



TETRA TECH

July 8, 2019

Dylan Rose-Coss
New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re:

**2016 - 2018 Groundwater Sampling Report
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery,
Section 22, Township 22 South, Range 37 East,
Lea County, New Mexico.
NMOCD Abatement Plan (AP-088)**

Mr. Rose-Coss,

This report summarizes the results of the quarterly sampling events which occurred between 2016 and 2018 for the E. M. Elliott Tank Battery (Site). The Site is located in Lea County, Section 22, Township 22 South, Range 37 East, approximately 4 miles south of Eunice, New Mexico. The GPS coordinates for the Site are 32.38266°N, 103.15517°W. Prior to OXY USA, Inc. (OXY) acquiring the property in March 2018, the facility was operated by Plains Exploration and Production (PXP), Pogo Producing Company (Pogo), and Latigo Petroleum, Inc. (Latigo). The Site location is shown on **Figures 1 and 2**.

FACILITY BACKGROUND

As part of a due diligence assessment for Pogo, the Site was inspected and soil sampling was performed to investigate areas where visual evidence of historic spills was observed.

Four impacted areas were investigated north and south of the facility and inside the containment dike. One auger hole and one borehole were installed in an area measuring 25' x 30'. One auger hole was placed in the second impacted area measuring 10' x 10'. Two auger holes were placed in a third impacted area measuring 6' x 15'. The auger holes could only be advanced to depths of 1.0'-1.5' below ground surface (bgs) due to the presence of a dense caliche layer. Elevated chloride concentrations were detected in three of the six auger hole samples analyzed. Total Petroleum Hydrocarbon (TPH) concentrations were above the New Mexico Oil Conservation Division (OCD) Recommended Remedial Action Level

Tetra Tech

901 W. Wall Street, Suite 100 Midland, TX 79701

Tel 432.682.4559 Fax 432.682.3946 www.tetrattech.com



(RRAL) of 5,000 milligrams per kilogram all six of the auger holes. Auger holes AH-1, AH-4 and AH-6 had TPH concentrations above the RRAL on the 0-1.0' sample, which declined to below the RRAL in the 1.0'-1.5' samples. Access was restricted inside the dike; therefore, the borehole BH-1 was drilled just outside the dike, close to AH-1, AH-2 and AH-5. In BH-1, the TPH concentrations declined to below the RRAL in the 30'-32' sample.

Based on the results, borehole BH-1 was converted to a temporary 2-inch monitor well. Groundwater was encountered at approximately 70 feet below the top of casing (TOC). On September 25, 2006 and May 15, 2007, the temporary well was purged and sampled for analyses of chlorides and benzene, toluene, ethylbenzene and xylenes (BTEX). Chloride concentrations exceeded New Mexico Water Quality Control Commission (NMWQCC) standard of 250 milligrams per liter (mg/L) while BTEX concentrations were below the NMWQCC standards.

In accordance with NM Rule 116 the OCD Environmental Bureau director was notified in writing on June 25, 2007 of groundwater impact at the Site. The OCD responded with a request for a Stage 1 Abatement Plan for the facility.

On July 9, 2008, a Stage 1 Abatement Plan addressing the soil and groundwater impacts at the Site was submitted to the OCD-Santa Fe, New Mexico office. The Stage 1 Abatement Plan concluded that chloride concentrations in groundwater had not been delineated and that no BTEX constituents exceeded NMWQCC standards. No receptors were found in the vicinity of the Site. Quarterly groundwater gauging and sampling was proposed to commence during the third quarter of 2008. Additional monitor wells were proposed to delineate the chloride impacts to groundwater.

On September 12, 2011, monitor wells MW-2 and MW-3 were installed down gradient and up gradient, respectively, from monitor well MW-1. Monitor wells MW-4 and MW-5 were installed on September 7, 2016 for cross gradient delineation. On September 8, 2016, monitor well MW-1R was drilled as a replacement for monitor well MW-1. Monitor well MW-1R was constructed as a 4-inch diameter well for potential use as a groundwater recovery well. Monitor well MW-1 was plugged on September 12, 2016. Monitor wells well locations are presented on **Figure 3**.

GAUGING AND MONITOR WELL SAMPLING

Monitor wells MW-2 and MW-3 were sampled on a quarterly basis during 2016. Monitor well MW-1 was sampled during the first and second quarters of 2016, prior to being plugged and abandoned and replaced by monitor well MW-1R which was sampled during the third and fourth quarters of 2016. Monitor wells MW-4 and MW-5 were installed during the third quarter of 2016 and were sampled during the third and fourth quarters. Monitor wells MW-1R, MW-2, MW-3, MW-4, and MW-5 were sampled on a quarterly basis during 2017 and 2018.

During each groundwater sampling event, the monitor wells were gauged with an electronic water level meter. The gauging data is summarized in **Table 1**. No Phase Separated Hydrocarbons (PSH) were measured in any of the monitor wells. The

hydraulic gradient was generally to the southeast during each of the sampling events. Potentiometric gradient maps for the fourth quarters of 2016 and 2017 and for the four quarterly 2018 sampling events are included as **Figures 4** through **9**.

During each groundwater sampling event, the monitor wells were purged to remove three well casing volumes of water using disposable rope or twine with a new polyethylene bailer for each well. The sample bottles were filled directly from the bailers. The sample bottles were placed on ice and shipped under proper chain-of-custody control to ALS Laboratories of Houston, Texas for analysis of BTEX by EPA Method SW8260 and chlorides by EPA Method E300.

Analytical results indicate that BTEX concentrations were below method detection limits during all of the sampling events with a few isolated exceptions. Estimated “J” flagged values were reported in monitor well MW-1R for toluene on September 29, 2016 and for xylene in a duplicate sample collected on August 24, 2018. An estimated “J” flagged value was reported in monitor well MW-5 for toluene on September 29, 2016. All “J” flagged values were significantly below NMWQCC standards.

Chloride analytical results for monitor wells MW-2, MW-3 and MW-5 were below NMWQCC standards during all 2016, 2017 and 2018 sampling events. The chloride analytical results for MW-1, MW-1R and MW-4 exceeded the NMWQCC standards during all 2016, 2017 and 2018 sampling events. In monitor well MW-1R, chloride concentrations ranged from 7,040 mg/L in the September 29, 2016 duplicate sample to 12,500 mg/L on November 20, 2017. These concentrations are within the range of previously detected chloride concentrations for monitor well MW-1. In monitor well MW-4, chloride concentrations ranged from 696 mg/L on September 29, 2016 to 1,270 mg/L on November 20, 2017.

Graphs of chloride concentrations versus groundwater elevations for each of the monitor wells are included in **Appendix A**. These graphs indicate stable or declining chloride concentrations in all of the monitor wells. For the two monitor wells with chloride concentrations exceeding the NMWQCC standards, chloride concentrations in monitor well MW-1R have been declining since the fourth quarter of 2017 and chloride concentrations in monitor well MW-4 are generally stable with periodic fluctuations within a range of 696 mg/L to 1,270 mg/L.

Chloride concentration maps for the fourth quarters of 2016 and 2017 and for the four quarterly 2018 sampling events are included as **Figures 10** through **15**. The groundwater analytical data is summarized in **Table 2**. Copies of the laboratory analytical reports are included in **Appendix B**.



CONCLUSIONS

1. Chloride concentrations for monitor wells MW-1R and MW-4 exceed the NMWQCC standard of 250 mg/L. Chloride concentrations in these wells are stable or declining.
2. Chloride concentrations for monitor wells MW-2, MW-3 and MW-5 were below the NMWQCC standard of 250 mg/L for all 2016-2018 sampling events. Chloride concentrations in these wells are stable or declining.
3. Analytical results indicate that BTEX concentrations were below method detection limits for all five monitor wells during each sampling event with three isolated exceptions where "J" flagged estimated concentrations of xylene and toluene were noted. All "J" flagged values were significantly below NMWQCC standards.
4. PSH has never been measured in any monitor wells at this Site.
5. Graphs of chloride concentrations versus groundwater elevations indicate stable or declining chloride concentrations in all of the monitor wells.

PROPOSED 2019 GROUNDWATER MONITORING PROGRAM

Continued quarterly groundwater monitoring is proposed for 2019.

If you have any questions or comments concerning this report, please feel free to contact Ray Cheatham at (713)203-0852.

Respectfully submitted,
Tetra Tech, Inc.

A handwritten signature in black ink, appearing to read 'R Cheatham'.

Ray Cheatham
Client Account Manager
Principal Geologist

A handwritten signature in black ink, appearing to read 'Sharon E. Hall'.

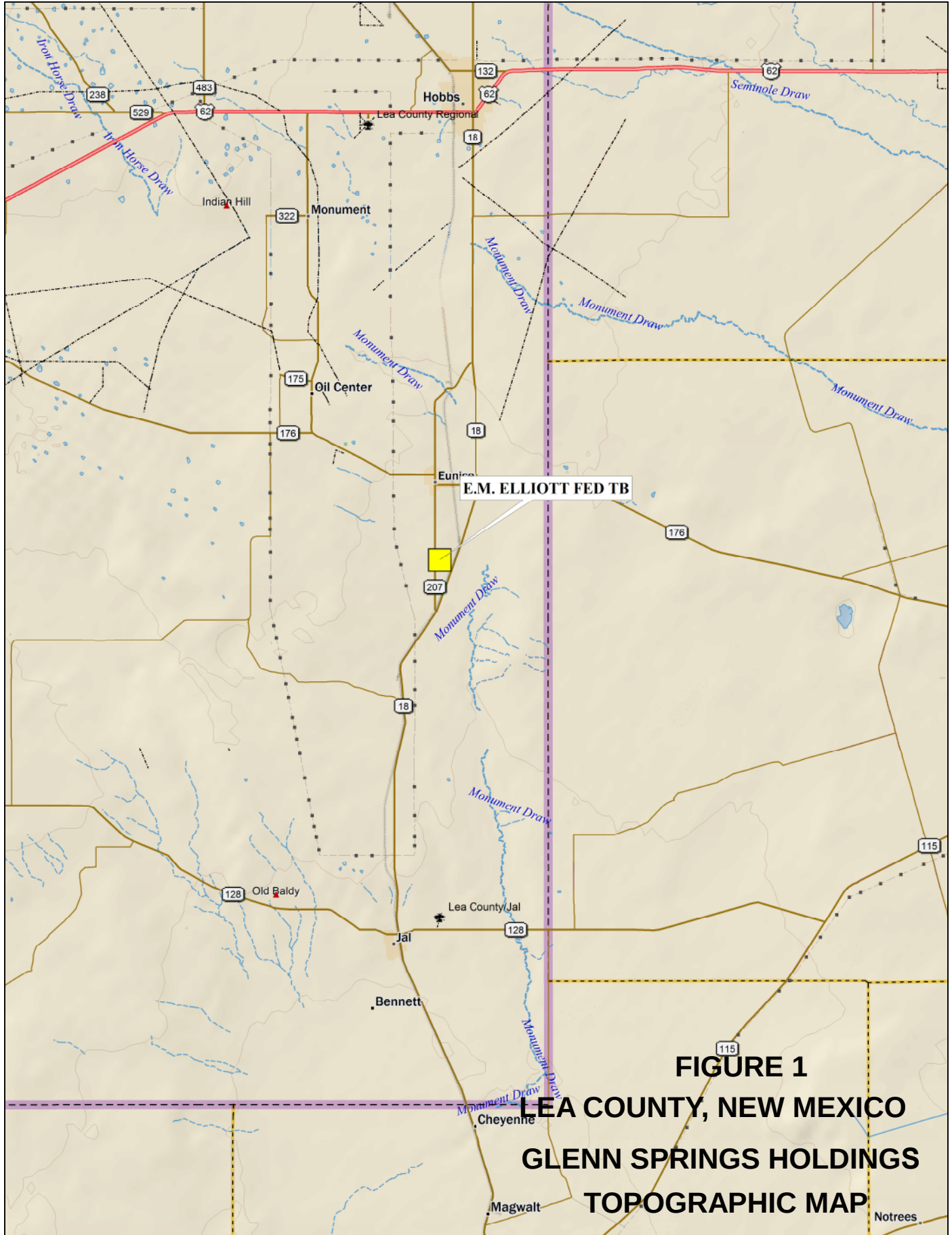
Sharon Hall
Operations Manager

Attachments:

Figures
Tables
Appendix A – Graphs
Appendix B – Lab Reports

cc: Dusty Wilson – Glenn Springs Holdings, Inc.

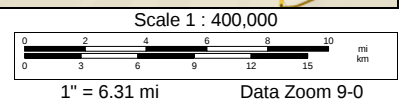
Figures

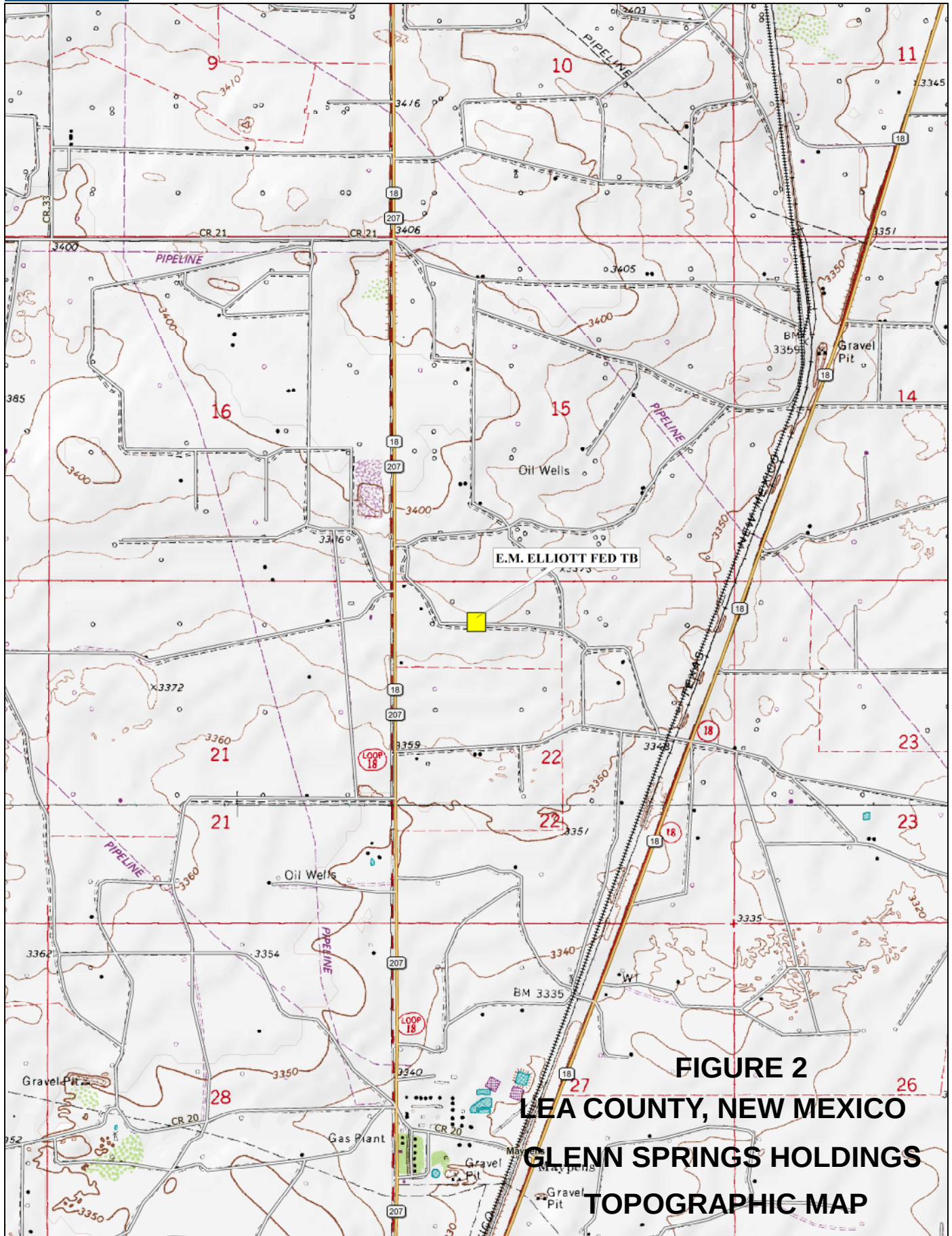


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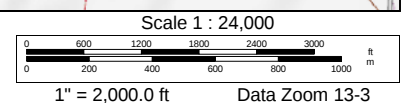




FIGURE NO. 3

LEGEND ⊕ MONITOR WELL LOCATIONS	NOTES:	 TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS NORTH 0 20 60ft	SITE MAP E.M. ELLIOT TANK BATTERY LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01688</td><td rowspan="3">REV</td></tr><tr><td>Date: 5/8/2019</td></tr><tr><td>File: H:\Acad Data\GLENN SPRINGS\2019\01688</td></tr></table>	Project: 212C-MD-01688	REV	Date: 5/8/2019	File: H:\Acad Data\GLENN SPRINGS\2019\01688
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Date: 5/8/2019								
File: H:\Acad Data\GLENN SPRINGS\2019\01688								

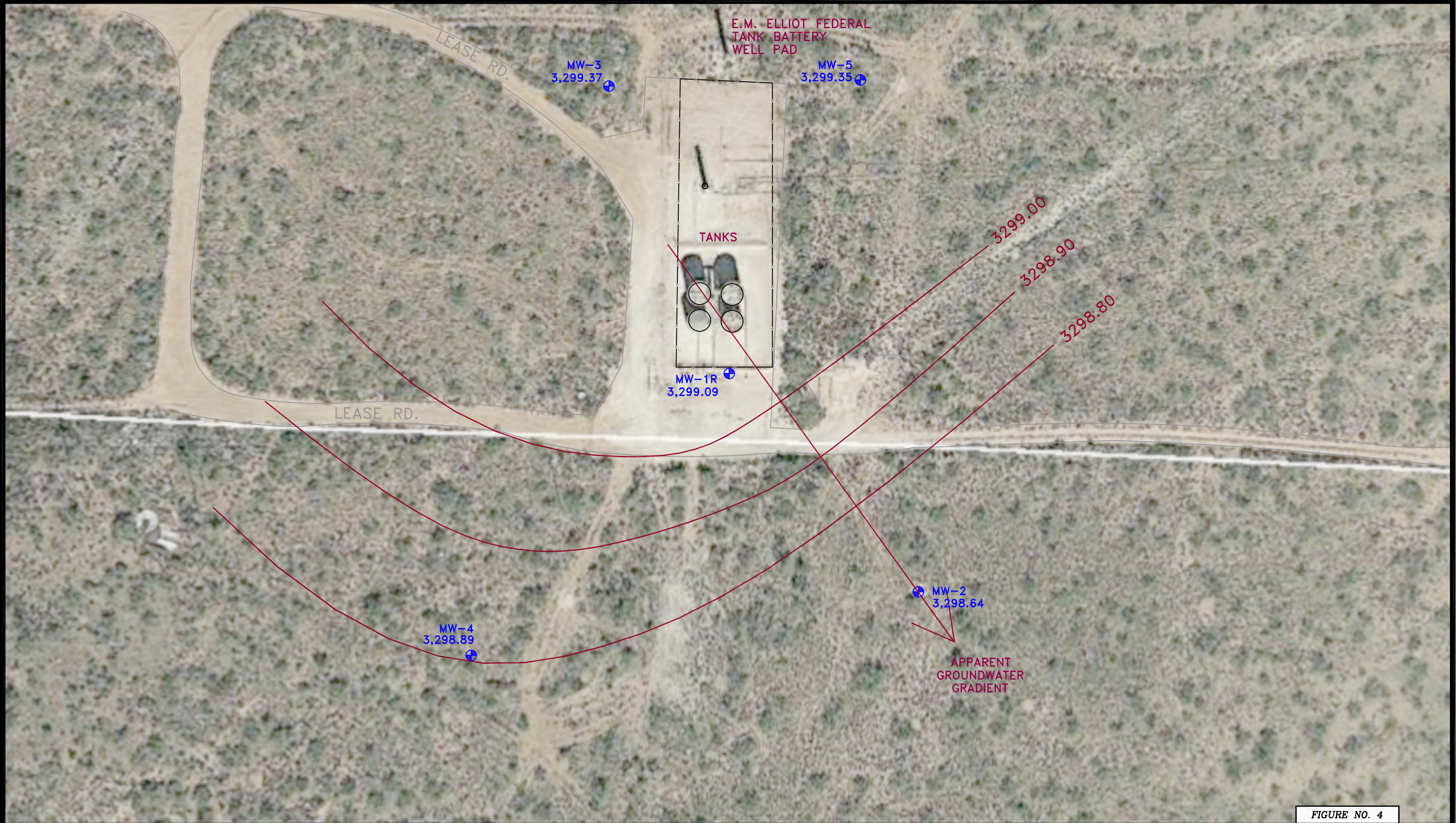


FIGURE NO. 4

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION
CONTOUR INTERVAL = .10 FT.

GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

APPARENT GROUNDWATER GRADIENT

NOTES:

TETRA TECH

901 W. WALL STREET STE. 100
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

GROUNDWATER GRADIENT MAP
DECEMBER 06, 2016

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/24/2019	
File: H:\Acad Data\GLENN SPRINGS\2016	

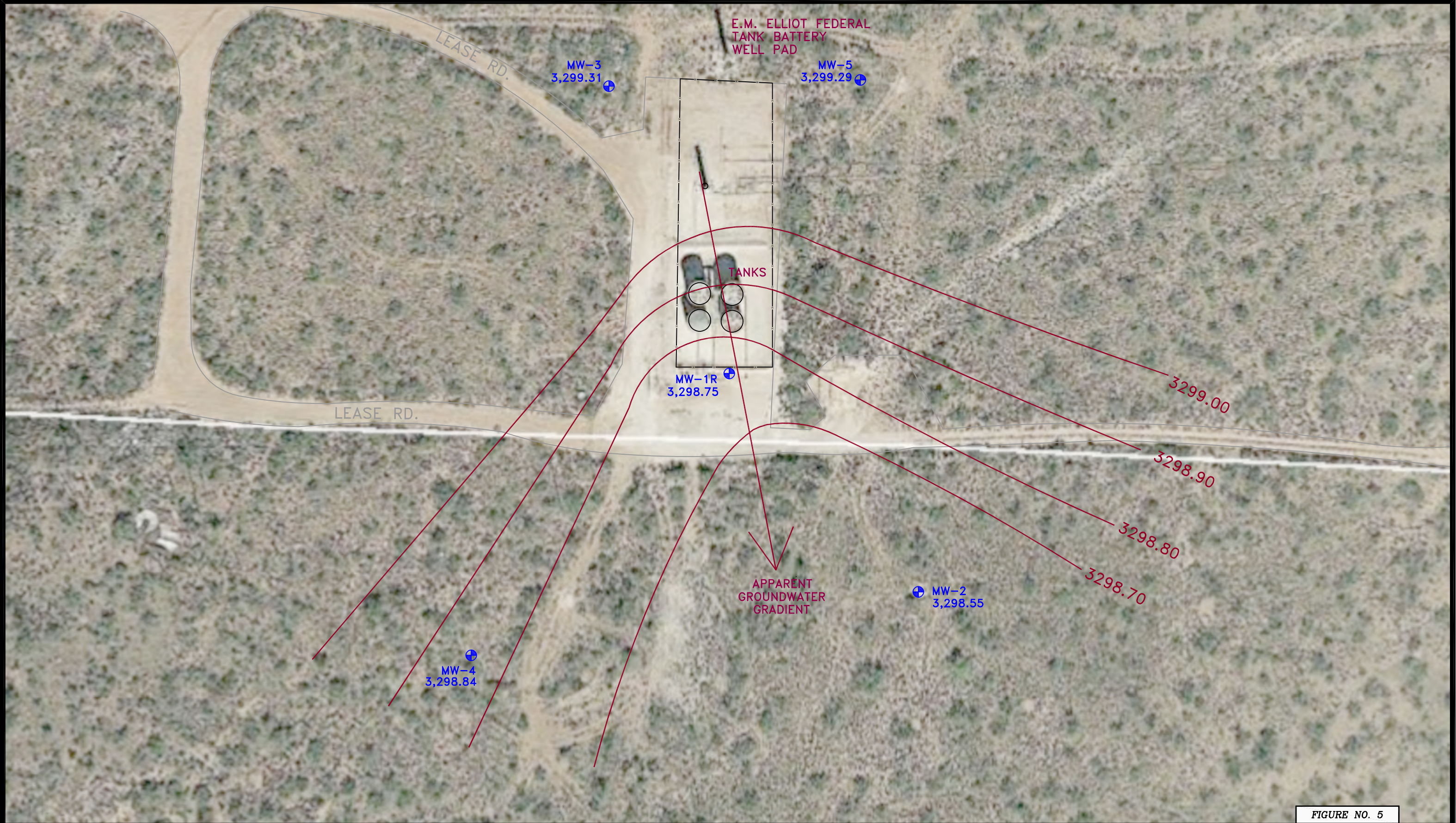


FIGURE NO. 5

LEGEND MONITOR WELL LOCATIONS GROUNDWATER ELEVATION CONTOUR INTERVAL = .10 FT. GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) APPARENT GROUNDWATER GRADIENT	NOTES:	TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS NORTH 0 20 60ft	GROUNDWATER GRADIENT MAP NOVEMBER 20, 2017 E.M. ELLIOT TANK BATTERY LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01688</td><td>REV.</td></tr><tr><td>Date: 5/24/2019</td><td></td></tr><tr><td>File: H:\Acad Data\GLENN SPRINGS\2017</td><td></td></tr></table>	Project: 212C-MD-01688	REV.	Date: 5/24/2019		File: H:\Acad Data\GLENN SPRINGS\2017	
Project: 212C-MD-01688	REV.									
Date: 5/24/2019										
File: H:\Acad Data\GLENN SPRINGS\2017										

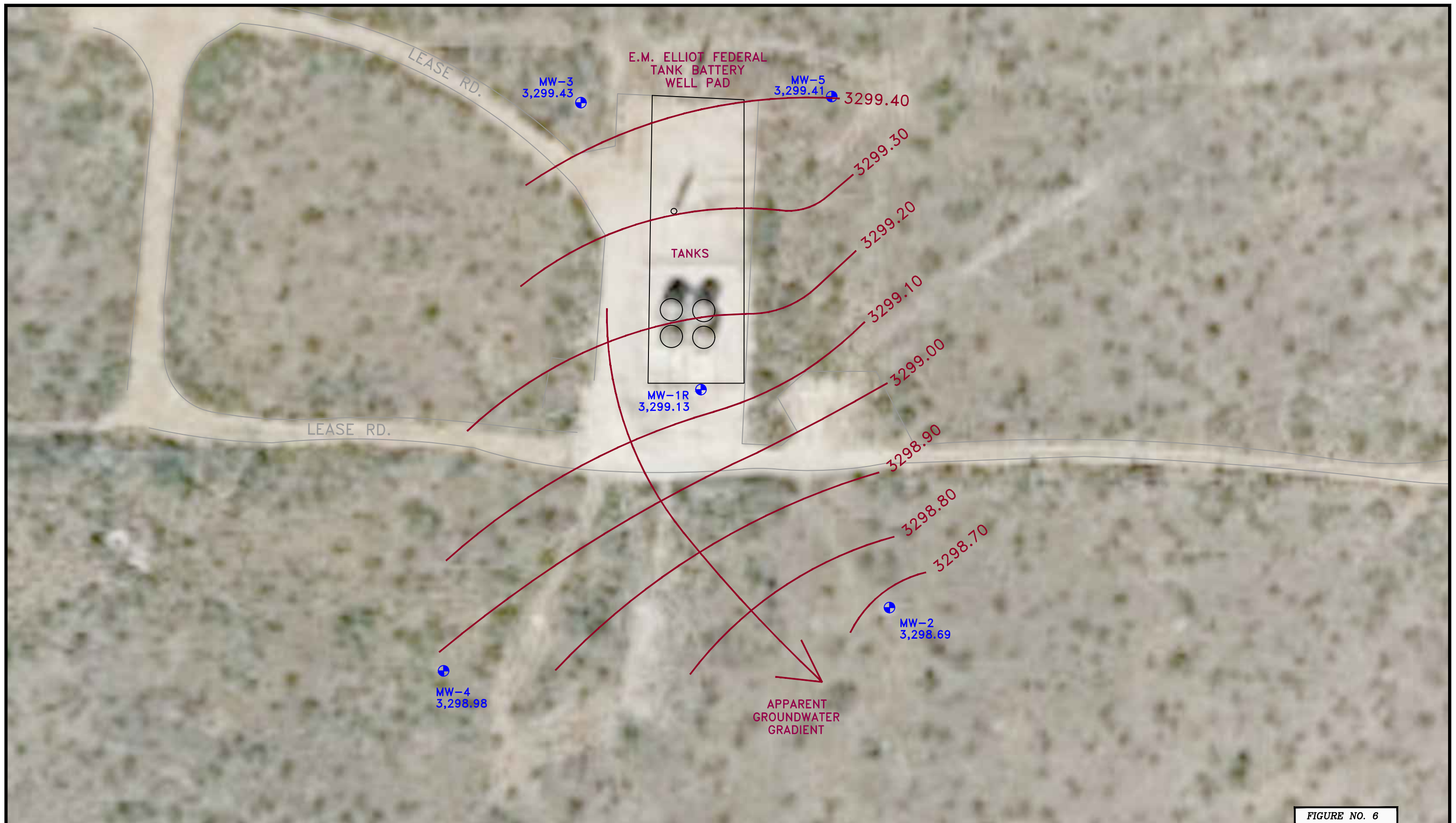


FIGURE NO. 6

LEGEND

- MONITOR WELL LOCATIONS
- GROUNDWATER ELEVATION CONTOUR INTERVAL = .10 FT.
- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPARENT GROUNDWATER GRADIENT RESULTS IN mg/L

NOTES:

TETRA TECH
901 W. WALL STREET STE. 100
MIDLAND, TEXAS

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

GROUNDWATER GRADIENT MAP
FEBRUARY 20, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 4/3/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	

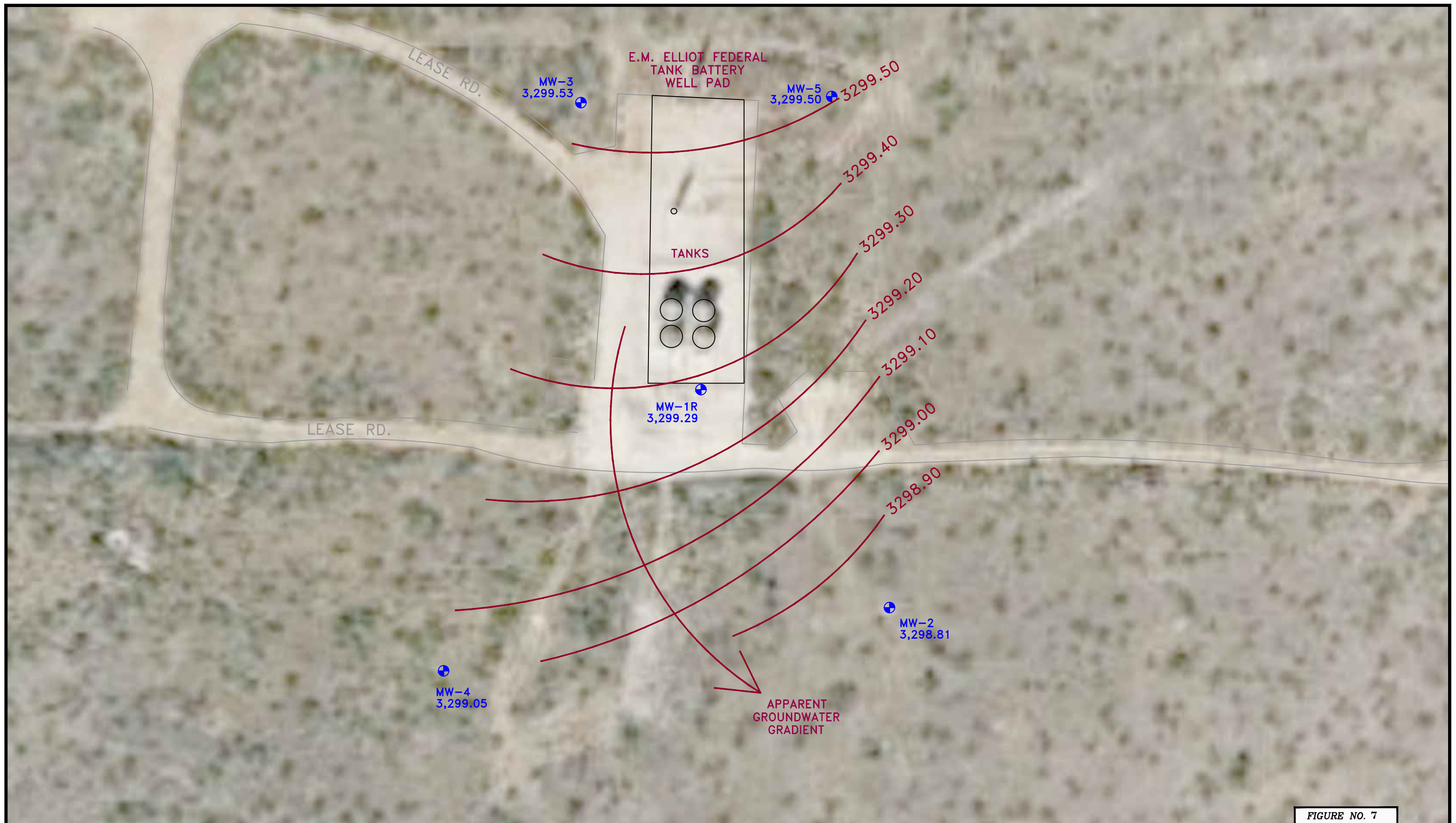


FIGURE NO. 7

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION CONTOUR INTERVAL = .10 FT.

GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

APPARENT GROUNDWATER GRADIENT

RESULTS IN mg/L

NOTES:

TETRA TECH
901 W. WALL STREET STE. 100
MIDLAND, TEXAS

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

GROUNDWATER GRADIENT MAP
MAY 24, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 4/4/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	

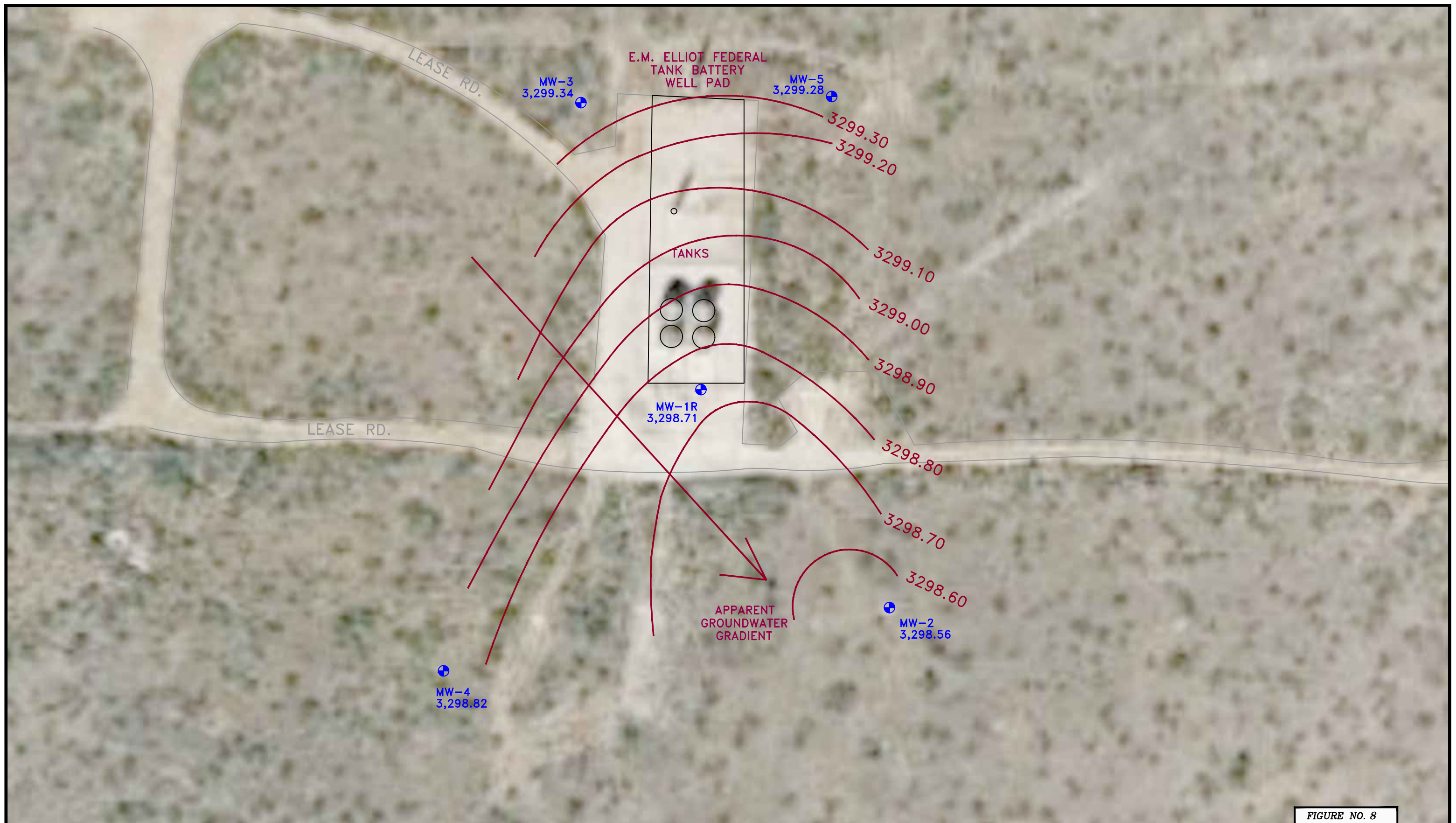


FIGURE NO. 8

LEGEND

- MONITOR WELL LOCATIONS
- GROUNDWATER ELEVATION CONTOUR INTERVAL = .10 FT.
- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPARENT GROUNDWATER GRADIENT

RESULTS IN mg/L

NOTES:

TETRA TECH
901 W. WALL STREET STE. 100
MIDLAND, TEXAS

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

GROUNDWATER GRADIENT MAP
AUGUST 24, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 4/3/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	

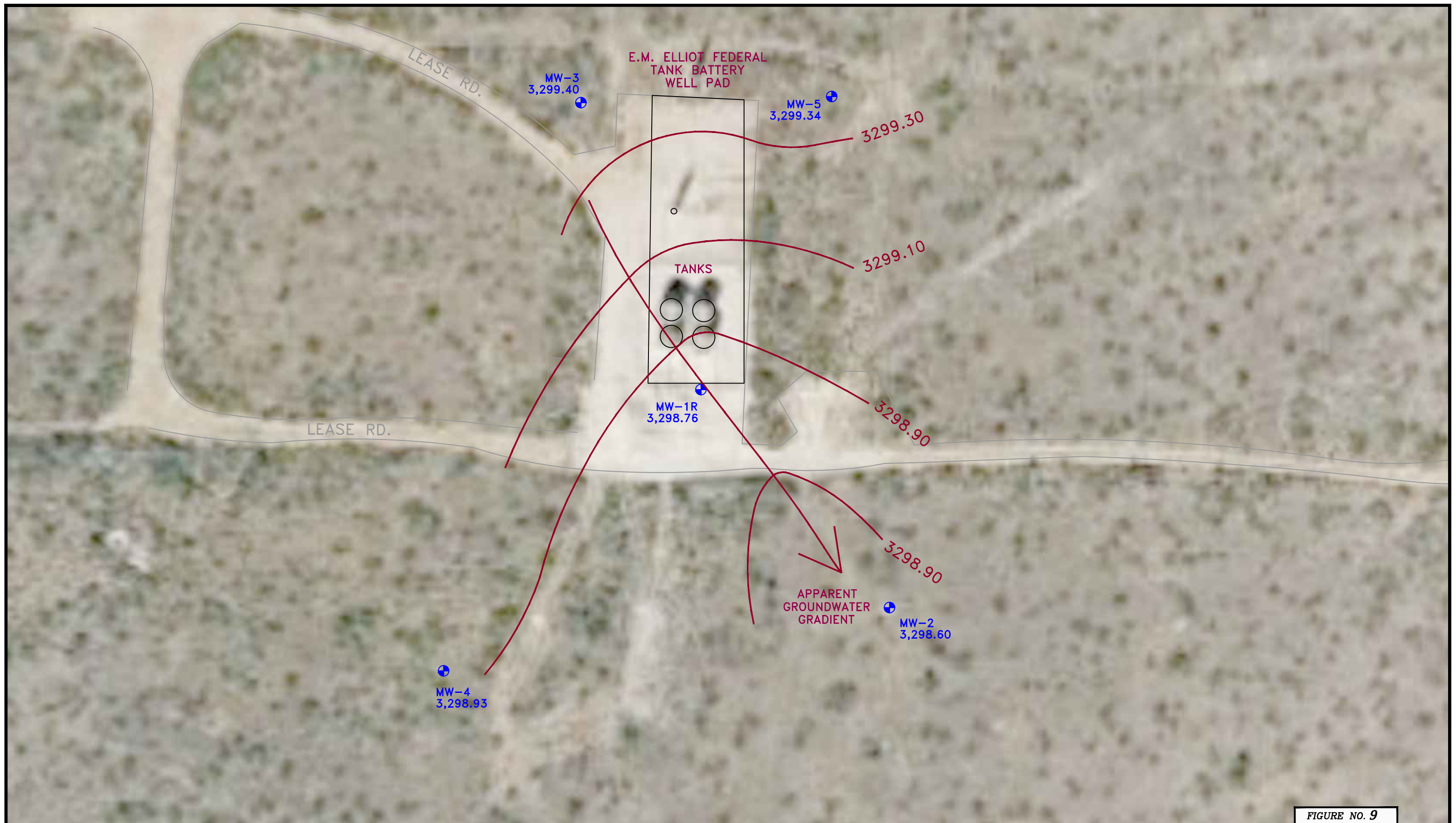


FIGURE NO. 9

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION
CONTOUR INTERVAL = .10 FT.

GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

APPARENT GROUNDWATER GRADIENT

RESULTS IN mg/L

NOTES:

TETRA TECH
901 W. WALL STREET STE. 100
MIDLAND, TEXAS

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

GROUNDWATER GRADIENT MAP
NOVEMBER 15, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 4/3/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	



FIGURE NO. 10

+

MONITOR WELL LOCATIONS

2,000

CHLORIDE CONCENTRATION mg/L

Cl=1,110

CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

NOTES:

Tt

TETRA TECH

901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH

0

20

60ft

CHLORIDE CONCENTRATION MAP
DECEMBER 07, 2016

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/6/2019	
File: H:\Acad Data\GLENN SPRINGS\2016	

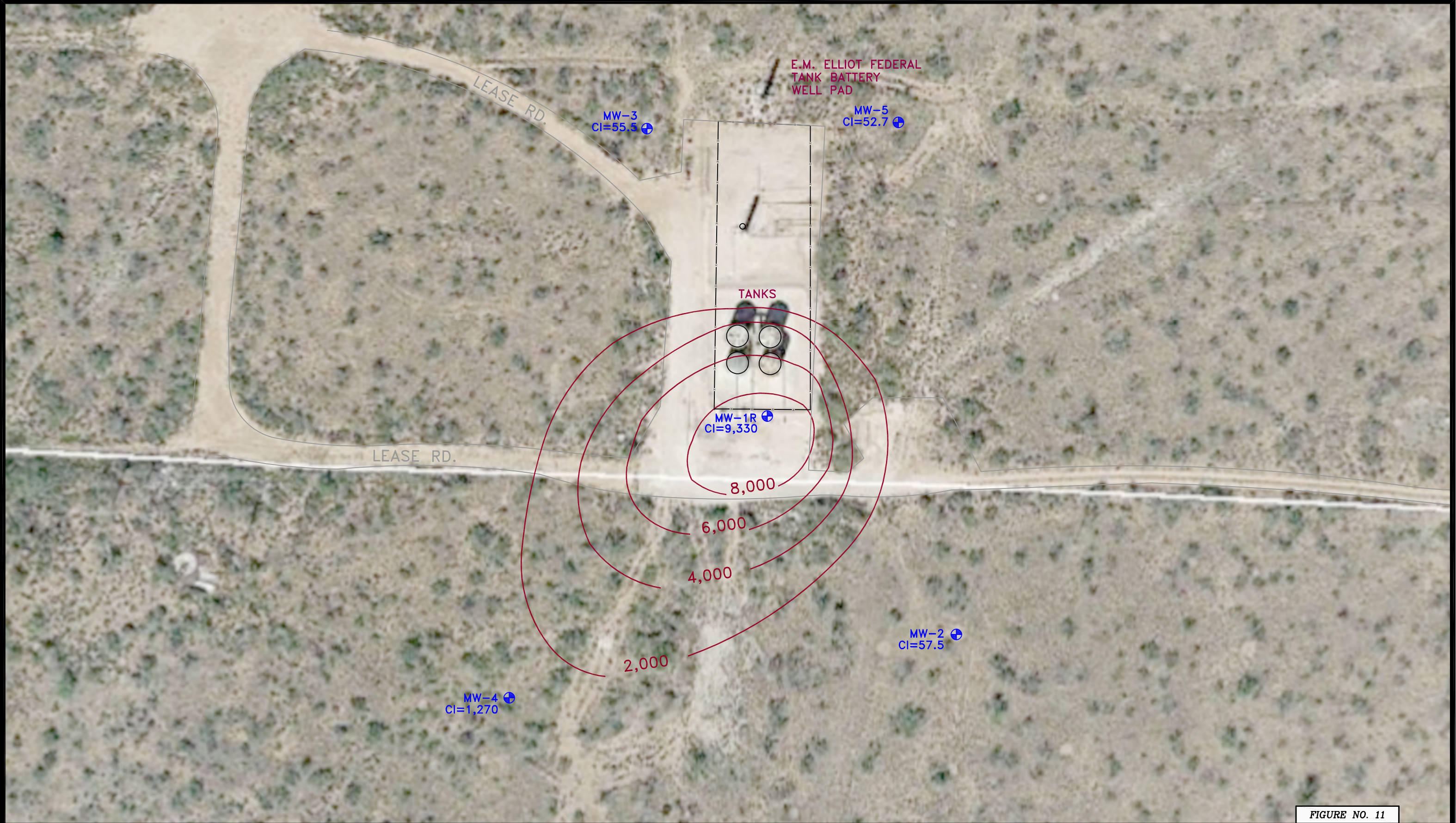


FIGURE NO. 11



MONITOR WELL LOCATIONS



CHLORIDE CONCENTRATION mg/L



CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

NOTES:



TETRA TECH

901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH



CHLORIDE CONCENTRATION MAP
NOVEMBER 20, 2017

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/6/2019	
File: H:\Acad Data\GLENN SPRINGS\2017	

