, LLC - Hammond
#41A

For:

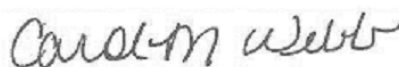
Stantec Consulting Services Inc

1560 Broadway

Suite 1800

Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:

8/4/2017 12:32:00 PM

Carol Webb, Project Manager II

(850)471-6250

carol.webb@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	15
QC Sample Results	16
Chronicle	17
Certification Summary	19
Method Summary	20
Chain of Custody	21
Receipt Checklists	22



Definitions/Glossary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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 - Hammond #41A

TestAmerica Job ID: 400-141181-1

Job ID: 400-141181-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-141181-1

Comments

No additional comments.

Receipt

The samples were received on 7/29/2017 8:12 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

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 - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-1R

Lab Sample ID: 400-141181-1

No Detections.

Client Sample ID: MW-2R

Lab Sample ID: 400-141181-2

No Detections.

Client Sample ID: MW-3R

Lab Sample ID: 400-141181-3

No Detections.

Client Sample ID: MW-4

Lab Sample ID: 400-141181-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.3		1.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 400-141181-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	4.2		1.0	ug/L	1		8021B	Total/NA
Xylenes, Total	11		5.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 400-141181-6

No Detections.

Client Sample ID: MW-7

Lab Sample ID: 400-141181-7

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-141181-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-141181-1	MW-1R	Water	07/28/17 14:35	07/29/17 08:12
400-141181-2	MW-2R	Water	07/28/17 14:40	07/29/17 08:12
400-141181-3	MW-3R	Water	07/28/17 14:45	07/29/17 08:12
400-141181-4	MW-4	Water	07/28/17 14:50	07/29/17 08:12
400-141181-5	MW-5	Water	07/28/17 14:55	07/29/17 08:12
400-141181-6	MW-6	Water	07/28/17 15:00	07/29/17 08:12
400-141181-7	MW-7	Water	07/28/17 15:10	07/29/17 08:12
400-141181-8	TRIP BLANK	Water	07/28/17 14:35	07/29/17 08:12

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-1R

Date Collected: 07/28/17 14:35

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-1

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			08/02/17 18:01	1
Ethylbenzene	<1.0		1.0	ug/L			08/02/17 18:01	1
Toluene	<5.0		5.0	ug/L			08/02/17 18:01	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 18:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124				08/02/17 18:01	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-2R

Date Collected: 07/28/17 14:40

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-2

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			08/02/17 19:00	1
Ethylbenzene	<1.0		1.0	ug/L			08/02/17 19:00	1
Toluene	<5.0		5.0	ug/L			08/02/17 19:00	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 19:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	106		78 - 124				08/02/17 19:00	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-3R

Date Collected: 07/28/17 14:45

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-3

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			08/02/17 20:00	1
Ethylbenzene	<1.0		1.0	ug/L			08/02/17 20:00	1
Toluene	<5.0		5.0	ug/L			08/02/17 20:00	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 20:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	106		78 - 124				08/02/17 20:00	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-4
Date Collected: 07/28/17 14:50
Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-4
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			08/02/17 20:59	1
Ethylbenzene	1.3		1.0	ug/L			08/02/17 20:59	1
Toluene	<5.0		5.0	ug/L			08/02/17 20:59	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 20:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>a,a,a-Trifluorotoluene (pid)</i>	106		78 - 124				08/02/17 20:59	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-5
Date Collected: 07/28/17 14:55
Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			08/02/17 23:57	1
Ethylbenzene	4.2		1.0	ug/L			08/02/17 23:57	1
Toluene	<5.0		5.0	ug/L			08/02/17 23:57	1
Xylenes, Total	11		5.0	ug/L			08/02/17 23:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124				08/02/17 23:57	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-6
Date Collected: 07/28/17 15:00
Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-6
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			08/03/17 00:57	1
Ethylbenzene	<1.0		1.0	ug/L			08/03/17 00:57	1
Toluene	<5.0		5.0	ug/L			08/03/17 00:57	1
Xylenes, Total	<5.0		5.0	ug/L			08/03/17 00:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	105		78 - 124				08/03/17 00:57	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-7