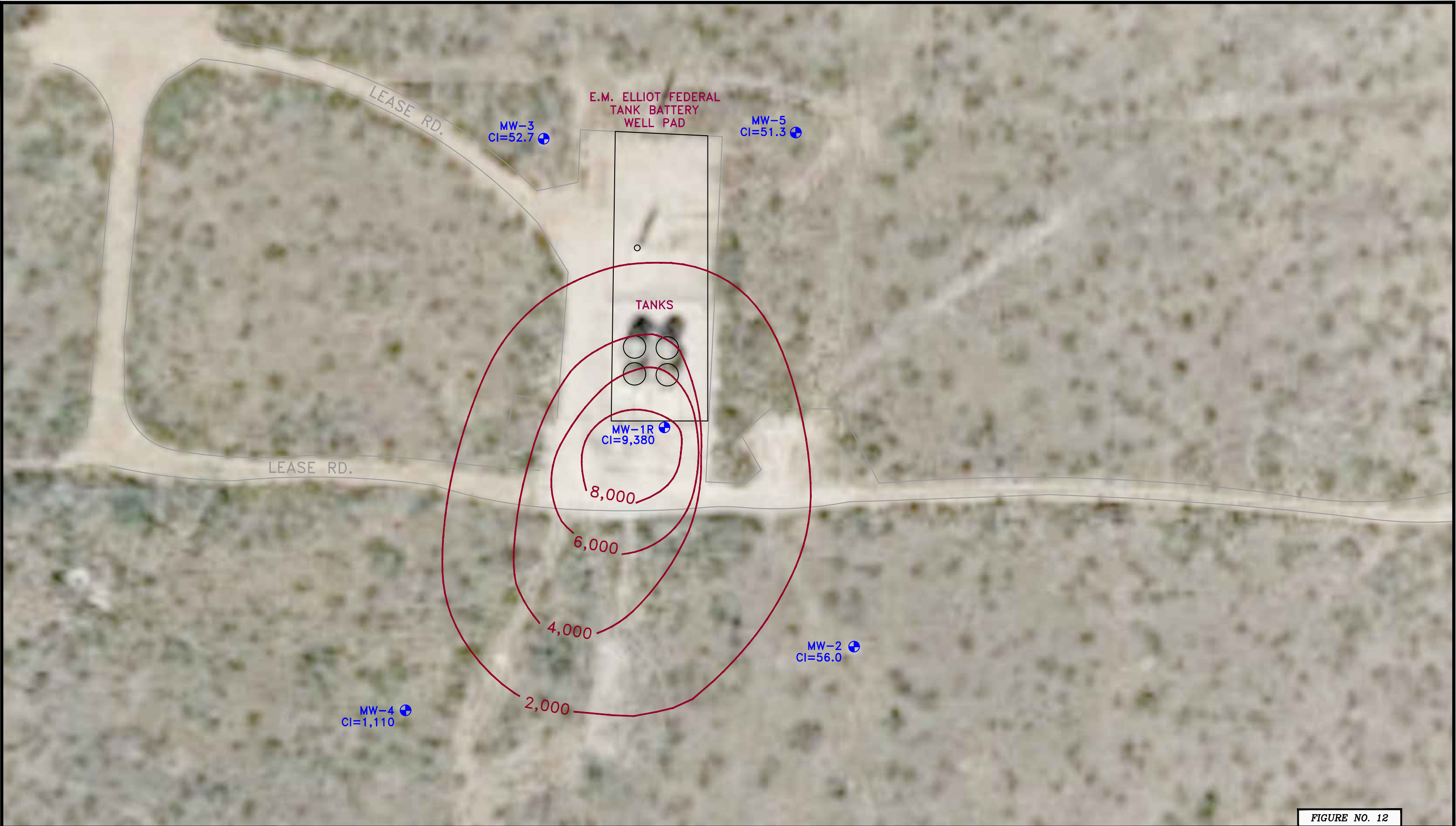


FIGURE NO. 12

 MONITOR WELL LOCATIONS

 CHLORIDE CONCENTRATION mg/L

 CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

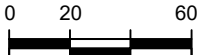
NOTES:



TETRA TECH
901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH



CHLORIDE CONCENTRATION MAP
FEBRUARY 21, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/6/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	

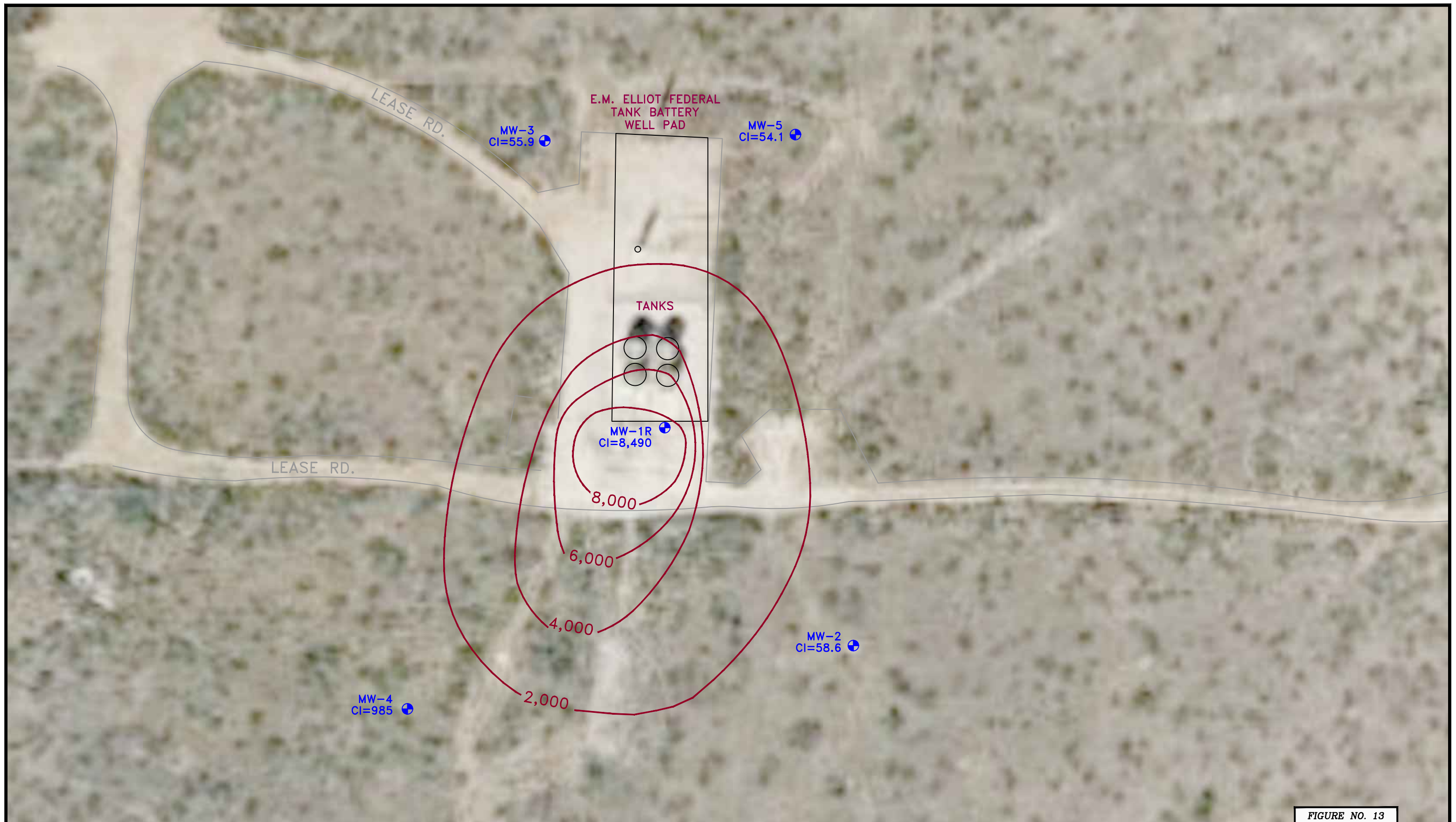


FIGURE NO. 13

LEGEND

MONITOR WELL LOCATIONS

CHLORIDE CONCENTRATION mg/L

CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

NOTES:

TETRA TECH

901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

CHLORIDE CONCENTRATION MAP
MAY 24, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/6/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\01688	

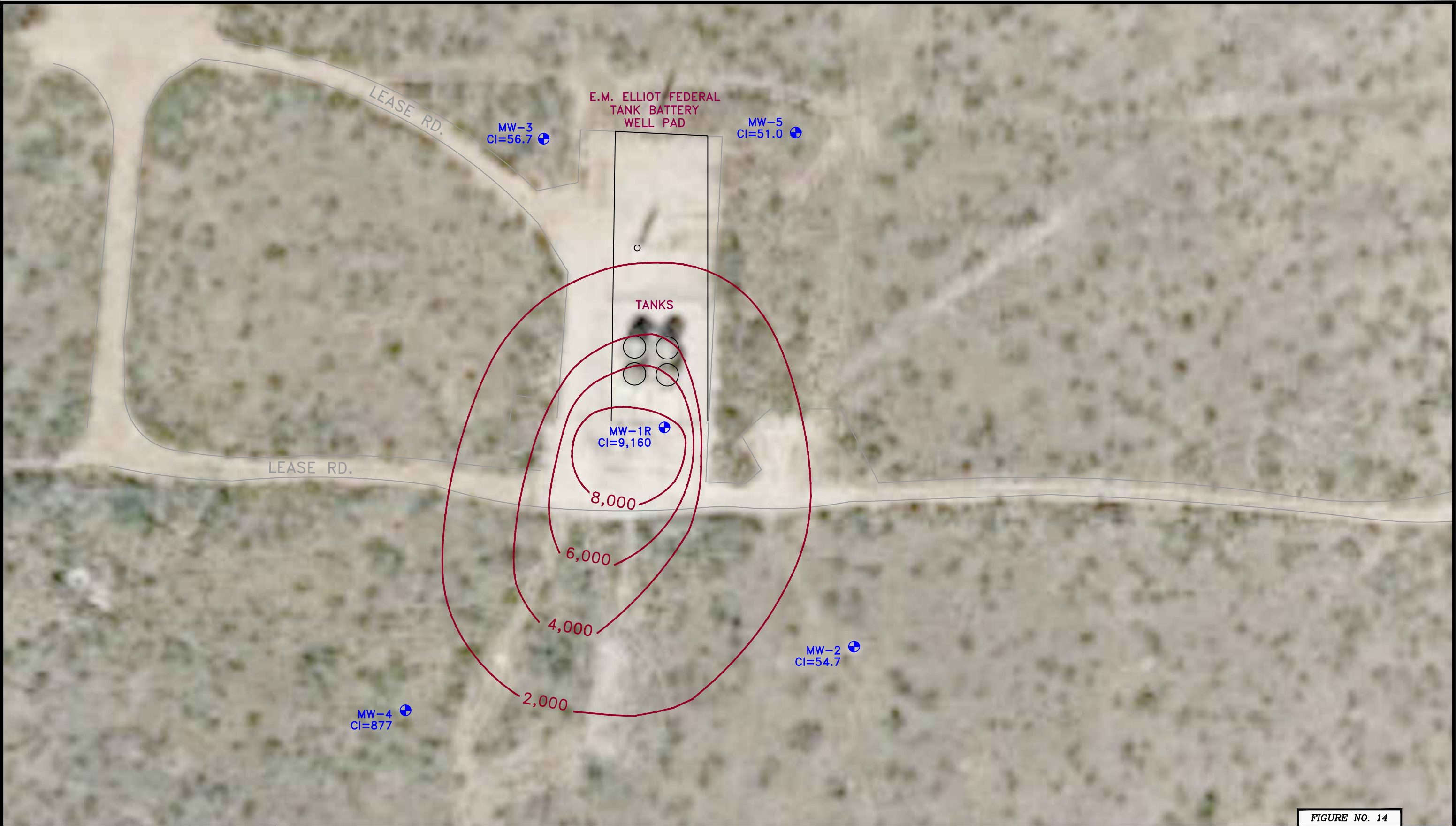


FIGURE NO. 14

LEGEND

MONITOR WELL LOCATIONS

2,000 CHLORIDE CONCENTRATION mg/L

CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

NOTES:

TETRA TECH

901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

CHLORIDE CONCENTRATION MAP
AUGUST 24, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688	REV.
Date: 5/6/2019	
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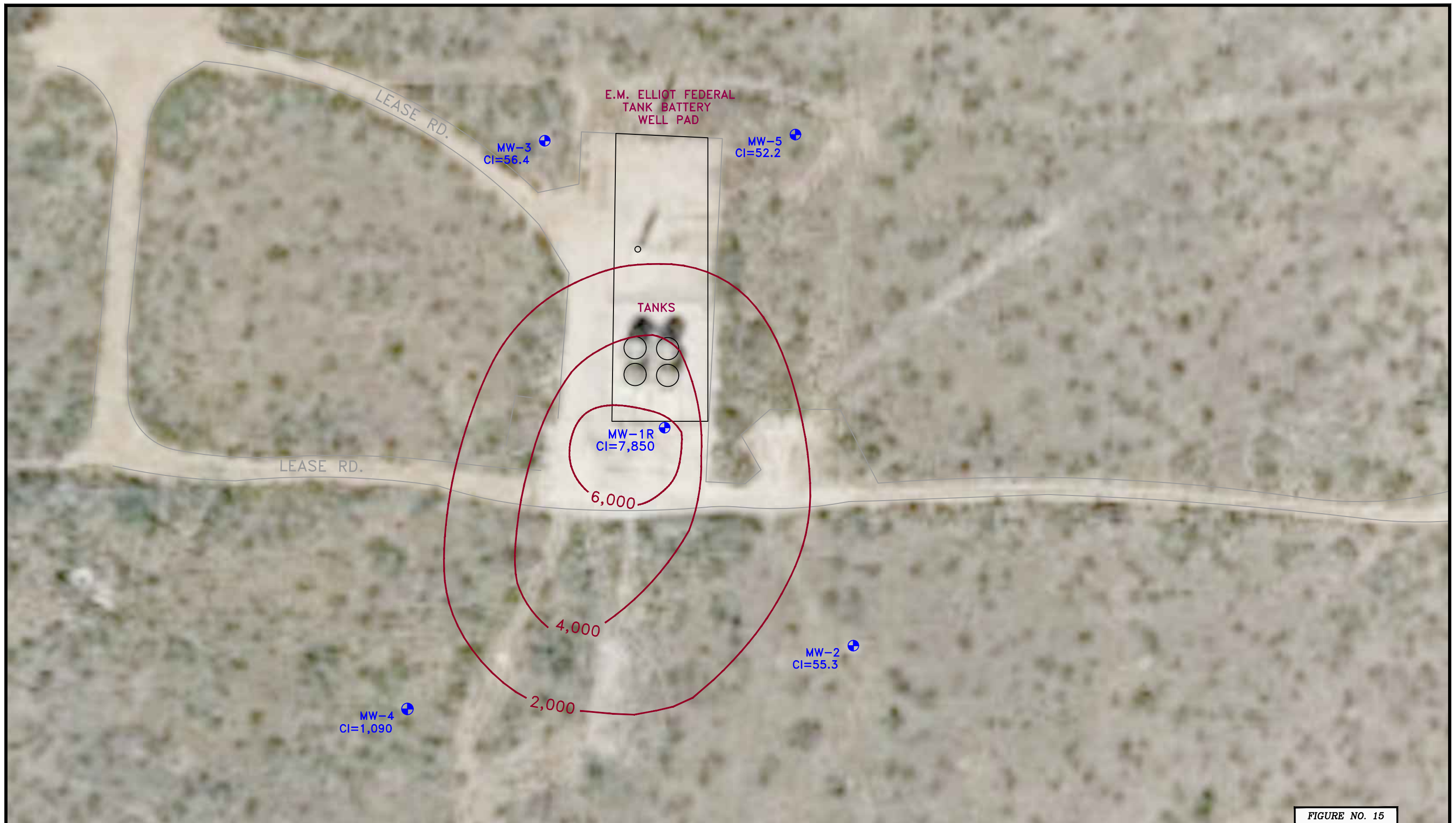


FIGURE NO. 15

LEGEND

MONITOR WELL LOCATIONS

2,000 CHLORIDE CONCENTRATION mg/L

Cl=1,090 CHLORIDE CONCENTRATION LEVEL

RESULTS IN mg/L

NOTES:

TETRA TECH

901 W. WALL STREET STE. 101
MIDLAND, TEXAS
(432) 682-4559

GLENN SPRINGS HOLDINGS

NORTH

0 20 60ft

CHLORIDE CONCENTRATION MAP
NOVEMBER 15, 2018

E.M. ELLIOT TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01688
Date: 5/8/2019
File: H:\Acad Data\GLENN SPRINGS\2019\01688

Tables

TABLE 1
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Measurement	Top of Casing Elevation, feet AMSL	Total Well Depth (in ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Groundwater Elevation (ft)
MW-1	10/23/08	3,378.91	85.60	-	80.88	-	3,298.03
	12/10/08	-	85.60	-	80.85	-	3,298.06
	03/11/09	-	85.60	-	80.85	-	3,298.06
	06/22/09	-	85.60	-	80.84	-	3,298.07
	09/15/09	-	85.66	-	80.84	-	3,298.03
	12/09/09	-	85.60	-	80.88	-	3,298.03
	03/10/10	-	85.60	-	80.85	-	3,298.06
	06/07/10	-	85.60	-	80.77	-	3,298.14
	09/13/10	-	85.60	-	81.64	-	3,297.27
	12/13/10	-	85.60	-	81.78	-	3,297.13
	03/10/11	-	85.60	-	81.82	-	3,297.09
	06/13/11	-	85.60	-	80.77	-	3,298.14
	09/20/11	-	85.60	-	80.82	-	3,298.09
	12/12/11	-	85.60	-	80.95	-	3,297.96
	04/05/12	-	85.60	-	80.84	-	3,298.07
	06/19/12	-	85.60	-	80.83	-	3,298.08
	09/24/12	-	85.60	-	80.91	-	3,298.00
	12/14/12	-	85.60	-	80.82	-	3,298.09
	03/27/13	-	86.80	-	80.83	-	3,298.08
	06/07/13	-	-	-	80.82	-	3,298.09
	09/19/13	-	-	-	80.81	-	3,298.10
	12/26/13	-	86.83	-	80.86	-	3,298.05
	03/27/14	-	85.60	-	80.93	-	3,297.98
	06/17/14	-	85.60	-	80.83	-	3,298.08
	09/26/14	-	85.60	-	80.88	-	3,298.03
	12/15/14	-	85.59	-	80.99	-	3,297.92
	03/24/15	-	85.66	-	80.91	-	3,298.00
	06/18/15	-	85.66	-	80.96	-	3,297.95
	08/06/15	-	-	-	80.90	-	3,298.01
	08/12/15	-	-	-	80.87	-	3,298.04
	08/18/15	-	-	-	80.84	-	3,298.07
	09/08/15	-	85.66	-	80.82	-	3,298.09
	12/18/15	-	85.72	-	80.86	-	3,298.05
	03/14/16	-	-	-	80.82	-	3,298.09
	06/28/16	-	85.66	-	80.83	-	3,298.08
	09/12/16	Well Plugged					NA
MW-1R	09/09/16	3,380.41		-	79.32	-	3,301.09
	09/15/16	-		-	82.04	-	3,298.37
	09/29/16	-	92.40	-	81.34	-	3,299.07
	10/12/16	-		-	81.30	-	3,299.11
	12/06/16	-		-	81.32	-	3,299.09
	03/01/17	-	92.40	-	81.39	-	3,299.02
	08/29/17	-	-	-	81.29	-	3,299.12
	11/20/17	-	-	-	81.66	-	3,298.75
	02/20/18	-	90.38	-	81.28	-	3,299.13

TABLE 1
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Measurement	Top of Casing Elevation, feet AMSL	Total Well Depth (in ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Groundwater Elevation (ft)
MW-1R	05/24/18	-	-	-	81.12	-	3,299.29
	08/24/18	-	-	-	81.70	-	3,298.71
	11/15/18	-	90.45	-	81.65	-	3,298.76
MW-2	09/20/11	3,378.00	102.00	-	82.97	-	3,295.03
	12/12/11	-	102.00	-	80.44	-	3,297.56
	04/05/12	-	102.00	-	80.27	-	3,297.73
	06/19/12	-	102.00	-	80.32	-	3,297.68
	09/24/12	-	102.00	-	80.31	-	3,297.69
	12/14/12	-	102.00	-	80.34	-	3,297.66
	03/27/13	-	98.35	-	80.33	-	3,297.67
	06/07/13	-	-	-	80.35	-	3,297.65
	09/19/13	-	-	-	80.34	-	3,297.66
	12/26/13	-	-	-	80.35	-	3,297.65
	03/27/14	-	97.16	-	80.39	-	3,297.61
	06/17/14	-	97.16	-	80.29	-	3,297.71
	09/30/14	-	97.16	-	80.37	-	3,297.63
	12/15/14	-	97.16	-	80.44	-	3,297.56
	03/24/15	-	97.05	-	80.37	-	3,297.63
	06/18/15	-	97.16	-	80.36	-	3,297.64
	08/06/15	-	-	-	80.37	-	3,297.63
	09/08/15	-	97.16	-	80.33	-	3,297.67
	12/18/15	-	97.12	-	80.35	-	3,297.65
	03/14/16	-	-	-	80.30	-	3,297.70
	06/28/16	-	97.16	-	80.32	-	3,297.68
	09/09/16	3,378.98	-	-	80.27	-	3,298.71
	09/29/16	-	97.16	-	80.34	-	3,298.64
	10/12/16	-	-	-	80.30	-	3,298.68
	12/06/16	-	-	-	80.34	-	3,298.64
	03/01/17	-	98.35	-	80.32	-	3,298.66
	08/29/17	-	98.35	-	80.29	-	3,298.69
	11/20/17	-	-	-	80.43	-	3,298.55
	02/20/18	-	97.10	-	80.29	-	3,298.69
	05/24/18	-	-	-	80.17	-	3,298.81
	08/24/18	-	-	-	80.42	-	3,298.56
	11/15/18	-	97.19	-	80.38	-	3,298.60
MW-3	09/20/11	3,381.40	99.00	-	80.33	-	3,301.07
	12/12/11	-	99.00	-	83.11	-	3,298.29
	04/05/12	-	99.00	-	82.98	-	3,298.42
	06/19/12	-	99.00	-	82.99	-	3,298.41
	09/24/12	-	99.00	-	82.99	-	3,298.41
	12/14/12	-	99.00	-	82.99	-	3,298.41
	03/27/13	-	99.00	-	83.04	-	3,298.36
	06/07/13	-	-	-	83.05	-	3,298.35

TABLE 1
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Measurement	Top of Casing Elevation, feet AMSL	Total Well Depth (in ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Groundwater Elevation (ft)
MW-3	09/19/13	-	-	-	83.02	-	3,298.38
	12/26/13	-	-	-	83.09	-	3,298.31
	03/27/14	-	100.95	-	83.12	-	3,298.28
	06/17/14	-	100.95	-	83.06	-	3,298.34
	09/30/14	-	100.95	-	83.09	-	3,298.31
	12/15/14	-	100.94	-	83.18	-	3,298.22
	03/24/15	-	100.94	-	83.08	-	3,298.32
	06/18/15	-	100.94	-	83.05	-	3,298.35
	08/06/15	-	-	-	83.04	-	3,298.36
	09/08/15	-	100.94	-	83.02	-	3,298.38
	12/18/15	-	104.94	-	83.04	-	3,298.36
	03/14/16	-	-	-	82.99	-	3,298.41
	06/28/16	-	100.97	-	82.98	-	3,298.42
	09/09/16	3,382.36	-	-	83.00	-	3,299.36
	09/29/16	-	100.97	-	83.01	-	3,299.35
	10/12/16	-	-	-	82.98	-	3,299.38
	12/06/16	-	-	-	82.99	-	3,299.37
	03/01/17	-	-	-	83.00	-	3,299.36
	08/29/17	-	-	-	82.98	-	3,299.38
	11/20/17	-	-	-	83.05	-	3,299.31
	02/20/18	-	100.96	-	82.93	-	3,299.43
	05/24/18	-	-	-	82.83	-	3,299.53
	08/24/18	-	-	-	83.02	-	3,299.34
	11/15/18	-	101.09	-	82.96	-	3,299.40
MW-4	09/08/16	3,377.80	-	-	78.90	-	3,298.90
	09/09/16	-	-	-	78.96	-	3,298.84
	09/15/16	-	-	-	78.95	-	3,298.85
	09/29/16	-	94.40	-	78.95	-	3,298.85
	10/12/16	-	-	-	78.92	-	3,298.88
	12/06/16	-	-	-	78.91	-	3,298.89
	03/01/17	-	93.35	-	78.89	-	3,298.91
	08/29/17	-	93.35	-	78.91	-	3,298.89
	11/20/17	-	-	-	78.96	-	3,298.84
	02/20/18	-	93.72	-	78.82	-	3,298.98
	05/24/18	-	-	-	78.75	-	3,299.05
	08/24/18	-	-	-	78.98	-	3,298.82
	11/15/18	-	93.72	-	78.87	-	3,298.93
MW-5	09/08/16	3,384.53	-	-	85.15	-	3,299.38
	09/09/16	-	-	-	85.19	-	3,299.34
	09/15/16	-	-	-	85.15	-	3,299.38
	09/29/16	-	101.94	-	85.16	-	3,299.37
	10/12/16	-	-	-	85.14	-	3,299.39
	12/06/16	-	-	-	85.18	-	3,299.35

TABLE 1
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Measurement	Top of Casing Elevation, feet AMSL	Total Well Depth (in ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Groundwater Elevation (ft)
MW-5	03/01/17	-	101.49	-	85.20	-	3,299.33
	08/29/17	-	101.49	-	85.16	-	3,299.37
	11/20/17	-	-	-	85.24	-	3,299.29
	02/20/18	-	101.95	-	85.12	-	3,299.41
	05/24/18	-	-	-	85.03	-	3,299.50
	08/24/18	-	-	-	85.25	-	3,299.28
	11/15/18	-	-	-	85.19	-	3,299.34

(-) No data (TOC) Top of casing

9/7/16 MW-4 and MW-5 drilled

9/8/16 MW-1R drilled

9/12/16 MW-1 plugged

10/12/16 John West Survey Company surveyed all five monitor wells on Site

TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/l)	Xylene (mg/L)	Total BTEX (mg/l)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
MW-1 Dup	09/25/06	-	0.0013	<0.001	<0.001	0.0065	0.0078	8,260
	05/15/07	-	<0.001	<0.001	<0.001	0.0015	0.0015	2,020
	10/23/08	-	<0.005	<0.005	<0.005	<0.005	<0.005	8,040
	12/11/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	9,590
	03/11/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,670
	03/11/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	8,950
	06/22/09	-	0.00049	<0.001	<0.001	<0.003	<0.003	9,600
	09/15/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,500
	12/09/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,880
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	8,630
	06/07/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,650
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,520
	12/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	9,580
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	16,800
	06/13/11	-	0.00024 J	<0.00030	<0.00020	<0.00023	0.00024 J	11,000
	09/20/11	-	0.00027 J	<0.00030	<0.00020	<0.00023	0.00027 J	4,400
	12/13/11	-	0.00025 J	<0.00030	<0.00020	<0.00023	0.00025 J	9,600
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	10,300
	06/19/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	8,030
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,100
	11/27/12	-	-	-	-	-	-	9,110
	11/27/12	-	-	-	-	-	-	8,310
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	7,230
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	8,820
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	9,320
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	9,620

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TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/l)	Xylene (mg/L)	Total BTEX (mg/l)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
MW-1	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	8,380
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	7,630
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,100
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	13,400
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	10,700
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,000
	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,000
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,500
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	11,500
	03/15/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	10,000
Dup	03/15/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	9,590
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	9,270
Dup	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	10,700
	09/12/16				Plugged			
MW-1R	09/29/16	-	<0.005	0.00095 J	<0.005	<0.015	0.00095 J	7,210
Dup	09/29/16	-	<0.005	0.0010 J	<0.005	<0.015	0.0010 J	7,040
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	8,810
Dup	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	9,380
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	8,740
Dup	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	9,250
	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	8,710
Dup	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	8,690
	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	8,600
Dup	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	8,860
	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	12,500

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TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/l)	Xylene (mg/L)	Total BTEX (mg/l)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
Dup	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9,330
	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9,380
Dup	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9,340
	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	8,490
Dup	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9,810
	08/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9,160
Dup	08/24/18	-	<0.0050	<0.0050	<0.0050	0.00081 J	0.00081 J	9,300
	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	7,850
MW-2	09/20/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	51
	12/13/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	160
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	62.2
	06/19/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	60.7
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	63.3
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	50.7
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	109
	06/07/13	-	NA	-	-	-	-	NA
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	59.9
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	53.5
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	63.1
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	63.1
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	58.0
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	54.4
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	55.0
	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	55.0
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	54.2
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	53.6

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TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/l)	Xylene (mg/L)	Total BTEX (mg/l)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
MW-2	03/15/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	57.6
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	53.4
	09/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.2
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	54.3
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	53.2
	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	49.4
	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	50.4
	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	57.5
	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	56.0
	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	58.6
	08/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	54.7
	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	55.3
MW-3	09/20/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	270
	12/13/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	52
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.7
	06/19/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	52.6
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	54.9
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	46.0
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	97.5
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	47.0
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	54.3
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.3
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	57.0
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	60.2
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	53.2
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.1

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TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylene (mg/L)	Total BTEX (mg/L)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
MW-3	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	56.9
	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	52.4
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.8
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	51.0
	03/15/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	55.9
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	53.4
	09/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	49.0
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	54.6
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	55.1
	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	48.4
	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	49.3
	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	55.5
	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	52.7
	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	55.9
	08/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	56.7
	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	56.4
MW-4	09/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	696
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	1,010
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	1,080
	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	923
	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	905
	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1,270
	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1,110
	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	985
	08/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	877
	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1,090

112MC06821
212C-MD-00236
212C-MD-00762

TABLE 2
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/l)	Xylene (mg/L)	Total BTEX (mg/l)	Chloride (mg/L)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.010 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L		250.0 mg/L*
Dup	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	1,100
MW-5	09/29/16	-	<0.005	0.0011 J	<0.005	<0.015	0.0011 J	61.8
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	51.6
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	51.2
	06/08/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	45.8
	08/30/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	47.2
	11/20/17	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	52.7
	02/21/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	51.3
	05/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	54.1
	08/24/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	51.0
	11/15/18	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	52.2

(-) Not Analyzed

NA - Not Analyzed, sample vials were broken during delivery to the laboratory

* - Other Standard for Domestic Water Supply

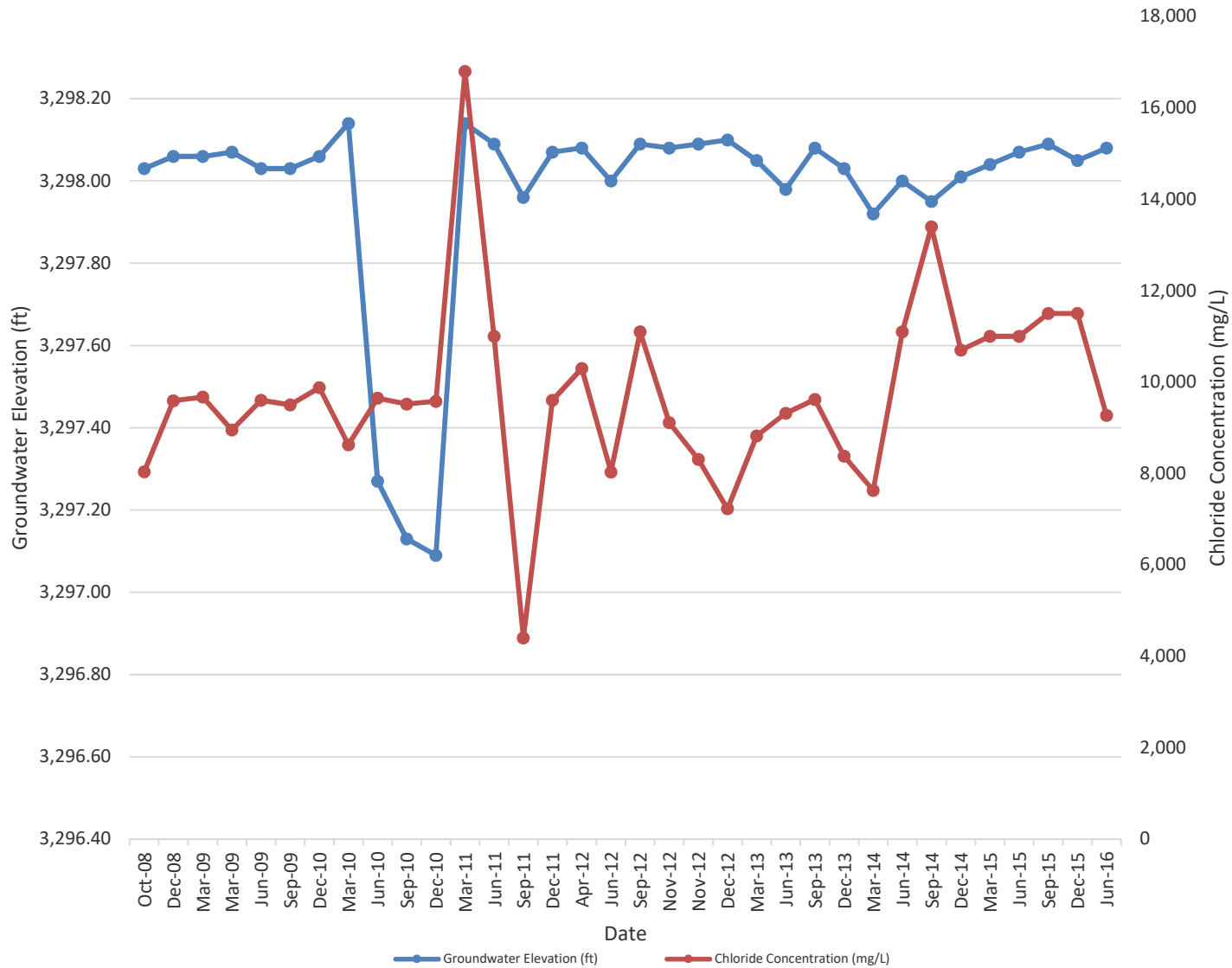
(J) Analyte detected below quantitation limit

MW-4 and MW-5 drilled on 9/7/16, MW-1R drilled on 09/08/16

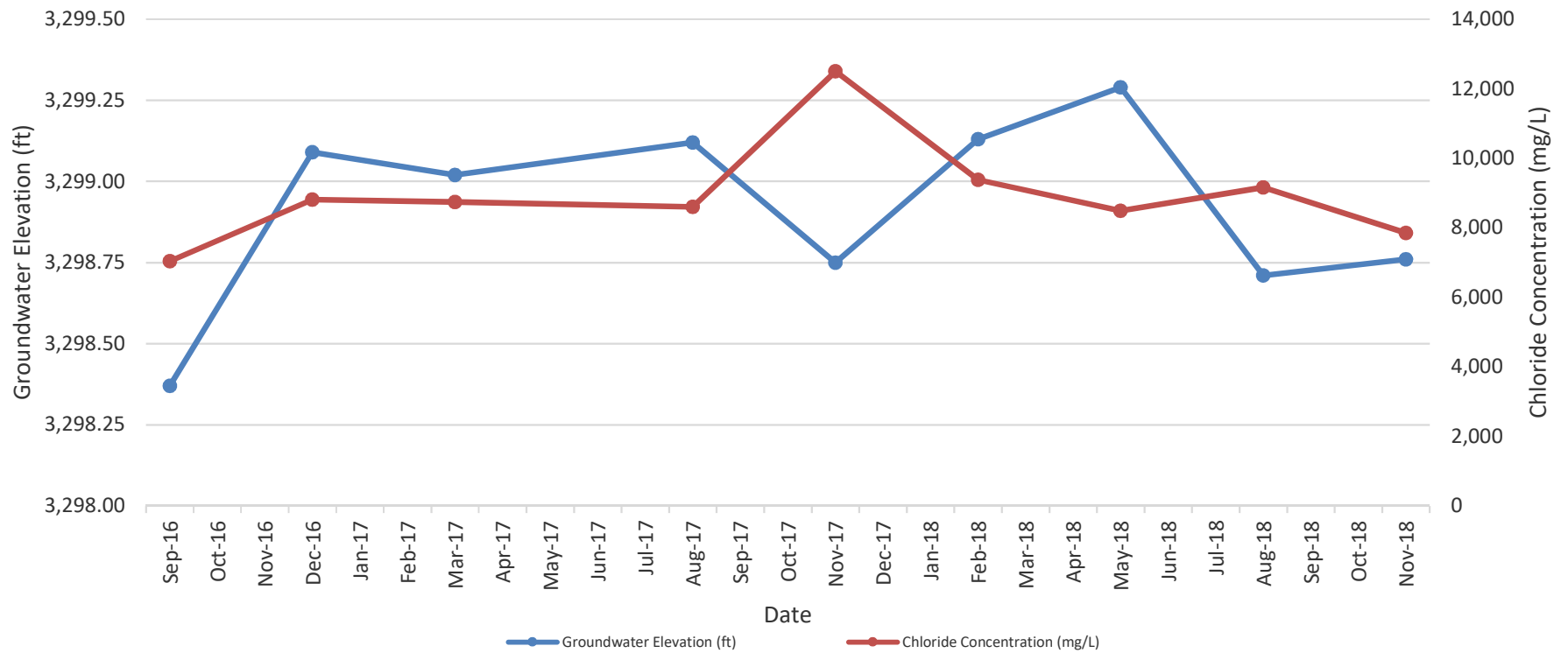
112MC06821
212C-MD-00236
212C-MD-00762

Appendix A – Graphs

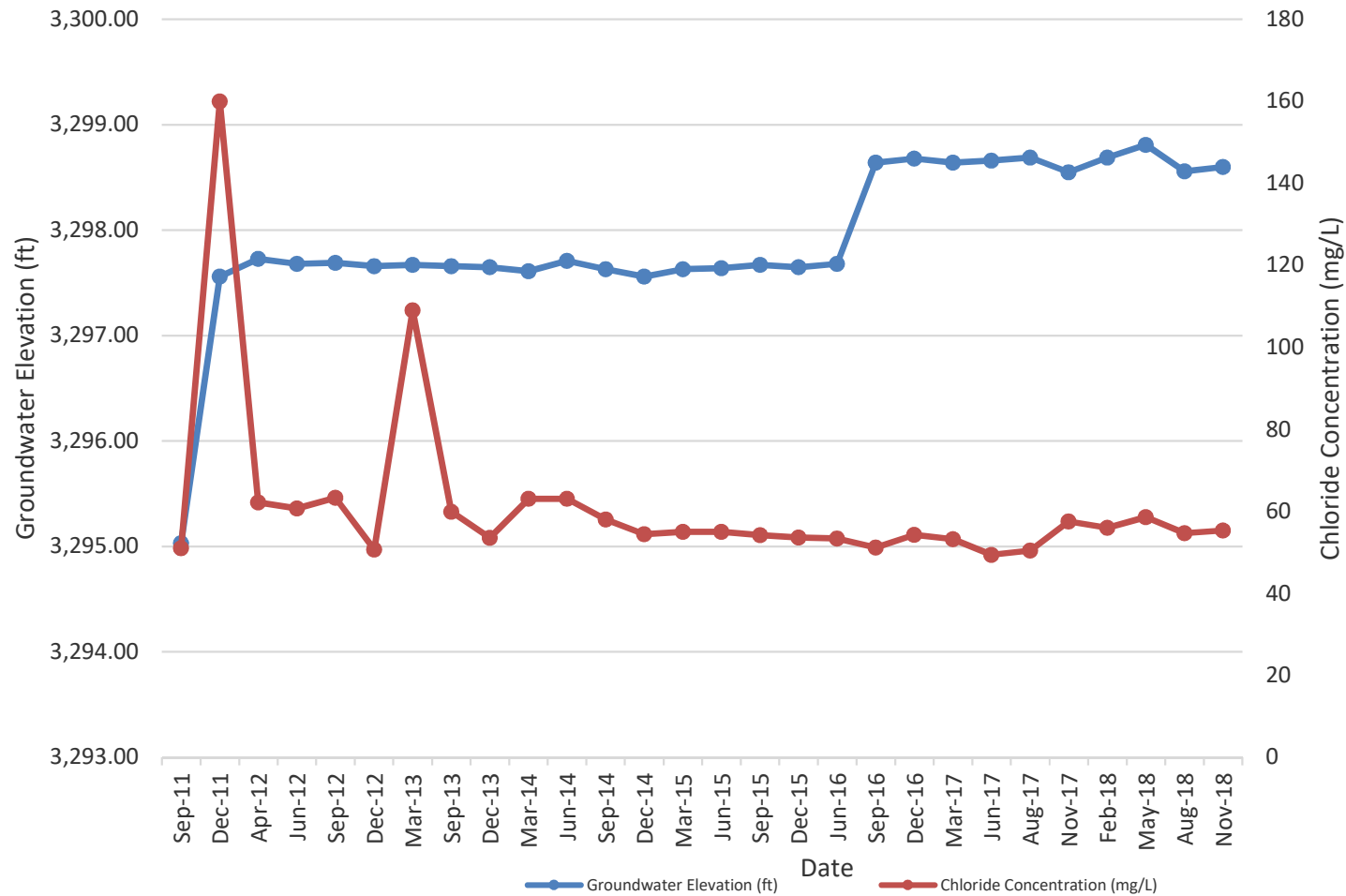
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Lea County, New Mexico
MW-1



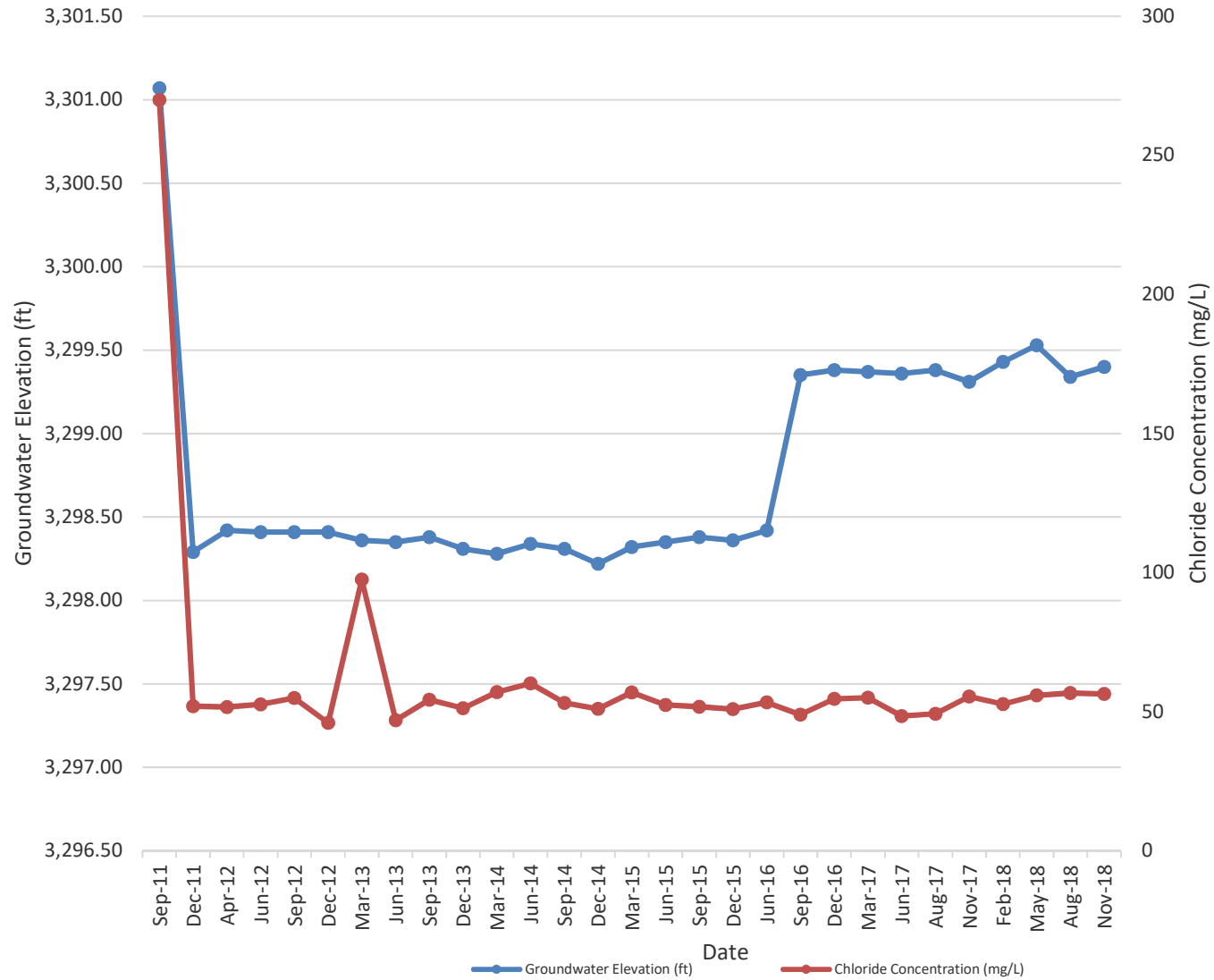
Glenn Springs Holdings, Inc.
E. M. Elliott Tank Battery
Lea County, New Mexico
MW-1R