Date Collected: 07/28/17 15:10

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-7

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			08/03/17 01:56	1
Ethylbenzene	<1.0		1.0	ug/L			08/03/17 01:56	1
Toluene	<5.0		5.0	ug/L			08/03/17 01:56	1
Xylenes, Total	<5.0		5.0	ug/L			08/03/17 01:56	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	105		78 - 124				08/03/17 01:56	1

Client Sample Results

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-141181-8

Date Collected: 07/28/17 14:35

Matrix: Water

Date Received: 07/29/17 08:12

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			08/02/17 22:58	1
Ethylbenzene	<1.0		1.0	ug/L			08/02/17 22:58	1
Toluene	<5.0		5.0	ug/L			08/02/17 22:58	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 22:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124				08/02/17 22:58	1

QC Association Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

GC VOA

Analysis Batch: 362639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-141181-1	MW-1R	Total/NA	Water	8021B	
400-141181-2	MW-2R	Total/NA	Water	8021B	
400-141181-3	MW-3R	Total/NA	Water	8021B	
400-141181-4	MW-4	Total/NA	Water	8021B	
400-141181-5	MW-5	Total/NA	Water	8021B	
400-141181-6	MW-6	Total/NA	Water	8021B	
400-141181-7	MW-7	Total/NA	Water	8021B	
400-141181-8	TRIP BLANK	Total/NA	Water	8021B	
MB 400-362639/3	Method Blank	Total/NA	Water	8021B	
LCS 400-362639/1002	Lab Control Sample	Total/NA	Water	8021B	
400-141188-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-141188-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

QC Sample Results

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-362639/3

Matrix: Water

Analysis Batch: 362639

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			08/02/17 12:05	1
Ethylbenzene	<1.0		1.0	ug/L			08/02/17 12:05	1
Toluene	<5.0		5.0	ug/L			08/02/17 12:05	1
Xylenes, Total	<5.0		5.0	ug/L			08/02/17 12:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	107		78 - 124		08/02/17 12:05	1

Lab Sample ID: LCS 400-362639/1002

Matrix: Water

Analysis Batch: 362639

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	51.2		ug/L		102	85 - 115
Ethylbenzene	50.0	51.8		ug/L		104	85 - 115
Toluene	50.0	51.3		ug/L		103	85 - 115
Xylenes, Total	150	157		ug/L		105	85 - 115

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

Lab Sample ID: 400-141188-A-1 MS

Matrix: Water

Analysis Batch: 362639

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<1.0		50.0	44.4		ug/L		89	44 - 150
Ethylbenzene	<1.0		50.0	45.0		ug/L		90	70 - 142
Toluene	<5.0		50.0	44.6		ug/L		89	69 - 136
Xylenes, Total	<5.0		150	137		ug/L		91	68 - 142

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

Lab Sample ID: 400-141188-A-1 MSD

Matrix: Water

Analysis Batch: 362639

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	44.6		ug/L		89	44 - 150	0	16
Ethylbenzene	<1.0		50.0	45.9		ug/L		92	70 - 142	2	16
Toluene	<5.0		50.0	45.2		ug/L		90	69 - 136	1	16
Xylenes, Total	<5.0		150	140		ug/L		93	68 - 142	2	15

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

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-1R

Date Collected: 07/28/17 14:35

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 18:01	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-2R

Date Collected: 07/28/17 14:40

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 19:00	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-3R

Date Collected: 07/28/17 14:45

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 20:00	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-4

Date Collected: 07/28/17 14:50

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 20:59	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-5

Date Collected: 07/28/17 14:55

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 23:57	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: MW-6

Date Collected: 07/28/17 15:00

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/03/17 00:57	MKA	TAL PEN
Instrument ID: ETHYL										

TestAmerica Pensacola

Lab Chronicle

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

Client Sample ID: MW-7

Date Collected: 07/28/17 15:10

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-7

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	362639	08/03/17 01:56	MKA	TAL PEN
Instrument ID: ETHYL										