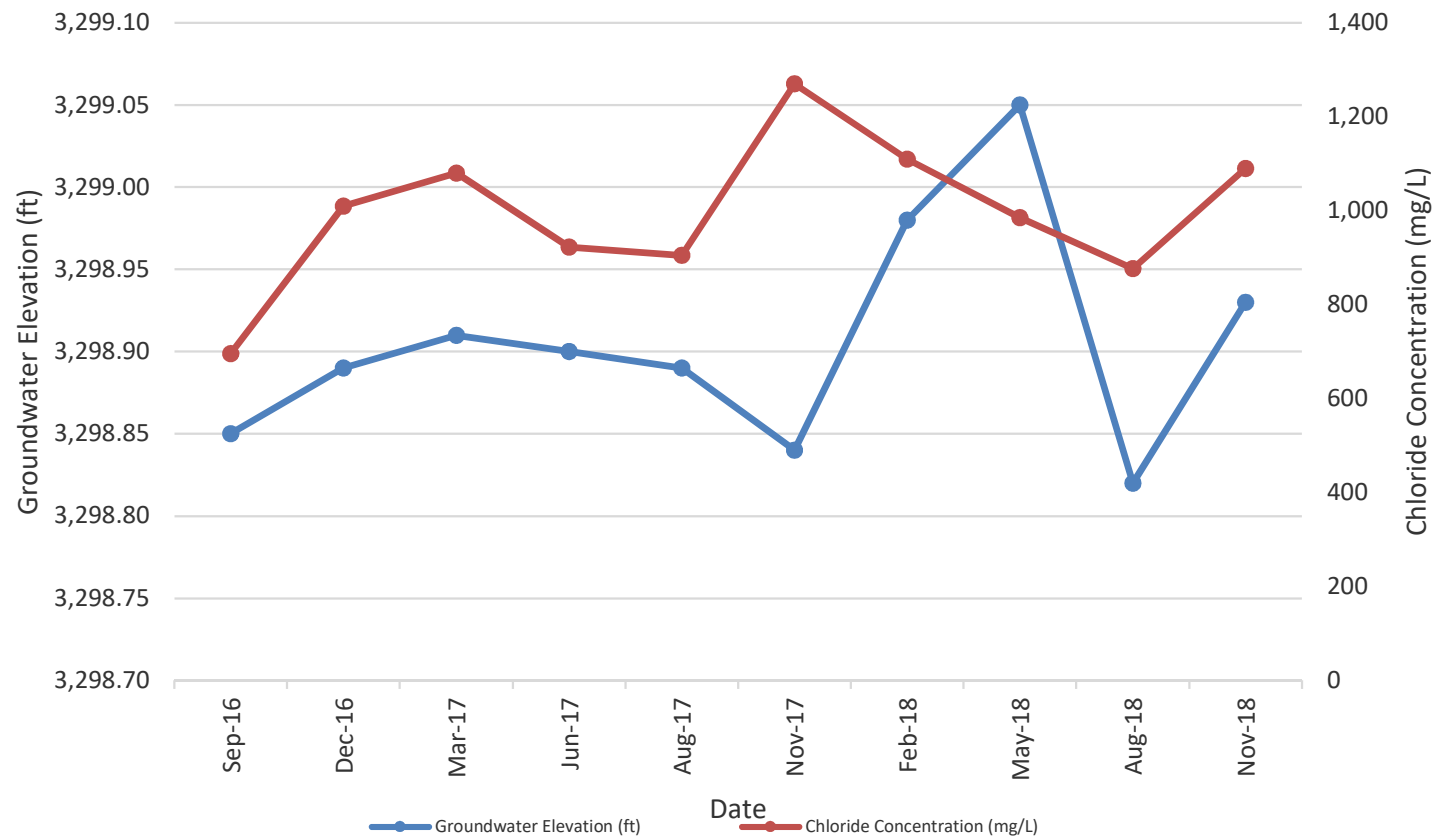
Glenn Springs Holdings, Inc.
E.M. Elliott Tank Battery
Lea County, New Mexico
MW-2



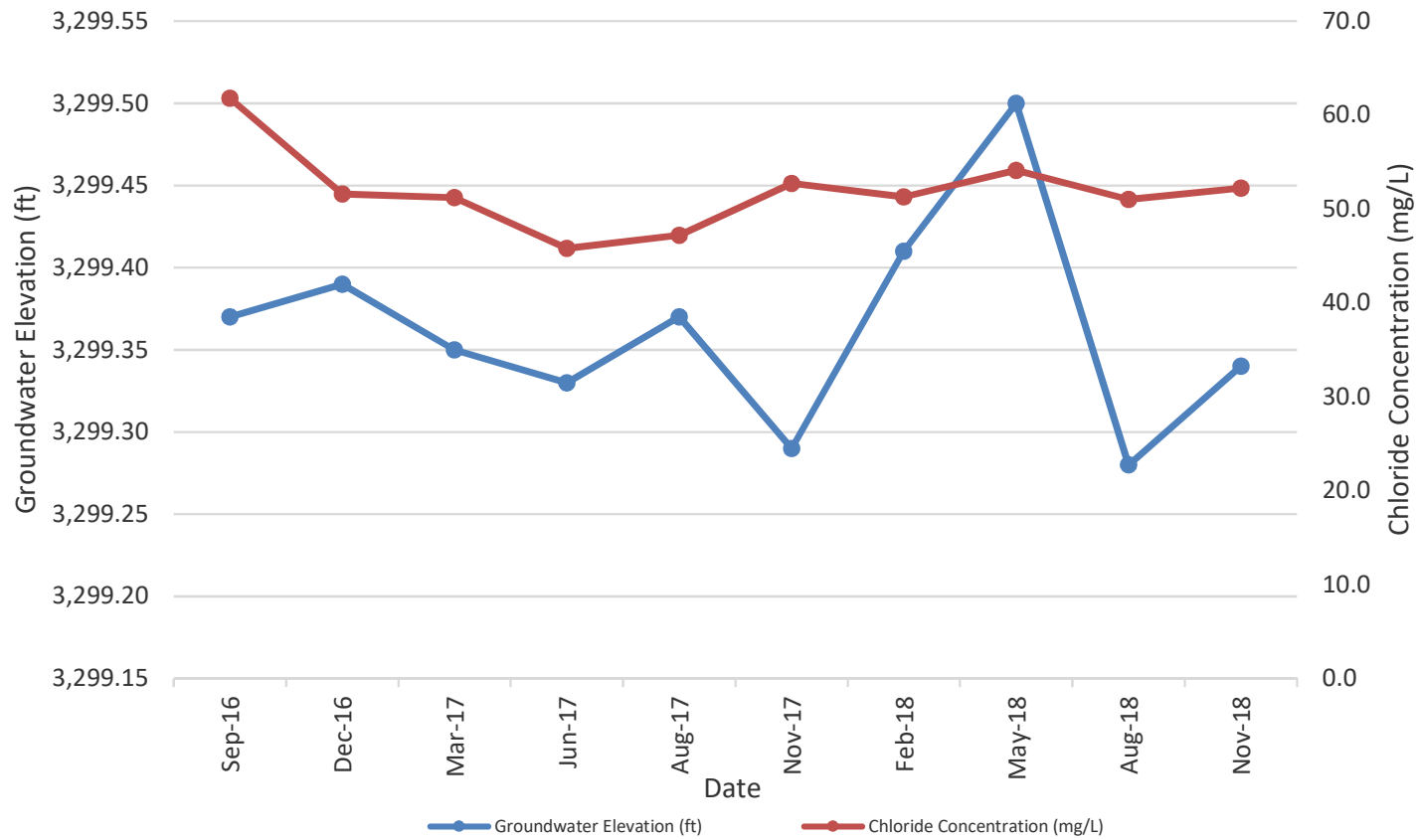
Glenn Springs Holdings, Inc.
E.M. Elliott Tank Battery
Lea County, New Mexico
MW-3



Glenn Springs Holdings, Inc.
E.M. Elliott Tank Battery
Lea County, New Mexico
MW-4



Glenn Springs Holdings, Inc.
E.M. Elliott Tank Battery
Lea County, New Mexico
MW-5



Appendix B – Lab Reports

2016 Lab Data



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March 24, 2016

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 485
Addison, TX 75001

Work Order: **HS16030905**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 5 sample(s) on Mar 19, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Jumoke.Lawal

Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16030905

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16030905-01	MW-1	Water		15-Mar-2016 14:38	19-Mar-2016 09:25	☐
HS16030905-02	MW-2	Water		15-Mar-2016 15:00	19-Mar-2016 09:25	☐
HS16030905-03	MW-3	Water		15-Mar-2016 14:35	19-Mar-2016 09:25	☐
HS16030905-04	Trip Blank-021116-19	Water		15-Mar-2016 00:00	19-Mar-2016 09:25	☐
HS16030905-05	Dup	Water		15-Mar-2016 00:00	19-Mar-2016 09:25	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16030905

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R271285

- Sample ID: **MW-1 (HS16030905-01MSD)**
- The MSD recovery was outside of the control limit.

WetChemistry by Method E300

Batch ID: R271186

- Sample ID: **MW-2 (HS16030905-02MS)**
- The MS recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Chloride
- Sample ID: **MW-2 (HS16030905-02MSD)**
- The MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount for Chloride
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1
 Collection Date: 15-Mar-2016 14:38

ANALYTICAL REPORT

WorkOrder:HS16030905
 Lab ID:HS16030905-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	24-Mar-2016 01:18
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Mar-2016 01:18
Toluene	U		0.50	5.0	ug/L	1	24-Mar-2016 01:18
Xylenes, Total	U		1.5	15	ug/L	1	24-Mar-2016 01:18
<i>Surr: 1,2-Dichloroethane-d4</i>	99.2			70-125	%REC	1	24-Mar-2016 01:18
<i>Surr: 4-Bromofluorobenzene</i>	98.4			72-125	%REC	1	24-Mar-2016 01:18
<i>Surr: Dibromofluoromethane</i>	92.4			71-125	%REC	1	24-Mar-2016 01:18
<i>Surr: Toluene-d8</i>	99.4			75-125	%REC	1	24-Mar-2016 01:18
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	10,000		80.0	200	mg/L	400	22-Mar-2016 08:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: MW-2
Collection Date: 15-Mar-2016 15:00

ANALYTICAL REPORT

WorkOrder:HS16030905
Lab ID:HS16030905-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	24-Mar-2016 04:48
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Mar-2016 04:48
Toluene	U		0.50	5.0	ug/L	1	24-Mar-2016 04:48
Xylenes, Total	U		1.5	15	ug/L	1	24-Mar-2016 04:48
Surr: 1,2-Dichloroethane-d4	98.4			70-125	%REC	1	24-Mar-2016 04:48
Surr: 4-Bromofluorobenzene	112			72-125	%REC	1	24-Mar-2016 04:48
Surr: Dibromofluoromethane	92.9			71-125	%REC	1	24-Mar-2016 04:48
Surr: Toluene-d8	105			75-125	%REC	1	24-Mar-2016 04:48
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	57.6		0.200	0.500	mg/L	1	22-Mar-2016 09:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 15-Mar-2016 14:35

ANALYTICAL REPORT

WorkOrder:HS16030905
 Lab ID:HS16030905-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	24-Mar-2016 05:14
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Mar-2016 05:14
Toluene	U		0.50	5.0	ug/L	1	24-Mar-2016 05:14
Xylenes, Total	U		1.5	15	ug/L	1	24-Mar-2016 05:14
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>104</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Mar-2016 05:14</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>109</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Mar-2016 05:14</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.1</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Mar-2016 05:14</i>
<i>Surr: Toluene-d8</i>	<i>97.6</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>24-Mar-2016 05:14</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	55.9		0.200	0.500	mg/L	1	22-Mar-2016 09:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank-021116-19
Collection Date: 15-Mar-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16030905
Lab ID:HS16030905-04
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260					Analyst: PC
Benzene	U		0.60	5.0	ug/L	1	24-Mar-2016 05:40
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Mar-2016 05:40
Toluene	U		0.50	5.0	ug/L	1	24-Mar-2016 05:40
Xylenes, Total	U		1.5	15	ug/L	1	24-Mar-2016 05:40
Surr: 1,2-Dichloroethane-d4	96.7			70-125	%REC	1	24-Mar-2016 05:40
Surr: 4-Bromofluorobenzene	104			72-125	%REC	1	24-Mar-2016 05:40
Surr: Dibromofluoromethane	90.2			71-125	%REC	1	24-Mar-2016 05:40
Surr: Toluene-d8	99.4			75-125	%REC	1	24-Mar-2016 05:40

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: Dup
 Collection Date: 15-Mar-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16030905
 Lab ID:HS16030905-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	24-Mar-2016 06:06
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Mar-2016 06:06
Toluene	U		0.50	5.0	ug/L	1	24-Mar-2016 06:06
Xylenes, Total	U		1.5	15	ug/L	1	24-Mar-2016 06:06
Surr: 1,2-Dichloroethane-d4	97.7			70-125	%REC	1	24-Mar-2016 06:06
Surr: 4-Bromofluorobenzene	101			72-125	%REC	1	24-Mar-2016 06:06
Surr: Dibromofluoromethane	91.8			71-125	%REC	1	24-Mar-2016 06:06
Surr: Toluene-d8	98.5			75-125	%REC	1	24-Mar-2016 06:06
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	9,590		80.0	200	mg/L	400	22-Mar-2016 10:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R271186	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16030905-01	MW-1	15 Mar 2016 14:38			22 Mar 2016 08:59	400
HS16030905-02	MW-2	15 Mar 2016 15:00			22 Mar 2016 09:20	1
HS16030905-03	MW-3	15 Mar 2016 14:35			22 Mar 2016 09:42	1
HS16030905-05	Dup	15 Mar 2016 00:00			22 Mar 2016 10:03	400
Batch ID R271285	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16030905-01	MW-1	15 Mar 2016 14:38			24 Mar 2016 01:18	1
HS16030905-02	MW-2	15 Mar 2016 15:00			24 Mar 2016 04:48	1
HS16030905-03	MW-3	15 Mar 2016 14:35			24 Mar 2016 05:14	1
HS16030905-04	Trip Blank-021116-19	15 Mar 2016 00:00			24 Mar 2016 05:40	1
HS16030905-05	Dup	15 Mar 2016 00:00			24 Mar 2016 06:06	1

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

QC BATCH REPORT

Batch ID: R271285		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-160323	Units: ug/L		Analysis Date: 24-Mar-2016 00:52					
Client ID:	Run ID: VOA1_271285	SeqNo: 3622457		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	15							
Surr: 1,2-Dichloroethane-d4	49.1	0	50	0	98.2	70 - 125			
Surr: 4-Bromofluorobenzene	55.96	0	50	0	112	72 - 125			
Surr: Dibromofluoromethane	46.7	0	50	0	93.4	71 - 125			
Surr: Toluene-d8	53.01	0	50	0	106	75 - 125			

LCS	Sample ID: VLCSW-160323	Units: ug/L		Analysis Date: 24-Mar-2016 00:00					
Client ID:	Run ID: VOA1_271285	SeqNo: 3622456		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	42.97	5.0	50	0	85.9	73 - 121			
Ethylbenzene	49.75	5.0	50	0	99.5	80 - 120			
Toluene	47.82	5.0	50	0	95.6	80 - 120			
Xylenes, Total	146.6	15	150	0	97.8	80 - 120			
Surr: 1,2-Dichloroethane-d4	47.64	0	50	0	95.3	70 - 125			
Surr: 4-Bromofluorobenzene	53.95	0	50	0	108	72 - 125			
Surr: Dibromofluoromethane	46.82	0	50	0	93.6	71 - 125			
Surr: Toluene-d8	50.26	0	50	0	101	75 - 125			

MS	Sample ID: HS16030905-01MS	Units: ug/L		Analysis Date: 24-Mar-2016 01:45					
Client ID: MW-1	Run ID: VOA1_271285	SeqNo: 3622459		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	42.28	5.0	50	0	84.6	73 - 121			
Ethylbenzene	42.92	5.0	50	0	85.8	80 - 120			
Toluene	42.57	5.0	50	0	85.1	80 - 120			
Xylenes, Total	132.4	15	150	0	88.3	80 - 120			
Surr: 1,2-Dichloroethane-d4	50.33	0	50	0	101	70 - 125			
Surr: 4-Bromofluorobenzene	50.38	0	50	0	101	72 - 125			
Surr: Dibromofluoromethane	46.59	0	50	0	93.2	71 - 125			
Surr: Toluene-d8	46.78	0	50	0	93.6	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

QC BATCH REPORT

Batch ID: R271285		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS16030905-01MSD		Units: ug/L		Analysis Date: 24-Mar-2016 02:11				
Client ID: MW-1		Run ID: VOA1_271285		SeqNo: 3622460		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.24	5.0	50	0	86.5	73 - 121	42.28	2.23	20	
Ethylbenzene	38.66	5.0	50	0	77.3	80 - 120	42.92	10.5	20	S
Toluene	39.65	5.0	50	0	79.3	80 - 120	42.57	7.09	20	S
Xylenes, Total	129.2	15	150	0	86.2	78 - 121	132.4	2.41	20	
Surr: 1,2-Dichloroethane-d4	50.88	0	50	0	102	70 - 125	50.33	1.09	20	
Surr: 4-Bromofluorobenzene	52.96	0	50	0	106	72 - 125	50.38	4.98	20	
Surr: Dibromofluoromethane	46.53	0	50	0	93.1	71 - 125	46.59	0.12	20	
Surr: Toluene-d8	49.14	0	50	0	98.3	75 - 125	46.78	4.92	20	
The following samples were analyzed in this batch:										
		HS16030905-01		HS16030905-02		HS16030905-03		HS16030905-04		
		HS16030905-05								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

QC BATCH REPORT

Batch ID: R271186		Instrument: ICS3000		Method: E300						
MBLK	Sample ID: WBLKW2-032116	Units: mg/L		Analysis Date: 22-Mar-2016 04:45						
Client ID:	Run ID: ICS3000_271186	SeqNo: 3620250		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW2-032116	Units: mg/L		Analysis Date: 22-Mar-2016 05:06						
Client ID:	Run ID: ICS3000_271186	SeqNo: 3620251		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.87	0.500	20	0	99.3	90 - 110				
LCSD	Sample ID: WLCSDW2-032116	Units: mg/L		Analysis Date: 22-Mar-2016 05:27						
Client ID:	Run ID: ICS3000_271186	SeqNo: 3620252		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.83	0.500	20	0	99.1	90 - 110	19.87	0.212	20	
MS	Sample ID: HS16030905-02MS	Units: mg/L		Analysis Date: 22-Mar-2016 11:06						
Client ID: MW-2	Run ID: ICS3000_271186	SeqNo: 3620268		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	64.24	0.500	10	57.63	66.1	80 - 120				SO
MS	Sample ID: HS16030904-01MS	Units: mg/L		Analysis Date: 22-Mar-2016 06:52						
Client ID:	Run ID: ICS3000_271186	SeqNo: 3620256		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	192.9	2.50	100	91.43	101	80 - 120				
MSD	Sample ID: HS16030905-02MSD	Units: mg/L		Analysis Date: 22-Mar-2016 11:28						
Client ID: MW-2	Run ID: ICS3000_271186	SeqNo: 3620269		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	63.71	0.500	10	57.63	60.8	80 - 120	64.24	0.827	20	SO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

QC BATCH REPORT

Batch ID: R271186		Instrument: ICS3000		Method: E300	
MSD	Sample ID: HS16030904-01MSD	Units: mg/L		Analysis Date: 22-Mar-2016 07:13	
Client ID:	Run ID: ICS3000_271186	SeqNo: 3620257		PrepDate:	DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	192.8	2.50	100	91.43 101	80 - 120 192.9 0.0524 20
The following samples were analyzed in this batch:					
HS16030905-01		HS16030905-02		HS16030905-03	
				HS16030905-05	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16030905

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Illinois	003622	09-May-2016
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R-193 2015-2016	30-Apr-2016
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16030905

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16030905-01	MW-1	Login	3/19/2016 1:08:47 PM	BHH	10A
HS16030905-01	MW-1	Login	3/19/2016 1:08:47 PM	BHH	VW-3
HS16030905-02	MW-2	Login	3/19/2016 1:08:47 PM	BHH	10A
HS16030905-02	MW-2	Login	3/19/2016 1:08:47 PM	BHH	VW-3
HS16030905-03	MW-3	Login	3/19/2016 1:08:47 PM	BHH	10A
HS16030905-03	MW-3	Login	3/19/2016 1:08:47 PM	BHH	VW-3
HS16030905-04	Trip Blank-021116-19	Login	3/19/2016 1:08:47 PM	BHH	VW-3
HS16030905-05	Dup	Login	3/19/2016 1:08:47 PM	BHH	10A
HS16030905-05	Dup	Login	3/19/2016 1:08:47 PM	BHH	VW-3

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **19-Mar-2016 09:25**

Work Order: HS16030905

Received by: **BHH**

Checklist completed by: Baudelio Hernandez 19-Mar-2016
 eSignature Date

Reviewed by: Dane J. Wacasey 22-Mar-2016
 eSignature Date

Matrices: **Water**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 1.7c / 2.3c u/c IR#4

Cooler(s)/Kit(s): 23743

Date/Time sample(s) sent to storage: 03/19/2016 13:10

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By: 0

Regarding:

Comments:

Corrective Action:



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 138245

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information				Project Information				ALS Project Manager:												ALS Work Order #:			
Parameter/Method Request for Analysis																							
Purchase Order	4502201559			Project Name	GSHI PXP Elliot, E.M. Federal TB			A	BTEX (8280)														
Work Order				Project Number	55626DM (ENV749A006)			B	Chloride by 300														
Company Name	Glenn Springs Holdings			Bill To Company	Glenn Springs Holdings			C	HS16030905 Glenn Springs Holdings, Inc. 55626DM GSHI PXP Elliot E.M. Federal TB														
Send Report To	Angela Bown			Invoice Attn	Jennifer Devanshire			D															
Address	C/O CRA 9033 Meridian Way			Address	C/O CRA 2055 Niagara Falls Blvd. Suite 3			E															
City/State/Zip	West Chester, Ohio, 45069			City/State/Zip	Niagara Falls, NY 14304			F															
Phone	(513) 942-4750			Phone				G															
Fax				Fax				H															
e-Mail Address				e-Mail Address				I															
								J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	3/15/16	1438	Water	8/1	4	X	X									
2	MW-2	↓	1500	Water	↓	↓	X	X									
3	MW-3	↓	1435	Water	↓	↓	X	X									
4	Trip Blank			Water			X										
5	Dup #	3/15/16	—	Water	1	4	X	X									
6																	
7																	
8																	
9																	
10																	

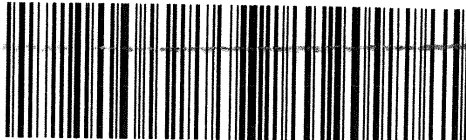
Sampler(s) Please Print & Sign <i>Chant Merritt</i>				Shipment Method FedEx		Required Turnaround Time: (Check Box) ☒ Std 10 WK days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other _____				Results Due Date: _____			
Relinquished by: <i>Chant Merritt</i>		Date: 3.18.16	Time: 08:20 AM	Received by: B.H. Simon		Notes: 10 Day TAT							
Relinquished by:		Date:	Time:	Received by (Laboratory): 03/19/16 09:25		Cooler ID 23743		Cooler Temp. 1.7		QC Package: (Check One Box Below)			
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):						☒ Level 2 Std QC ☐ TTRP ChkList ☐ Level 3 Std QC/Row dz ☐ TTRP Level 4 ☐ Level 4 SW846/CLP ☐ Other/EDD			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035													

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5856 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>CM</i>
	Date: <i>3/18/16</i> Time: <i>14:30</i> Signature: <i>[Signature]</i> Company: <i>Febra beds</i>	Date: <i>03/19/16</i>	

23743

MAR 19 2016

FedEx TRK# 0221 6355 5187 2408	SATURDAY 12:00P PRIORITY OVERNIGHT
XO SGRA 23743	77099 TX-US IAH
	

#2025927 03/18 540J1/CF34/727F



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

July 13, 2016

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 2148
Houston, TX 77252-2148

Work Order: **HS16070049**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 5 sample(s) on Jul 01, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Jumoke.Lawal

Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16070049

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16070049-01	MW-1	Water		30-Jun-2016 14:45	01-Jul-2016 08:50	☐
HS16070049-02	MW-2	Water		30-Jun-2016 14:30	01-Jul-2016 08:50	☐
HS16070049-03	MW-3	Water		30-Jun-2016 14:30	01-Jul-2016 08:50	☐
HS16070049-04	DUP	Water		30-Jun-2016 00:00	01-Jul-2016 08:50	☐
HS16070049-05	Trip Blank	Water	052316-88	30-Jun-2016 00:00	01-Jul-2016 08:50	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16070049

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R277463

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R277916

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1
 Collection Date: 30-Jun-2016 14:45

ANALYTICAL REPORT

WorkOrder:HS16070049
 Lab ID:HS16070049-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	03-Jul-2016 20:27
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:27
Toluene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:27
Xylenes, Total	U		1.5	15	ug/L	1	03-Jul-2016 20:27
<i>Surr: 1,2-Dichloroethane-d4</i>	98.7			70-125	%REC	1	03-Jul-2016 20:27
<i>Surr: 4-Bromofluorobenzene</i>	92.3			72-125	%REC	1	03-Jul-2016 20:27
<i>Surr: Dibromofluoromethane</i>	103			71-125	%REC	1	03-Jul-2016 20:27
<i>Surr: Toluene-d8</i>	95.6			75-125	%REC	1	03-Jul-2016 20:27
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	9,270		80.0	200	mg/L	400	12-Jul-2016 07:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: MW-2
Collection Date: 30-Jun-2016 14:30

ANALYTICAL REPORT

WorkOrder:HS16070049
Lab ID:HS16070049-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	03-Jul-2016 20:53
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:53
Toluene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:53
Xylenes, Total	U		1.5	15	ug/L	1	03-Jul-2016 20:53
Surr: 1,2-Dichloroethane-d4	88.9			70-125	%REC	1	03-Jul-2016 20:53
Surr: 4-Bromofluorobenzene	95.5			72-125	%REC	1	03-Jul-2016 20:53
Surr: Dibromofluoromethane	99.2			71-125	%REC	1	03-Jul-2016 20:53
Surr: Toluene-d8	99.1			75-125	%REC	1	03-Jul-2016 20:53
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	53.4		1.00	2.50	mg/L	5	12-Jul-2016 07:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 30-Jun-2016 14:30

ANALYTICAL REPORT

WorkOrder:HS16070049
 Lab ID:HS16070049-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	03-Jul-2016 21:20
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Jul-2016 21:20
Toluene	U		0.50	5.0	ug/L	1	03-Jul-2016 21:20
Xylenes, Total	U		1.5	15	ug/L	1	03-Jul-2016 21:20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>96.1</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>03-Jul-2016 21:20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>103</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>03-Jul-2016 21:20</i>
<i>Surr: Dibromofluoromethane</i>	<i>103</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>03-Jul-2016 21:20</i>
<i>Surr: Toluene-d8</i>	<i>111</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>03-Jul-2016 21:20</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	53.4		1.00	2.50	mg/L	5	12-Jul-2016 08:00

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 30-Jun-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16070049
 Lab ID:HS16070049-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	03-Jul-2016 21:46
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Jul-2016 21:46
Toluene	U		0.50	5.0	ug/L	1	03-Jul-2016 21:46
Xylenes, Total	U		1.5	15	ug/L	1	03-Jul-2016 21:46
Surr: 1,2-Dichloroethane-d4	102			70-125	%REC	1	03-Jul-2016 21:46
Surr: 4-Bromofluorobenzene	95.7			72-125	%REC	1	03-Jul-2016 21:46
Surr: Dibromofluoromethane	105			71-125	%REC	1	03-Jul-2016 21:46
Surr: Toluene-d8	95.7			75-125	%REC	1	03-Jul-2016 21:46
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	10,700		80.0	200	mg/L	400	12-Jul-2016 08:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 30-Jun-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16070049
Lab ID:HS16070049-05
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260					Analyst: PC
Benzene	U		0.60	5.0	ug/L	1	03-Jul-2016 20:01
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:01
Toluene	U		0.50	5.0	ug/L	1	03-Jul-2016 20:01
Xylenes, Total	U		1.5	15	ug/L	1	03-Jul-2016 20:01
Surr: 1,2-Dichloroethane-d4	98.7			70-125	%REC	1	03-Jul-2016 20:01
Surr: 4-Bromofluorobenzene	97.4			72-125	%REC	1	03-Jul-2016 20:01
Surr: Dibromofluoromethane	104			71-125	%REC	1	03-Jul-2016 20:01
Surr: Toluene-d8	104			75-125	%REC	1	03-Jul-2016 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R277463	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16070049-01	MW-1	30 Jun 2016 14:45			03 Jul 2016 20:27	1
HS16070049-02	MW-2	30 Jun 2016 14:30			03 Jul 2016 20:53	1
HS16070049-03	MW-3	30 Jun 2016 14:30			03 Jul 2016 21:20	1
HS16070049-04	DUP	30 Jun 2016 00:00			03 Jul 2016 21:46	1
HS16070049-05	Trip Blank	30 Jun 2016 00:00			03 Jul 2016 20:01	1
Batch ID R277916	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16070049-01	MW-1	30 Jun 2016 14:45			12 Jul 2016 07:02	400
HS16070049-02	MW-2	30 Jun 2016 14:30			12 Jul 2016 07:46	5
HS16070049-03	MW-3	30 Jun 2016 14:30			12 Jul 2016 08:00	5
HS16070049-04	DUP	30 Jun 2016 00:00			12 Jul 2016 08:15	400

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

QC BATCH REPORT

Batch ID: R277463		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-160703	Units: ug/L		Analysis Date: 03-Jul-2016 12:56					
Client ID:	Run ID: VOA1_277463	SeqNo: 3748061		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	15							
Surr: 1,2-Dichloroethane-d4	47.52	0	50	0	95.0	70 - 125			
Surr: 4-Bromofluorobenzene	48.78	0	50	0	97.6	72 - 125			
Surr: Dibromofluoromethane	48.53	0	50	0	97.1	71 - 125			
Surr: Toluene-d8	49.09	0	50	0	98.2	75 - 125			

LCS	Sample ID: VLCSW-160703	Units: ug/L		Analysis Date: 03-Jul-2016 11:37					
Client ID:	Run ID: VOA1_277463	SeqNo: 3748060		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.1	5.0	50	0	102	73 - 121			
Ethylbenzene	47.99	5.0	50	0	96.0	80 - 120			
Toluene	51.73	5.0	50	0	103	80 - 120			
Xylenes, Total	145.6	15	150	0	97.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	48.71	0	50	0	97.4	70 - 125			
Surr: 4-Bromofluorobenzene	46.11	0	50	0	92.2	72 - 125			
Surr: Dibromofluoromethane	49.2	0	50	0	98.4	71 - 125			
Surr: Toluene-d8	50.09	0	50	0	100	75 - 125			

MS	Sample ID: HS16070044-01MS	Units: ug/L		Analysis Date: 03-Jul-2016 14:41					
Client ID:	Run ID: VOA1_277463	SeqNo: 3748063		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	44.66	5.0	50	0	89.3	73 - 121			
Ethylbenzene	43.35	5.0	50	0	86.7	80 - 120			
Toluene	49.36	5.0	50	0	98.7	80 - 120			
Xylenes, Total	135.1	15	150	0	90.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	49.32	0	50	0	98.6	70 - 125			
Surr: 4-Bromofluorobenzene	50.15	0	50	0	100	72 - 125			
Surr: Dibromofluoromethane	50.42	0	50	0	101	71 - 125			
Surr: Toluene-d8	47.2	0	50	0	94.4	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

QC BATCH REPORT

Batch ID: R277463		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS16070044-01MSD		Units: ug/L		Analysis Date: 03-Jul-2016 15:07				
Client ID:		Run ID: VOA1_277463		SeqNo: 3748064		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.94	5.0	50	0	87.9	73 - 121	44.66	1.63	20	
Ethylbenzene	43.08	5.0	50	0	86.2	80 - 120	43.35	0.626	20	
Toluene	47.16	5.0	50	0	94.3	80 - 120	49.36	4.56	20	
Xylenes, Total	137.2	15	150	0	91.5	78 - 121	135.1	1.57	20	
Surr: 1,2-Dichloroethane-d4	48.74	0	50	0	97.5	70 - 125	49.32	1.18	20	
Surr: 4-Bromofluorobenzene	49.06	0	50	0	98.1	72 - 125	50.15	2.19	20	
Surr: Dibromofluoromethane	51.93	0	50	0	104	71 - 125	50.42	2.96	20	
Surr: Toluene-d8	48.47	0	50	0	96.9	75 - 125	47.2	2.67	20	
The following samples were analyzed in this batch:										
HS16070049-01 HS16070049-02 HS16070049-03 HS16070049-04 HS16070049-05										

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

QC BATCH REPORT

Batch ID: R277916		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-071213	Units: mg/L		Analysis Date: 12-Jul-2016 06:18						
Client ID:	Run ID: ICS2100_277916	SeqNo: 3757201		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-071213	Units: mg/L		Analysis Date: 12-Jul-2016 06:33						
Client ID:	Run ID: ICS2100_277916	SeqNo: 3757203		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.54	0.500	20	0	97.7	90 - 110				
LCSD	Sample ID: WLCSDW1-071213	Units: mg/L		Analysis Date: 12-Jul-2016 06:48						
Client ID:	Run ID: ICS2100_277916	SeqNo: 3757204		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.79	0.500	20	0	99.0	90 - 110	19.54	1.27	20	
MS	Sample ID: HS16070050-01MS	Units: mg/L		Analysis Date: 12-Jul-2016 09:13						
Client ID:	Run ID: ICS2100_277916	SeqNo: 3757217		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	130	2.50	50	85.2	89.6	80 - 120				
MS	Sample ID: HS16070049-01MS	Units: mg/L		Analysis Date: 12-Jul-2016 07:17						
Client ID: MW-1	Run ID: ICS2100_277916	SeqNo: 3757208		PrepDate:		DF: 400				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	12970	200	4000	9272	92.5	80 - 120				
MSD	Sample ID: HS16070050-01MSD	Units: mg/L		Analysis Date: 12-Jul-2016 09:28						
Client ID:	Run ID: ICS2100_277916	SeqNo: 3757218		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	130.7	2.50	50	85.2	90.9	80 - 120	130	0.495	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

QC BATCH REPORT

Batch ID: R277916		Instrument: ICS2100		Method: E300						
MSD		Sample ID: HS16070049-01MSD		Units: mg/L		Analysis Date: 12-Jul-2016 07:31				
Client ID: MW-1		Run ID: ICS2100_277916		SeqNo: 3757209		PrepDate:		DF: 400		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13160	200	4000	9272	97.3	80 - 120	12970	1.48	20	
The following samples were analyzed in this batch:										
HS16070049-01		HS16070049-02		HS16070049-03		HS16070049-04				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16070049

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-0	27-Mar-2017
California	2919	31-Jul-2016
Illinois	003872	09-May-2017
Kansas	E-10352 2014-2015	31-Jul-2016
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016/2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2015-047	31-Aug-2016
Texas	TX104704231-16-17	30-Apr-2017

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16070049

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16070049-01	MW-1	Login	7/1/2016 3:40:59 PM	CGG	14A
HS16070049-01	MW-1	Login	7/1/2016 3:40:59 PM	CGG	VW-3
HS16070049-02	MW-2	Login	7/1/2016 3:40:59 PM	CGG	14A
HS16070049-02	MW-2	Login	7/1/2016 3:40:59 PM	CGG	VW-3
HS16070049-03	MW-3	Login	7/1/2016 3:40:59 PM	CGG	14A
HS16070049-03	MW-3	Login	7/1/2016 3:40:59 PM	CGG	VW-3
HS16070049-04	DUP	Login	7/1/2016 3:40:59 PM	CGG	14A
HS16070049-04	DUP	Login	7/1/2016 3:40:59 PM	CGG	VW-3
HS16070049-05	Trip Blank	Login	7/1/2016 3:40:59 PM	CGG	VW-3

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **01-Jul-2016 08:50**

Work Order: HS16070049

Received by: **JRM**

Checklist completed by: Corey Grandits 1-Jul-2016
 eSignature Date

Reviewed by: Dane J. Wacasey 5-Jul-2016
 eSignature Date

Matrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):	3.4c/4.0c uc/c	IR#5
Cooler(s)/Kit(s):	5461	
Date/Time sample(s) sent to storage:	07/01/2016 15:45	
Water - VOA vials have zero headspace?	Yes ☒	No ☐ No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐ N/A ☐
pH adjusted?	Yes ☐	No ☐ N/A ☒
pH adjusted by:		

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Environmental

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Chain of Custody Form

Page 1 of 1

COC ID: 142020

Houston, TX
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Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information		Project Information		ALS Project Manager:													ALS Work Order #:	
Parameter/Method Request for Analysis																		
Purchase Order	4502201559 ENV 749-4	Project Name	55626DM_GSHI PXP Elliot E.M. Feder.	A 8260_W (BTEX)														
Work Order		Project Number	ENV749A006	B 300_W (Chloride)														
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.	C 8260_W (BTEX-Trip Blank)														
Send Report To	Angela Bown	Invoice Attn	Jen Devonshire	D														
Address	PO Box 2148	Address	PO Box 2148	E HS16070049														
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston, TX 77252-2148	F Glenn Springs Holdings, Inc.														
Phone		Phone		G 55626DM GSHI PXP Elliot E.M. Federal TB														
Fax		Fax		H														
e-Mail Address		e-Mail Address		I														
				J														

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1	6.30.16	14:45	Water	1.8	4	X	X									
2	MW-2	6.30.16	14:30	Water	1	4	X	X									
3	MW-3	6.30.16	14:30	Water	1	4	X	X									
4	Trip Blank			Water		2			X								
5	Dup	6.30.16	-		1.8	4	X	X									
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
C. St. Merritt		Fed EX		TAT 10 days			
Relinquished by:	Date:	Time:	Received by:	Notes:			
C. St. Merritt	17:04			(GSHI PXP Elliot E.M. Federal TB)			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
			JM 7/1/16 08:50	5461	41C	QC Level STD	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Other:			

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

- note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody Form is a controlled document.

Express

E

FedEx

TRK# 6355 5189 5269

0221

AB SGRA

FRI - 01 JUL 10:30A

PRIORITY OVERNIGHT

77099

TX-US IAH

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: 6-30-16 Name: Matthew McDaniel Company: Tetra Tech	Time: 1600	Date:



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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October 13, 2016

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS16100129**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Oct 04, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Dane.Wacasey

Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16100129

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16100129-01	MW-1R	Water		29-Sep-2016 15:15	04-Oct-2016 08:30	☐
HS16100129-02	MW-2	Water		29-Sep-2016 12:50	04-Oct-2016 08:30	☐
HS16100129-03	MW-3	Water		29-Sep-2016 12:20	04-Oct-2016 08:30	☐
HS16100129-04	Trip Blank	Water		29-Sep-2016 00:00	04-Oct-2016 08:30	☐
HS16100129-05	MW-4	Water		29-Sep-2016 16:00	04-Oct-2016 08:30	☐
HS16100129-06	MW-5	Water		29-Sep-2016 14:45	04-Oct-2016 08:30	☐
HS16100129-07	DUP	Water		29-Sep-2016 00:00	04-Oct-2016 08:30	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16100129

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R282504

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R282562

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 29-Sep-2016 15:15

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 12:58
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 12:58
Toluene	0.00095	J	0.00050	0.0050	mg/L	1	05-Oct-2016 12:58
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 12:58
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>90.9</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:58</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>101</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:58</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.8</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:58</i>
<i>Surr: Toluene-d8</i>	<i>102</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:58</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	7,210		40.0	100	mg/L	200	05-Oct-2016 13:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 29-Sep-2016 12:50

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 12:11
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 12:11
Toluene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 12:11
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 12:11
<i>Surr: 1,2-Dichloroethane-d4</i>	86.7			70-125	%REC	1	05-Oct-2016 12:11
<i>Surr: 4-Bromofluorobenzene</i>	98.3			72-125	%REC	1	05-Oct-2016 12:11
<i>Surr: Dibromofluoromethane</i>	96.0			71-125	%REC	1	05-Oct-2016 12:11
<i>Surr: Toluene-d8</i>	96.7			75-125	%REC	1	05-Oct-2016 12:11
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	51.2		1.00	2.50	mg/L	5	05-Oct-2016 13:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 29-Sep-2016 12:20

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 12:35
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 12:35
Toluene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 12:35
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 12:35
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>84.0</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:35</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.5</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:35</i>
<i>Surr: Dibromofluoromethane</i>	<i>95.6</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:35</i>
<i>Surr: Toluene-d8</i>	<i>96.0</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 12:35</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	49.0		1.00	2.50	mg/L	5	05-Oct-2016 14:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 29-Sep-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16100129
Lab ID:HS16100129-04
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 11:47
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 11:47
Toluene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 11:47
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 11:47
Surr: 1,2-Dichloroethane-d4	87.5			70-125	%REC	1	05-Oct-2016 11:47
Surr: 4-Bromofluorobenzene	97.9			72-125	%REC	1	05-Oct-2016 11:47
Surr: Dibromofluoromethane	97.6			71-125	%REC	1	05-Oct-2016 11:47
Surr: Toluene-d8	97.4			75-125	%REC	1	05-Oct-2016 11:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 29-Sep-2016 16:00

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 17:44
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 17:44
Toluene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 17:44
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 17:44
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>86.7</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 17:44</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.8</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 17:44</i>
<i>Surr: Dibromofluoromethane</i>	<i>95.9</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 17:44</i>
<i>Surr: Toluene-d8</i>	<i>97.8</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 17:44</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	696		8.00	20.0	mg/L	40	05-Oct-2016 15:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 29-Sep-2016 14:45

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 18:08
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 18:08
Toluene	0.0011	J	0.00050	0.0050	mg/L	1	05-Oct-2016 18:08
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 18:08
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>87.9</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 18:08</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 18:08</i>
<i>Surr: Dibromofluoromethane</i>	<i>101</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 18:08</i>
<i>Surr: Toluene-d8</i>	<i>99.7</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>05-Oct-2016 18:08</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	61.8		0.200	0.500	mg/L	1	05-Oct-2016 20:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 29-Sep-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16100129
 Lab ID:HS16100129-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Oct-2016 18:32
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Oct-2016 18:32
Toluene	0.0010	J	0.00050	0.0050	mg/L	1	05-Oct-2016 18:32
Xylenes, Total	U		0.0015	0.015	mg/L	1	05-Oct-2016 18:32
<i>Surr: 1,2-Dichloroethane-d4</i>	86.0			70-125	%REC	1	05-Oct-2016 18:32
<i>Surr: 4-Bromofluorobenzene</i>	98.8			72-125	%REC	1	05-Oct-2016 18:32
<i>Surr: Dibromofluoromethane</i>	96.2			71-125	%REC	1	05-Oct-2016 18:32
<i>Surr: Toluene-d8</i>	97.4			75-125	%REC	1	05-Oct-2016 18:32
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	7,040		40.0	100	mg/L	200	05-Oct-2016 15:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R282504	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16100129-01	MW-1R	29 Sep 2016 15:15			05 Oct 2016 12:58	1
HS16100129-02	MW-2	29 Sep 2016 12:50			05 Oct 2016 12:11	1
HS16100129-03	MW-3	29 Sep 2016 12:20			05 Oct 2016 12:35	1
HS16100129-04	Trip Blank	29 Sep 2016 00:00			05 Oct 2016 11:47	1
HS16100129-05	MW-4	29 Sep 2016 16:00			05 Oct 2016 17:44	1
HS16100129-06	MW-5	29 Sep 2016 14:45			05 Oct 2016 18:08	1
HS16100129-07	DUP	29 Sep 2016 00:00			05 Oct 2016 18:32	1
Batch ID R282562	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16100129-01	MW-1R	29 Sep 2016 15:15			05 Oct 2016 13:31	200
HS16100129-02	MW-2	29 Sep 2016 12:50			05 Oct 2016 13:53	5
HS16100129-03	MW-3	29 Sep 2016 12:20			05 Oct 2016 14:15	5
HS16100129-05	MW-4	29 Sep 2016 16:00			05 Oct 2016 15:20	40
HS16100129-06	MW-5	29 Sep 2016 14:45			05 Oct 2016 20:02	1
HS16100129-07	DUP	29 Sep 2016 00:00			05 Oct 2016 15:41	200

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

QC BATCH REPORT

Batch ID: R282504		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-161005	Units: ug/L		Analysis Date: 05-Oct-2016 11:23					
Client ID:	Run ID: VOA6_282504	SeqNo: 3848885		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	15							
Surr: 1,2-Dichloroethane-d4	43.58	0	50	0	87.2	70 - 125			
Surr: 4-Bromofluorobenzene	48.23	0	50	0	96.5	72 - 125			
Surr: Dibromofluoromethane	48.37	0	50	0	96.7	71 - 125			
Surr: Toluene-d8	48.24	0	50	0	96.5	75 - 125			

LCS	Sample ID: VLCSW-161005	Units: ug/L		Analysis Date: 05-Oct-2016 10:11					
Client ID:	Run ID: VOA6_282504	SeqNo: 3848884		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	50.53	5.0	50	0	101	73 - 121			
Ethylbenzene	47.04	5.0	50	0	94.1	80 - 120			
Toluene	45.24	5.0	50	0	90.5	80 - 120			
Xylenes, Total	140.3	15	150	0	93.5	80 - 120			
Surr: 1,2-Dichloroethane-d4	41.81	0	50	0	83.6	70 - 125			
Surr: 4-Bromofluorobenzene	49.93	0	50	0	99.9	72 - 125			
Surr: Dibromofluoromethane	47.91	0	50	0	95.8	71 - 125			
Surr: Toluene-d8	47.79	0	50	0	95.6	75 - 125			

MS	Sample ID: HS16100129-02MS	Units: ug/L		Analysis Date: 05-Oct-2016 14:10					
Client ID: MW-2	Run ID: VOA6_282504	SeqNo: 3849099		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	48.52	5.0	50	0	97.0	73 - 121			
Ethylbenzene	45.9	5.0	50	0	91.8	80 - 120			
Toluene	44.13	5.0	50	0	88.3	80 - 120			
Xylenes, Total	138.6	15	150	0	92.4	80 - 120			
Surr: 1,2-Dichloroethane-d4	41.77	0	50	0	83.5	70 - 125			
Surr: 4-Bromofluorobenzene	49.28	0	50	0	98.6	72 - 125			
Surr: Dibromofluoromethane	47.68	0	50	0	95.4	71 - 125			
Surr: Toluene-d8	47.18	0	50	0	94.4	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

QC BATCH REPORT

Batch ID: R282504		Instrument: VOA6		Method: SW8260					
MSD		Sample ID: HS16100129-02MSD		Units: ug/L		Analysis Date: 05-Oct-2016 14:34			
Client ID: MW-2		Run ID: VOA6_282504		SeqNo: 3849100		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	48.47	5.0	50	0	96.9	73 - 121	48.52	0.097	20
Ethylbenzene	46.06	5.0	50	0	92.1	80 - 120	45.9	0.358	20
Toluene	44.55	5.0	50	0	89.1	80 - 120	44.13	0.955	20
Xylenes, Total	138.5	15	150	0	92.3	78 - 121	138.6	0.0801	20
Surr: 1,2-Dichloroethane-d4	42.13	0	50	0	84.3	70 - 125	41.77	0.873	20
Surr: 4-Bromofluorobenzene	49.82	0	50	0	99.6	72 - 125	49.28	1.09	20
Surr: Dibromofluoromethane	48.27	0	50	0	96.5	71 - 125	47.68	1.25	20
Surr: Toluene-d8	48.12	0	50	0	96.2	75 - 125	47.18	1.96	20
The following samples were analyzed in this batch:		HS16100129-01 HS16100129-05		HS16100129-02 HS16100129-06		HS16100129-03 HS16100129-07		HS16100129-04	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