Client Sample ID: TRIP BLANK

Date Collected: 07/28/17 14:35

Date Received: 07/29/17 08:12

Lab Sample ID: 400-141181-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	362639	08/02/17 22:58	MKA	TAL PEN
Instrument ID: ETHYL										

Laboratory References:

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

Accreditation/Certification Summary

Client: Stantec Consulting Services Inc
Project/Site: EIPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

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	06-30-18
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	06-30-18
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	08-31-17
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	06-30-18
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	06-30-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pensacola

Method Summary

Client: Stantec Consulting Services Inc
Project/Site: ElPaso CGP Company, LLC - Hammond #41A

TestAmerica Job ID: 400-141181-1

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

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

Chain of Custody Record

THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Ms. Sarah Gardner Company: Stantec Consulting Services Inc Address: 1560 Broadway Suite 1800 City: Denver State, Zip: CO, 80202 Phone: 303-291-2239 (Tel) Email: sarah.gardner@mwglobal.com Project Name: Hammond #41A Site:		Lab PM: Webb, Carol M E-Mail: carol.webb@testamericainc.com Carrier Tracking No(s): COC No: 400-67116-27358.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): 5TD PO #: Purchase Order Requested WO #: WD249323 Project #: 40005479 SSOW#:		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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification MW-1R MW-2R MW-3R MW-4 MW-5 MW-6 MW-7 THE BANK		Total Number of Containers: 8021B - BTEX 8021 Special Instructions/Note: SEE ATT: W-EPG-GEN-05-17-17-5Lg-06 HAMMOND #41A	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months	
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Method of Shipment: Date/Time: 7/29/17 16:15 Date/Time: 7-29-17 08:12 Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature (°C) and Other Remarks: 0.7 LR-17	

Login Sample Receipt Checklist

Client: Stantec Consulting Services Inc

Job Number: 400-141181-1

Login Number: 141181

List Source: TestAmerica Pensacola

List Number: 1

Creator: Edwards, Robin S

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C IR-7
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT C

GROUNDWATER DISPOSAL DOCUMENTATION

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

DATE 4-4-17

GENERATOR: El Paso Corp

HAULING CO. MWH

ORDERED BY: Joseph Wiley

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		Lincoln 8424, Hammer 899A	1	.25			.25	
2		Hammer 89						
3								
4								
5								

I, Paul But representative 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

NO.

NMOCDD PERMIT: NM -001-0005

Oil Field Waste Document, Form C138

INVOICE:

DEL. TKT#.

BILL TO:

DRIVER:

(Print Full Name)

CODES:

683462

El Paso

Paul Barton

TAPR 4 10:02am

Stanley Grant

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. **687962**

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

DATE 6-8-17

GENERATOR: EL PASO

HAULING CO. Waste Consulting

ORDERED BY: Joseph Wilcox

DEL. TKT#.

BILL TO: EL PASO

DRIVER: Sarah Gardner
(Print Full Name)

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	<u>01</u>	<u>JONES FR. #1 IE</u>	<u>7</u>	<u>750</u>			<u>754</u>	
2		<u>STATE GAS CUM #1</u>					<u>37 JUN 8</u>	<u>4:13 PM</u>
3		<u>CAWUDIA #2</u>						
4		<u>M. LOS FORTIA</u>						
5		<u>Fields #2A</u>						
		<u>Lindath B #24</u>						
		<u>Acampood #41A</u>						
		<u>KN SLT #1</u>						
		<u>K2710072</u>						

I, Sarah Gardner representative 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]

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. **691721**

NMOC D PERMIT: NM -001-0005

Oil Field Waste Document, Form C138

INVOICE:

DATE 8-1-17

GENERATOR: El Paso

HAULING CO: Serina

ORDERED BY: Joseph Wiley

DEL. TKT#

BILL TO: El Paso

DRIVER: Calvin
(Print Full Name)

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	39	Lindri th B 24	2 Gal.					
2		Hammond 41A						
3								
4								
5								

I, Calvin John representative 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

Calvin John