QC BATCH REPORT

Batch ID: R282562		Instrument: ICS3K2		Method: E300						
MBLK	Sample ID: WBLKW3-100516	Units: mg/L		Analysis Date: 05-Oct-2016 11:30						
Client ID:	Run ID: ICS3K2_282562	SeqNo: 3849903		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW3-100516	Units: mg/L		Analysis Date: 05-Oct-2016 11:52						
Client ID:	Run ID: ICS3K2_282562	SeqNo: 3849904		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.17	0.500	20	0	95.9	90 - 110				
LCSD	Sample ID: WLCSDW3-100516	Units: mg/L		Analysis Date: 05-Oct-2016 12:14						
Client ID:	Run ID: ICS3K2_282562	SeqNo: 3849905		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.16	0.500	20	0	95.8	90 - 110	19.17	0.0835	20	
MS	Sample ID: HS16100202-01MS	Units: mg/L		Analysis Date: 05-Oct-2016 17:30						
Client ID:	Run ID: ICS3K2_282562	SeqNo: 3849917		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	42.16	0.500	10	32.32	98.4	80 - 120				
MS	Sample ID: HS16100129-03MS	Units: mg/L		Analysis Date: 05-Oct-2016 14:36						
Client ID: MW-3	Run ID: ICS3K2_282562	SeqNo: 3849909		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	97.27	2.50	50	49.02	96.5	80 - 120				
MSD	Sample ID: HS16100202-01MSD	Units: mg/L		Analysis Date: 05-Oct-2016 17:52						
Client ID:	Run ID: ICS3K2_282562	SeqNo: 3849918		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	41.97	0.500	10	32.32	96.4	80 - 120	42.16	0.459	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

QC BATCH REPORT

Batch ID: R282562		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS16100129-03MSD	Units: mg/L		Analysis Date: 05-Oct-2016 14:58	
Client ID: MW-3	Run ID: ICS3K2_282562		SeqNo: 3849910	PrepDate:	DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	96.64	2.50	50	49.02 95.2	80 - 120 97.27 0.649 20

The following samples were analyzed in this batch:

HS16100129-01	HS16100129-02	HS16100129-03	HS16100129-05
HS16100129-06	HS16100129-07		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16100129

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16100129

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16100129-01	MW-1R	Login	10/4/2016 5:13:14 PM	DJW	10C
HS16100129-01	MW-1R	Login	10/4/2016 5:13:14 PM	DJW	VW-3
HS16100129-02	MW-2	Login	10/4/2016 5:13:15 PM	DJW	10C
HS16100129-02	MW-2	Login	10/4/2016 5:13:15 PM	DJW	VW-3
HS16100129-03	MW-3	Login	10/4/2016 5:13:15 PM	DJW	10C
HS16100129-03	MW-3	Login	10/4/2016 5:13:15 PM	DJW	VW-3
HS16100129-04	Trip Blank	Login	10/4/2016 5:13:15 PM	DJW	VW-3
HS16100129-05	MW-4	Login	10/4/2016 5:13:16 PM	DJW	10C
HS16100129-05	MW-4	Login	10/4/2016 5:13:16 PM	DJW	VW-3
HS16100129-06	MW-5	Login	10/4/2016 5:13:16 PM	DJW	10C
HS16100129-06	MW-5	Login	10/4/2016 5:13:16 PM	DJW	VW-3
HS16100129-07	DUP	Login	10/4/2016 5:13:16 PM	DJW	10C
HS16100129-07	DUP	Login	10/4/2016 5:13:16 PM	DJW	VW-3

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **04-Oct-2016 08:30**

Work Order: HS16100129

Received by: **RPG**

Checklist completed by: Jared R. Makan 4-Oct-2016
 eSignature Date

Reviewed by: Dane J. Wacasey 6-Oct-2016
 eSignature Date

Matrices: **Water**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 1.0c/1.5c UC/C IR5

Cooler(s)/Kit(s): 25676

Date/Time sample(s) sent to storage: 10/04/2016 17:25

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Environmental

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Chain of Custody Form

Page 1 of 1

COC ID: 151437

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+1 717 944 5541

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+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

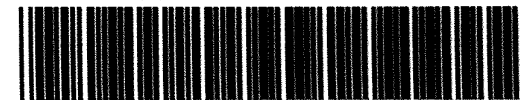
York, PA
+1 717 505 5280

Customer Information						Project Information		Parameter/Method Request for Analysis													
Purchase Order	4502201559 ENV 749-4					Project Name	55626DM GSHI PXP Elliot E.M. Feder	A	8260_W (BTEX)												
Work Order						Project Number	ENV749A006	B	300_W (Chloride)												
Company Name	Glenn Springs Holdings, Inc.					Bill To Company	Glenn Springs Holdings, Inc.	C	8260_W (BTEX-Trip Blank)												
Send Report To	Angela Bown					Invoice Attn	Jen Devonshire	D													
Address	PO Box 2148					Address	PO Box 2148	E													
								F													
								G													
City/State/Zip	Houston, TX 77252-2148					City/State/Zip	Houston, TX 77252-2148	H													
Phone						Phone		I													
Fax						Fax		J													
e-Mail Address						e-Mail Address															

HS16100129

Glenn Springs Holdings, Inc.

55626DM GSHI PXP Elliot E.M. Federal TB



No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1A	9-29-16	1515	Water	188	4	X	X									
2	MW-2	9-29-16	1250	Water		4	X	X									
3	MW-3	9-29-16	1220	Water		4	X	X									
4	Trip Blank			Water		2			X								
5	mw-4	9-29-16	1600	water		4	X	X									
6	mw-5	9-29-16	1445	water		4	X	X									
7	DUP	9-29-16	—	water		4	X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Matthew Mularich</i>				Shipment Method <i>Fed ex</i>		Required Turnaround Time: (Check Box) TAT <u>10 days</u> Other: _____				Results Due Date: _____	
Relinquished by: <i>Matthew Mularich</i>		Date: <i>9-29-16</i>	Time: <i>1700</i>		Received by: <i>Todd Wells</i>		Notes: [GSHI PXP Elliot EM Federal TB]				
Relinquished by: <i>Todd Wells</i>		Date: <i>10-3-16</i>	Time: <i>1600</i>		Received by (Laboratory): <i>R Cigna 10/4/16 08:30</i>		Cooler ID <i>25676</i>	Cooler Temp. <i>1.0</i>	QC Package: (Check One Box Below)		
Logged by (Laboratory):		Date:	Time:		Checked by (Laboratory):		<i>12.5</i>		QC Level <u>STD</u>		
							<i>CF 10.5</i>		Other: _____		

Preservative Key: CF101 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.

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CUSTODY SEAL		Seal Broken By: <u>PS</u>
Date: <u>10/3/16</u>	Time: <u>1600</u>	Date: <u>10-21-16</u>
by: <u>1624 W/ALS</u>		
any: <u>7</u>		

25676

FedEx	TUE - 04 OCT 10:30A
TRK# 6786 7200 0043	PRIORITY OVERNIGHT
0221	
AB SGRA	25676 77099
	TX-US IAH



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December 19, 2016

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS16120509**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Dec 08, 2016 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Dayna.Fisher

Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16120509

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16120509-01	MW-1R	Water		07-Dec-2016 13:30	08-Dec-2016 09:00	☐
HS16120509-02	MW-2	Water		07-Dec-2016 12:40	08-Dec-2016 09:00	☐
HS16120509-03	MW-3	Water		07-Dec-2016 13:15	08-Dec-2016 09:00	☐
HS16120509-04	MW-4	Water		07-Dec-2016 12:25	08-Dec-2016 09:00	☐
HS16120509-05	MW-5	Water		07-Dec-2016 13:00	08-Dec-2016 09:00	☐
HS16120509-06	DUP	Water		07-Dec-2016 00:00	08-Dec-2016 09:00	☐
HS16120509-07	Trip Blank	Water	112216-59	07-Dec-2016 00:00	08-Dec-2016 09:00	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16120509

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R286437

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R286814

Sample ID: **HS16120814-01**

- MS and MSD are for an unrelated sample
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 07-Dec-2016 13:30

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 07:21
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 07:21
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 07:21
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 07:21
Surr: 1,2-Dichloroethane-d4	115			70-125	%REC	1	13-Dec-2016 07:21
Surr: 4-Bromofluorobenzene	91.2			72-125	%REC	1	13-Dec-2016 07:21
Surr: Dibromofluoromethane	119			71-125	%REC	1	13-Dec-2016 07:21
Surr: Toluene-d8	99.8			75-125	%REC	1	13-Dec-2016 07:21
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,810		40.0	100	mg/L	200	19-Dec-2016 06:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 07-Dec-2016 12:40

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 07:45
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 07:45
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 07:45
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 07:45
Surr: 1,2-Dichloroethane-d4	110			70-125	%REC	1	13-Dec-2016 07:45
Surr: 4-Bromofluorobenzene	91.7			72-125	%REC	1	13-Dec-2016 07:45
Surr: Dibromofluoromethane	116			71-125	%REC	1	13-Dec-2016 07:45
Surr: Toluene-d8	99.5			75-125	%REC	1	13-Dec-2016 07:45
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	54.3		1.00	2.50	mg/L	5	19-Dec-2016 07:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 07-Dec-2016 13:15

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 08:09
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:09
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:09
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 08:09
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	13-Dec-2016 08:09
Surr: 4-Bromofluorobenzene	91.6			72-125	%REC	1	13-Dec-2016 08:09
Surr: Dibromofluoromethane	115			71-125	%REC	1	13-Dec-2016 08:09
Surr: Toluene-d8	97.5			75-125	%REC	1	13-Dec-2016 08:09
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	54.6		1.00	2.50	mg/L	5	19-Dec-2016 07:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 07-Dec-2016 12:25

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 08:33
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:33
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:33
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 08:33
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>111</i>			<i>70-125</i>	<i>%REC</i>	<i>1</i>	<i>13-Dec-2016 08:33</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>90.9</i>			<i>72-125</i>	<i>%REC</i>	<i>1</i>	<i>13-Dec-2016 08:33</i>
<i>Surr: Dibromofluoromethane</i>	<i>114</i>			<i>71-125</i>	<i>%REC</i>	<i>1</i>	<i>13-Dec-2016 08:33</i>
<i>Surr: Toluene-d8</i>	<i>98.1</i>			<i>75-125</i>	<i>%REC</i>	<i>1</i>	<i>13-Dec-2016 08:33</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	1,010		8.00	20.0	mg/L	40	19-Dec-2016 07:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 07-Dec-2016 13:00

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 08:57
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:57
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 08:57
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 08:57
Surr: 1,2-Dichloroethane-d4	111			70-125	%REC	1	13-Dec-2016 08:57
Surr: 4-Bromofluorobenzene	91.9			72-125	%REC	1	13-Dec-2016 08:57
Surr: Dibromofluoromethane	114			71-125	%REC	1	13-Dec-2016 08:57
Surr: Toluene-d8	98.0			75-125	%REC	1	13-Dec-2016 08:57
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	51.6		1.00	2.50	mg/L	5	19-Dec-2016 10:17

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 07-Dec-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16120509
 Lab ID:HS16120509-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	13-Dec-2016 09:20
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Dec-2016 09:20
Toluene	U		0.50	5.0	ug/L	1	13-Dec-2016 09:20
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Dec-2016 09:20
Surr: 1,2-Dichloroethane-d4	116			70-125	%REC	1	13-Dec-2016 09:20
Surr: 4-Bromofluorobenzene	93.9			72-125	%REC	1	13-Dec-2016 09:20
Surr: Dibromofluoromethane	121			71-125	%REC	1	13-Dec-2016 09:20
Surr: Toluene-d8	100			75-125	%REC	1	13-Dec-2016 09:20
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	9,380		40.0	100	mg/L	200	19-Dec-2016 10:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 07-Dec-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16120509
Lab ID:HS16120509-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	13-Dec-2016 00:37
Ethylbenzene	U		0.00050	0.0050	mg/L	1	13-Dec-2016 00:37
Toluene	U		0.00050	0.0050	mg/L	1	13-Dec-2016 00:37
Xylenes, Total	U		0.00050	0.0050	mg/L	1	13-Dec-2016 00:37
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	13-Dec-2016 00:37
Surr: 4-Bromofluorobenzene	93.0			72-125	%REC	1	13-Dec-2016 00:37
Surr: Dibromofluoromethane	115			71-125	%REC	1	13-Dec-2016 00:37
Surr: Toluene-d8	98.3			75-125	%REC	1	13-Dec-2016 00:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R286437	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16120509-01	MW-1R	07 Dec 2016 13:30			13 Dec 2016 07:21	1
HS16120509-02	MW-2	07 Dec 2016 12:40			13 Dec 2016 07:45	1
HS16120509-03	MW-3	07 Dec 2016 13:15			13 Dec 2016 08:09	1
HS16120509-04	MW-4	07 Dec 2016 12:25			13 Dec 2016 08:33	1
HS16120509-05	MW-5	07 Dec 2016 13:00			13 Dec 2016 08:57	1
HS16120509-06	DUP	07 Dec 2016 00:00			13 Dec 2016 09:20	1
HS16120509-07	Trip Blank	07 Dec 2016 00:00			13 Dec 2016 00:37	1
Batch ID R286814	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16120509-01	MW-1R	07 Dec 2016 13:30			19 Dec 2016 06:46	200
HS16120509-02	MW-2	07 Dec 2016 12:40			19 Dec 2016 07:01	5
HS16120509-03	MW-3	07 Dec 2016 13:15			19 Dec 2016 07:15	5
HS16120509-04	MW-4	07 Dec 2016 12:25			19 Dec 2016 07:30	40
HS16120509-05	MW-5	07 Dec 2016 13:00			19 Dec 2016 10:17	5
HS16120509-06	DUP	07 Dec 2016 00:00			19 Dec 2016 10:31	200

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

QC BATCH REPORT

Batch ID: R286437		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-161212	Units: ug/L		Analysis Date: 13-Dec-2016 00:13					
Client ID:	Run ID: VOA6_286437	SeqNo: 3926971		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	54.34	0	50	0	109	70 - 125			
Surr: 4-Bromofluorobenzene	45.35	0	50	0	90.7	72 - 125			
Surr: Dibromofluoromethane	58.03	0	50	0	116	71 - 125			
Surr: Toluene-d8	48.86	0	50	0	97.7	75 - 125			

LCS	Sample ID: VLCSW-161212	Units: ug/L		Analysis Date: 12-Dec-2016 23:25					
Client ID:	Run ID: VOA6_286437	SeqNo: 3926970		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	53.09	5.0	50	0	106	73 - 121			
Ethylbenzene	45.92	5.0	50	0	91.8	80 - 120			
Toluene	44.32	5.0	50	0	88.6	80 - 120			
Xylenes, Total	137	5.0	150	0	91.3	80 - 120			
Surr: 1,2-Dichloroethane-d4	54.82	0	50	0	110	70 - 125			
Surr: 4-Bromofluorobenzene	47.35	0	50	0	94.7	72 - 125			
Surr: Dibromofluoromethane	59.38	0	50	0	119	71 - 125			
Surr: Toluene-d8	49.64	0	50	0	99.3	75 - 125			

MS	Sample ID: HS16120517-01MS	Units: ug/L		Analysis Date: 13-Dec-2016 02:12					
Client ID:	Run ID: VOA6_286437	SeqNo: 3926974		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.02	5.0	50	0	104	73 - 121			
Ethylbenzene	44.49	5.0	50	0	89.0	80 - 120			
Toluene	43.55	5.0	50	0	87.1	80 - 120			
Xylenes, Total	133	5.0	150	0	88.7	80 - 120			
Surr: 1,2-Dichloroethane-d4	53.57	0	50	0	107	70 - 125			
Surr: 4-Bromofluorobenzene	46.72	0	50	0	93.4	72 - 125			
Surr: Dibromofluoromethane	57.6	0	50	0	115	71 - 125			
Surr: Toluene-d8	48.21	0	50	0	96.4	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

QC BATCH REPORT

Batch ID: R286437		Instrument: VOA6		Method: SW8260						
MSD	Sample ID: HS16120517-01MSD	Units: ug/L			Analysis Date: 13-Dec-2016 02:36					
Client ID:	Run ID: VOA6_286437	SeqNo: 3926975		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Benzene	52.81	5.0	50	0	106	73 - 121	52.02	1.51	20	
Ethylbenzene	45.61	5.0	50	0	91.2	80 - 120	44.49	2.49	20	
Toluene	44.71	5.0	50	0	89.4	80 - 120	43.55	2.62	20	
Xylenes, Total	137.5	5.0	150	0	91.7	78 - 121	133	3.35	20	
Surr: 1,2-Dichloroethane-d4	54.88	0	50	0	110	70 - 125	53.57	2.43	20	
Surr: 4-Bromofluorobenzene	46.47	0	50	0	92.9	72 - 125	46.72	0.52	20	
Surr: Dibromofluoromethane	59.17	0	50	0	118	71 - 125	57.6	2.69	20	
Surr: Toluene-d8	48.51	0	50	0	97.0	75 - 125	48.21	0.627	20	
The following samples were analyzed in this batch:		HS16120509-01 HS16120509-05		HS16120509-02 HS16120509-06		HS16120509-03 HS16120509-07		HS16120509-04		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

QC BATCH REPORT

Batch ID: R286814		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW3-121816	Units: mg/L		Analysis Date: 19-Dec-2016 05:34						
Client ID:	Run ID: ICS2100_286814	SeqNo: 3935338		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW3-121816	Units: mg/L		Analysis Date: 19-Dec-2016 05:48						
Client ID:	Run ID: ICS2100_286814	SeqNo: 3935339		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.4	0.500	20	0	102	90 - 110				
LCSD	Sample ID: WLCSDW3-121816	Units: mg/L		Analysis Date: 19-Dec-2016 06:03						
Client ID:	Run ID: ICS2100_286814	SeqNo: 3935340		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.13	0.500	20	0	101	90 - 110	20.4	1.38	20	
MS	Sample ID: HS16120814-01MS	Units: mg/L		Analysis Date: 19-Dec-2016 11:00						
Client ID:	Run ID: ICS2100_286814	SeqNo: 3935357		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	276.5	0.500	10	283.2	-67.4	80 - 120				SEO
MS	Sample ID: HS16120509-04MS	Units: mg/L		Analysis Date: 19-Dec-2016 07:44						
Client ID: MW-4	Run ID: ICS2100_286814	SeqNo: 3935346		PrepDate:		DF: 40				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1375	20.0	400	1010	91.3	80 - 120				
MSD	Sample ID: HS16120814-01MSD	Units: mg/L		Analysis Date: 19-Dec-2016 11:15						
Client ID:	Run ID: ICS2100_286814	SeqNo: 3935358		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	281.6	0.500	10	283.2	-17.0	80 - 120	276.5	1.81	20	SEO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

QC BATCH REPORT

Batch ID: R286814		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS16120509-04MSD	Units: mg/L		Analysis Date: 19-Dec-2016 10:02	
Client ID: MW-4	Run ID: ICS2100_286814		SeqNo: 3935353	PrepDate:	DF: 40
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	1437	20.0	400	1010 107	80 - 120 1375 4.38 20

The following samples were analyzed in this batch:

HS16120509-01	HS16120509-02	HS16120509-03	HS16120509-04
HS16120509-05	HS16120509-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS16120509

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624 - 2016	31-Dec-2016
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS16120509

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16120509-01	MW-1R	Login	12/9/2016 4:30:50 PM	BAF	14B
HS16120509-01	MW-1R	Login	12/9/2016 4:30:50 PM	BAF	VW-3
HS16120509-02	MW-2	Login	12/9/2016 4:30:52 PM	BAF	14A
HS16120509-02	MW-2	Login	12/9/2016 4:30:52 PM	BAF	VW-3
HS16120509-03	MW-3	Login	12/9/2016 4:30:54 PM	BAF	14B
HS16120509-03	MW-3	Login	12/9/2016 4:30:54 PM	BAF	VW-3
HS16120509-04	MW-4	Login	12/9/2016 4:30:57 PM	BAF	14B
HS16120509-04	MW-4	Login	12/9/2016 4:30:57 PM	BAF	VW-3
HS16120509-05	MW-5	Login	12/9/2016 4:30:59 PM	BAF	14B
HS16120509-05	MW-5	Login	12/9/2016 4:30:59 PM	BAF	VW-3
HS16120509-06	DUP	Login	12/9/2016 4:31:02 PM	BAF	14B
HS16120509-06	DUP	Login	12/9/2016 4:31:02 PM	BAF	VW-3
HS16120509-07	Trip Blank	Login	12/9/2016 4:37:55 PM	BAF	VW-3

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **08-Dec-2016 09:00**

Work Order: HS16120509

Received by: **RPG**

Checklist completed by:	<u>Bernadette A. Fini</u>	<u>10-Dec-2016</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>12-Dec-2016</u>
	eSignature	Date		eSignature	Date

Matrices: **Water**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 0.9c/1.2c uc/c 11Cooler(s)/Kit(s): 24436Date/Time sample(s) sent to storage: 12/09/2016 16:45pmWater - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐pH adjusted? Yes ☐ No ☐ N/A ☒pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

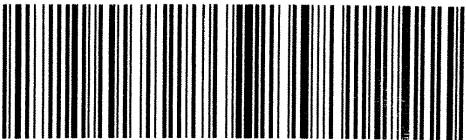
Comments:

Corrective Action:

 ALS Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>SM</i>
	Date: <i>12-7-16</i>	Time: <i>4:45</i>	Date: <i>12/08/16</i>
	Name: <i>Mike Carmona</i> Company: <i>Tetra Tech</i>		

24436

DEC 08 2016

FedEx TRK# 6786 7202 1681 0221	THU - 08 DEC 10:30A PRIORITY OVERNIGHT
AB SGRA	24436 77099 TX-US IAH
	

2017 Lab Data



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

March 15, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17030338**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Mar 07, 2017 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane Wacasey".

Generated By: Jumoke.Lawal

Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17030338

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17030338-01	MW-1R	Water		03-Mar-2017 13:55	07-Mar-2017 09:10	☐
HS17030338-02	MW-2	Water		03-Mar-2017 13:40	07-Mar-2017 09:10	☐
HS17030338-03	MW-3	Water		03-Mar-2017 12:35	07-Mar-2017 09:10	☐
HS17030338-04	MW-4	Water		03-Mar-2017 13:00	07-Mar-2017 09:10	☐
HS17030338-05	MW-5	Water		03-Mar-2017 13:15	07-Mar-2017 09:10	☐
HS17030338-06	DUP	Water		03-Mar-2017 00:01	07-Mar-2017 09:10	☐
HS17030338-07	Trip Blank	Water		03-Mar-2017 00:01	07-Mar-2017 09:10	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17030338

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R290761

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R290752

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R291110

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 03-Mar-2017 13:55

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 21:30
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:30
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:30
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:30
Surr: 1,2-Dichloroethane-d4	94.5			70-125	%REC	1	08-Mar-2017 21:30
Surr: 4-Bromofluorobenzene	103			72-125	%REC	1	08-Mar-2017 21:30
Surr: Dibromofluoromethane	95.6			71-125	%REC	1	08-Mar-2017 21:30
Surr: Toluene-d8	96.9			75-125	%REC	1	08-Mar-2017 21:30
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,740		40.0	100	mg/L	200	14-Mar-2017 13:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 03-Mar-2017 13:40

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 21:56
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:56
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:56
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:56
Surr: 1,2-Dichloroethane-d4	98.0			70-125	%REC	1	08-Mar-2017 21:56
Surr: 4-Bromofluorobenzene	110			72-125	%REC	1	08-Mar-2017 21:56
Surr: Dibromofluoromethane	91.0			71-125	%REC	1	08-Mar-2017 21:56
Surr: Toluene-d8	104			75-125	%REC	1	08-Mar-2017 21:56
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	53.2		1.00	2.50	mg/L	5	14-Mar-2017 13:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 03-Mar-2017 12:35

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 22:23
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 22:23
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 22:23
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 22:23
Surr: 1,2-Dichloroethane-d4	98.1			70-125	%REC	1	08-Mar-2017 22:23
Surr: 4-Bromofluorobenzene	110			72-125	%REC	1	08-Mar-2017 22:23
Surr: Dibromofluoromethane	99.5			71-125	%REC	1	08-Mar-2017 22:23
Surr: Toluene-d8	95.9			75-125	%REC	1	08-Mar-2017 22:23
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	55.1		1.00	2.50	mg/L	5	14-Mar-2017 14:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 03-Mar-2017 13:00

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 20:44
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 20:44
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 20:44
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 20:44
Surr: 1,2-Dichloroethane-d4	90.5			70-125	%REC	1	08-Mar-2017 20:44
Surr: 4-Bromofluorobenzene	92.4			72-125	%REC	1	08-Mar-2017 20:44
Surr: Dibromofluoromethane	94.3			71-125	%REC	1	08-Mar-2017 20:44
Surr: Toluene-d8	94.0			75-125	%REC	1	08-Mar-2017 20:44
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	1,080		8.00	20.0	mg/L	40	14-Mar-2017 14:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 03-Mar-2017 13:15

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 21:09
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:09
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:09
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:09
Surr: 1,2-Dichloroethane-d4	87.8			70-125	%REC	1	08-Mar-2017 21:09
Surr: 4-Bromofluorobenzene	91.5			72-125	%REC	1	08-Mar-2017 21:09
Surr: Dibromofluoromethane	94.2			71-125	%REC	1	08-Mar-2017 21:09
Surr: Toluene-d8	92.3			75-125	%REC	1	08-Mar-2017 21:09
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	51.2		1.00	2.50	mg/L	5	14-Mar-2017 15:33

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 03-Mar-2017 00:01

ANALYTICAL REPORT

WorkOrder:HS17030338
 Lab ID:HS17030338-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 21:34
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:34
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:34
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:34
Surr: 1,2-Dichloroethane-d4	87.2			70-125	%REC	1	08-Mar-2017 21:34
Surr: 4-Bromofluorobenzene	90.3			72-125	%REC	1	08-Mar-2017 21:34
Surr: Dibromofluoromethane	92.8			71-125	%REC	1	08-Mar-2017 21:34
Surr: Toluene-d8	95.0			75-125	%REC	1	08-Mar-2017 21:34
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	9,250		40.0	100	mg/L	200	14-Mar-2017 15:48

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 03-Mar-2017 00:01

ANALYTICAL REPORT

WorkOrder:HS17030338
Lab ID:HS17030338-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	08-Mar-2017 21:58
Ethylbenzene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:58
Toluene	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:58
Xylenes, Total	U		0.00050	0.0050	mg/L	1	08-Mar-2017 21:58
Surr: 1,2-Dichloroethane-d4	87.8			70-125	%REC	1	08-Mar-2017 21:58
Surr: 4-Bromofluorobenzene	90.5			72-125	%REC	1	08-Mar-2017 21:58
Surr: Dibromofluoromethane	92.9			71-125	%REC	1	08-Mar-2017 21:58
Surr: Toluene-d8	93.1			75-125	%REC	1	08-Mar-2017 21:58

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R290752 Test Name : VOLATILES - SW8260C Matrix: Water						
HS17030338-04	MW-4	03 Mar 2017 13:00			08 Mar 2017 20:44	1
HS17030338-05	MW-5	03 Mar 2017 13:15			08 Mar 2017 21:09	1
HS17030338-06	DUP	03 Mar 2017 00:01			08 Mar 2017 21:34	1
HS17030338-07	Trip Blank	03 Mar 2017 00:01			08 Mar 2017 21:58	1
Batch ID R290761 Test Name : VOLATILES - SW8260C Matrix: Water						
HS17030338-01	MW-1R	03 Mar 2017 13:55			08 Mar 2017 21:30	1
HS17030338-02	MW-2	03 Mar 2017 13:40			08 Mar 2017 21:56	1
HS17030338-03	MW-3	03 Mar 2017 12:35			08 Mar 2017 22:23	1
Batch ID R291110 Test Name : ANIONS BY E300.0 Matrix: Water						
HS17030338-01	MW-1R	03 Mar 2017 13:55			14 Mar 2017 13:37	200
HS17030338-02	MW-2	03 Mar 2017 13:40			14 Mar 2017 13:51	5
HS17030338-03	MW-3	03 Mar 2017 12:35			14 Mar 2017 14:35	5
HS17030338-04	MW-4	03 Mar 2017 13:00			14 Mar 2017 14:50	40
HS17030338-05	MW-5	03 Mar 2017 13:15			14 Mar 2017 15:33	5
HS17030338-06	DUP	03 Mar 2017 00:01			14 Mar 2017 15:48	200

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R290752		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-170308	Units: ug/L		Analysis Date: 08-Mar-2017 11:54					
Client ID:	Run ID: VOA6_290752	SeqNo: 4010948		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	44.24	0	50	0	88.5	70 - 125			
Surr: 4-Bromofluorobenzene	46.61	0	50	0	93.2	72 - 125			
Surr: Dibromofluoromethane	46.67	0	50	0	93.3	71 - 125			
Surr: Toluene-d8	46.03	0	50	0	92.1	75 - 125			

LCS	Sample ID: VLCSW-170308	Units: ug/L		Analysis Date: 08-Mar-2017 11:05					
Client ID:	Run ID: VOA6_290752	SeqNo: 4010947		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	53.16	5.0	50	0	106	73 - 121			
Ethylbenzene	48.67	5.0	50	0	97.3	80 - 120			
Toluene	48.56	5.0	50	0	97.1	80 - 120			
Xylenes, Total	147.2	5.0	150	0	98.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	42.76	0	50	0	85.5	70 - 125			
Surr: 4-Bromofluorobenzene	46.59	0	50	0	93.2	72 - 125			
Surr: Dibromofluoromethane	46.56	0	50	0	93.1	71 - 125			
Surr: Toluene-d8	45.42	0	50	0	90.8	75 - 125			

MS	Sample ID: HS17030221-01MS	Units: ug/L		Analysis Date: 08-Mar-2017 15:45					
Client ID:	Run ID: VOA6_290752	SeqNo: 4010953		PrepDate:		DF: 20			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	1053	100	1000	0	105	73 - 121			
Ethylbenzene	976.7	100	1000	0	97.7	80 - 120			
Toluene	976.2	100	1000	0	97.6	80 - 120			
Xylenes, Total	2962	100	3000	0	98.7	80 - 120			
Surr: 1,2-Dichloroethane-d4	846.2	0	1000	0	84.6	70 - 125			
Surr: 4-Bromofluorobenzene	926	0	1000	0	92.6	72 - 125			
Surr: Dibromofluoromethane	936.2	0	1000	0	93.6	71 - 125			
Surr: Toluene-d8	904.2	0	1000	0	90.4	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R290752		Instrument: VOA6		Method: SW8260					
MSD		Sample ID: HS17030221-01MSD		Units: ug/L		Analysis Date: 08-Mar-2017 16:10			
Client ID:		Run ID: VOA6_290752		SeqNo: 4010954		PrepDate:		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	995.4	100	1000	0	99.5	73 - 121	1053	5.58	20
Ethylbenzene	932.1	100	1000	0	93.2	80 - 120	976.7	4.68	20
Toluene	917.5	100	1000	0	91.8	80 - 120	976.2	6.19	20
Xylenes, Total	2813	100	3000	0	93.8	78 - 121	2962	5.15	20
Surr: 1,2-Dichloroethane-d4	826.5	0	1000	0	82.6	70 - 125	846.2	2.37	20
Surr: 4-Bromofluorobenzene	907.8	0	1000	0	90.8	72 - 125	926	1.98	20
Surr: Dibromofluoromethane	909.9	0	1000	0	91.0	71 - 125	936.2	2.84	20
Surr: Toluene-d8	871.3	0	1000	0	87.1	75 - 125	904.2	3.7	20
The following samples were analyzed in this batch:									
HS17030338-04		HS17030338-05		HS17030338-06		HS17030338-07			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R290761		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170308	Units: ug/L		Analysis Date: 08-Mar-2017 13:14					
Client ID:	Run ID: VOA1_290761	SeqNo: 4011058		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	47.3	0	50	0	94.6	70 - 125			
Surr: 4-Bromofluorobenzene	56.1	0	50	0	112	72 - 125			
Surr: Dibromofluoromethane	47.25	0	50	0	94.5	71 - 125			
Surr: Toluene-d8	49.38	0	50	0	98.8	75 - 125			

LCS	Sample ID: VLCSW-170308	Units: ug/L		Analysis Date: 08-Mar-2017 11:56					
Client ID:	Run ID: VOA1_290761	SeqNo: 4011057		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	48.52	5.0	50	0	97.0	73 - 121			
Ethylbenzene	51.09	5.0	50	0	102	80 - 120			
Toluene	46.51	5.0	50	0	93.0	80 - 120			
Xylenes, Total	155.8	5.0	150	0	104	80 - 120			
Surr: 1,2-Dichloroethane-d4	47.05	0	50	0	94.1	70 - 125			
Surr: 4-Bromofluorobenzene	56.62	0	50	0	113	72 - 125			
Surr: Dibromofluoromethane	46.5	0	50	0	93.0	71 - 125			
Surr: Toluene-d8	50.18	0	50	0	100	75 - 125			

MS	Sample ID: HS17030339-01MS	Units: ug/L		Analysis Date: 08-Mar-2017 14:59					
Client ID:	Run ID: VOA1_290761	SeqNo: 4011062		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.18	5.0	50	0	92.4	73 - 121			
Ethylbenzene	48.07	5.0	50	0	96.1	80 - 120			
Toluene	47.28	5.0	50	0	94.6	80 - 120			
Xylenes, Total	156.3	5.0	150	0	104	80 - 120			
Surr: 1,2-Dichloroethane-d4	49.51	0	50	0	99.0	70 - 125			
Surr: 4-Bromofluorobenzene	53.84	0	50	0	108	72 - 125			
Surr: Dibromofluoromethane	48.4	0	50	0	96.8	71 - 125			
Surr: Toluene-d8	50.64	0	50	0	101	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R290761		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS17030339-01MSD		Units: ug/L		Analysis Date: 08-Mar-2017 15:25				
Client ID:		Run ID: VOA1_290761		SeqNo: 4011063		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	47.26	5.0	50	0	94.5	73 - 121	46.18	2.31	20	
Ethylbenzene	46.07	5.0	50	0	92.1	80 - 120	48.07	4.25	20	
Toluene	46.37	5.0	50	0	92.7	80 - 120	47.28	1.94	20	
Xylenes, Total	140.4	5.0	150	0	93.6	78 - 121	156.3	10.7	20	
Surr: 1,2-Dichloroethane-d4	49.93	0	50	0	99.9	70 - 125	49.51	0.842	20	
Surr: 4-Bromofluorobenzene	56.84	0	50	0	114	72 - 125	53.84	5.42	20	
Surr: Dibromofluoromethane	48.88	0	50	0	97.8	71 - 125	48.4	0.981	20	
Surr: Toluene-d8	50.27	0	50	0	101	75 - 125	50.64	0.734	20	
The following samples were analyzed in this batch:										
HS17030338-01		HS17030338-02		HS17030338-03						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R291110		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW2-031417	Units: mg/L		Analysis Date: 14-Mar-2017 12:25						
Client ID:	Run ID: ICS2100_291110	SeqNo: 4018462		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW2-031417	Units: mg/L		Analysis Date: 14-Mar-2017 12:40						
Client ID:	Run ID: ICS2100_291110	SeqNo: 4018463		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.75	0.500	20	0	104	90 - 110				
LCSD	Sample ID: WLCSDW2-031417	Units: mg/L		Analysis Date: 14-Mar-2017 12:54						
Client ID:	Run ID: ICS2100_291110	SeqNo: 4018464		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.57	0.500	20	0	103	90 - 110	20.75	0.871	20	
MS	Sample ID: HS17030339-01MS	Units: mg/L		Analysis Date: 14-Mar-2017 16:17						
Client ID:	Run ID: ICS2100_291110	SeqNo: 4018477		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	248	5.00	100	147.7	100	80 - 120				
MS	Sample ID: HS17030338-02MS	Units: mg/L		Analysis Date: 14-Mar-2017 14:06						
Client ID: MW-2	Run ID: ICS2100_291110	SeqNo: 4018468		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	106.6	2.50	50	53.22	107	80 - 120				
MSD	Sample ID: HS17030339-01MSD	Units: mg/L		Analysis Date: 14-Mar-2017 16:31						
Client ID:	Run ID: ICS2100_291110	SeqNo: 4018478		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	252.6	5.00	100	147.7	105	80 - 120	248	1.85	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

QC BATCH REPORT

Batch ID: R291110		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS17030338-02MSD	Units: mg/L		Analysis Date: 14-Mar-2017 14:20	
Client ID: MW-2	Run ID: ICS2100_291110		SeqNo: 4018469	PrepDate:	DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual

Chloride	104	2.50	50	53.22	102	80 - 120	106.6	2.48	20
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The following samples were analyzed in this batch:

HS17030338-01	HS17030338-02	HS17030338-03	HS17030338-04
HS17030338-05	HS17030338-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17030338

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
California	2919 2016-2018	31-Jul-2018
Illinois	003872	09-May-2017
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	96 2016-2017	30-Apr-2017
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2016-2017	30-Apr-2017
Oklahoma	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17030338

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS17030338-01	MW-1R	Login	3/7/2017 7:24:02 PM	CL	14B
HS17030338-01	MW-1R	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-02	MW-2	Login	3/7/2017 7:24:02 PM	CL	14A
HS17030338-02	MW-2	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-03	MW-3	Login	3/7/2017 7:24:02 PM	CL	14B
HS17030338-03	MW-3	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-04	MW-4	Login	3/7/2017 7:24:02 PM	CL	14B
HS17030338-04	MW-4	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-05	MW-5	Login	3/7/2017 7:24:02 PM	CL	14B
HS17030338-05	MW-5	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-06	DUP	Login	3/7/2017 7:24:02 PM	CL	14B
HS17030338-06	DUP	Login	3/7/2017 7:24:02 PM	CL	VW-3
HS17030338-07	Trip Blank	Login	3/7/2017 7:24:02 PM	CL	VW-3

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **07-Mar-2017 09:10**

Work Order: HS17030338

Received by: **JRM**

Checklist completed by:	<u>Cesar A. Lira</u>	<u>7-Mar-2017</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>9-Mar-2017</u>
	eSignature	Date		eSignature	Date

Matrices: **Water**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):	2.7c/3.2c uc/c	IR#11
Cooler(s)/Kit(s):	EHS0042881	
Date/Time sample(s) sent to storage:	3/7/2017 8:00pm	
Water - VOA vials have zero headspace?	Yes ☒	No ☐ No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐ N/A ☐
pH adjusted?	Yes ☐	No ☐ N/A ☒
pH adjusted by:		

Login Notes:

Client Contacted:

Date Contacted:

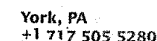
Person Contacted:

Contacted By:

Regarding:

Comments:

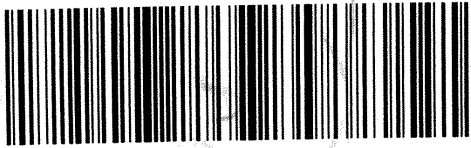
Corrective Action:



Copyright 2011 by A I S Environmental

 ALS Environmental 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>EH</i>
	Date: <i>3-6-17</i>	Time: <i>15:00</i>	Date: <i>03/07/17</i>
	Name: <i>Stancilff</i>	Company: <i>ALS Fed</i>	

EH50042881 MAR 07 2017

FedEx TRK# 6786 7203 7349 0221	TUE - 07 MAR 10:30A PRIORITY OVERNIGHT
AB SGRA	<i>EH50042881</i> 77099 TX-US IAH
	
#244918 03/06 546J3/1ADB/53C1	



10450 Stancliff Rd. Suite 210
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T: +1 281 530 5656
F: +1 281 530 5887

June 19, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17060578**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Jun 09, 2017 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: Dayna.Fisher
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17060578

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17060578-01	MW-1R	Water		08-Jun-2017 12:15	09-Jun-2017 08:20	☐
HS17060578-02	MW-2	Water		08-Jun-2017 10:45	09-Jun-2017 08:20	☐
HS17060578-03	MW-3	Water		08-Jun-2017 11:30	09-Jun-2017 08:20	☐
HS17060578-04	MW-4	Water		08-Jun-2017 12:10	09-Jun-2017 08:20	☐
HS17060578-05	MW-5	Water		08-Jun-2017 10:50	09-Jun-2017 08:20	☐
HS17060578-06	DUP	Water		08-Jun-2017 00:00	09-Jun-2017 08:20	☐
HS17060578-07	TRIP BLANK - 051717-88	Water		08-Jun-2017 00:00	09-Jun-2017 08:20	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17060578

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R296417

Sample ID: HS17060756-05MSD

- MSD is for an unrelated sample

Batch ID: R296406

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R296355

Sample ID: HS17060739-01MSD

- MSD is for an unrelated sample

WetChemistry by Method E300

Batch ID: R296608

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 08-Jun-2017 12:15

ANALYTICAL REPORT

WorkOrder:HS17060578
 Lab ID:HS17060578-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 17:50
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 17:50
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 17:50
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 17:50
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	14-Jun-2017 17:50
Surr: 4-Bromofluorobenzene	91.2			72-125	%REC	1	14-Jun-2017 17:50
Surr: Dibromofluoromethane	103			71-125	%REC	1	14-Jun-2017 17:50
Surr: Toluene-d8	97.6			75-125	%REC	1	14-Jun-2017 17:50
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,710		80.0	200	mg/L	400	18-Jun-2017 17:50

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: MW-2
Collection Date: 08-Jun-2017 10:45

ANALYTICAL REPORT

WorkOrder:HS17060578
Lab ID:HS17060578-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 18:39
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 18:39
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 18:39
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 18:39
Surr: 1,2-Dichloroethane-d4	98.9			70-125	%REC	1	14-Jun-2017 18:39
Surr: 4-Bromofluorobenzene	88.1			72-125	%REC	1	14-Jun-2017 18:39
Surr: Dibromofluoromethane	101			71-125	%REC	1	14-Jun-2017 18:39
Surr: Toluene-d8	95.8			75-125	%REC	1	14-Jun-2017 18:39
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	49.4		1.00	2.50	mg/L	5	18-Jun-2017 18:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 08-Jun-2017 11:30

ANALYTICAL REPORT

WorkOrder:HS17060578
 Lab ID:HS17060578-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 21:58
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 21:58
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 21:58
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 21:58
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	14-Jun-2017 21:58
Surr: 4-Bromofluorobenzene	90.6			72-125	%REC	1	14-Jun-2017 21:58
Surr: Dibromofluoromethane	103			71-125	%REC	1	14-Jun-2017 21:58
Surr: Toluene-d8	99.1			75-125	%REC	1	14-Jun-2017 21:58
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	48.4		1.00	2.50	mg/L	5	18-Jun-2017 18:49

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 08-Jun-2017 12:10

ANALYTICAL REPORT

WorkOrder:HS17060578
 Lab ID:HS17060578-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 22:48
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 22:48
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 22:48
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 22:48
Surr: 1,2-Dichloroethane-d4	104			70-125	%REC	1	14-Jun-2017 22:48
Surr: 4-Bromofluorobenzene	90.6			72-125	%REC	1	14-Jun-2017 22:48
Surr: Dibromofluoromethane	104			71-125	%REC	1	14-Jun-2017 22:48
Surr: Toluene-d8	101			75-125	%REC	1	14-Jun-2017 22:48
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	923		8.00	20.0	mg/L	40	18-Jun-2017 19:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 08-Jun-2017 10:50

ANALYTICAL REPORT

WorkOrder:HS17060578
 Lab ID:HS17060578-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 23:54
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 23:54
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 23:54
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 23:54
Surr: 1,2-Dichloroethane-d4	93.5			70-125	%REC	1	14-Jun-2017 23:54
Surr: 4-Bromofluorobenzene	99.2			72-125	%REC	1	14-Jun-2017 23:54
Surr: Dibromofluoromethane	96.3			71-125	%REC	1	14-Jun-2017 23:54
Surr: Toluene-d8	107			75-125	%REC	1	14-Jun-2017 23:54
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	45.8		1.00	2.50	mg/L	5	18-Jun-2017 20:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 08-Jun-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17060578
 Lab ID:HS17060578-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	15-Jun-2017 00:20
Ethylbenzene	U		0.00050	0.0050	mg/L	1	15-Jun-2017 00:20
Toluene	U		0.00050	0.0050	mg/L	1	15-Jun-2017 00:20
Xylenes, Total	U		0.00050	0.0050	mg/L	1	15-Jun-2017 00:20
Surr: 1,2-Dichloroethane-d4	87.1			70-125	%REC	1	15-Jun-2017 00:20
Surr: 4-Bromofluorobenzene	96.6			72-125	%REC	1	15-Jun-2017 00:20
Surr: Dibromofluoromethane	94.6			71-125	%REC	1	15-Jun-2017 00:20
Surr: Toluene-d8	104			75-125	%REC	1	15-Jun-2017 00:20
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,690		80.0	200	mg/L	400	18-Jun-2017 20:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: TRIP BLANK - 051717-88
Collection Date: 08-Jun-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17060578
Lab ID:HS17060578-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	14-Jun-2017 08:05
Ethylbenzene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 08:05
Toluene	U		0.00050	0.0050	mg/L	1	14-Jun-2017 08:05
Xylenes, Total	U		0.00050	0.0050	mg/L	1	14-Jun-2017 08:05
Surr: 1,2-Dichloroethane-d4	87.4			70-125	%REC	1	14-Jun-2017 08:05
Surr: 4-Bromofluorobenzene	96.8			72-125	%REC	1	14-Jun-2017 08:05
Surr: Dibromofluoromethane	94.6			71-125	%REC	1	14-Jun-2017 08:05
Surr: Toluene-d8	103			75-125	%REC	1	14-Jun-2017 08:05

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R296355	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17060578-07	TRIP BLANK - 051717-88	08 Jun 2017 00:00			14 Jun 2017 08:05	1
Batch ID R296406	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17060578-01	MW-1R	08 Jun 2017 12:15			14 Jun 2017 17:50	1
HS17060578-02	MW-2	08 Jun 2017 10:45			14 Jun 2017 18:39	1
HS17060578-03	MW-3	08 Jun 2017 11:30			14 Jun 2017 21:58	1
HS17060578-04	MW-4	08 Jun 2017 12:10			14 Jun 2017 22:48	1
Batch ID R296417	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17060578-05	MW-5	08 Jun 2017 10:50			14 Jun 2017 23:54	1
HS17060578-06	DUP	08 Jun 2017 00:00			15 Jun 2017 00:20	1
Batch ID R296608	Test Name : ANIONS BY E300.0			Matrix: Water		
HS17060578-01	MW-1R	08 Jun 2017 12:15			18 Jun 2017 17:50	400
HS17060578-02	MW-2	08 Jun 2017 10:45			18 Jun 2017 18:34	5
HS17060578-03	MW-3	08 Jun 2017 11:30			18 Jun 2017 18:49	5
HS17060578-04	MW-4	08 Jun 2017 12:10			18 Jun 2017 19:03	40
HS17060578-05	MW-5	08 Jun 2017 10:50			18 Jun 2017 20:01	5
HS17060578-06	DUP	08 Jun 2017 00:00			18 Jun 2017 20:16	400

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296355		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170613	Units: ug/L		Analysis Date: 14-Jun-2017 01:31					
Client ID:	Run ID: VOA1_296355	SeqNo: 4121565		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	45.22	0	50	0	90.4	70 - 125			
Surr: 4-Bromofluorobenzene	48.91	0	50	0	97.8	72 - 125			
Surr: Dibromofluoromethane	49.56	0	50	0	99.1	71 - 125			
Surr: Toluene-d8	53.06	0	50	0	106	75 - 125			

LCS	Sample ID: VLCSW-170613	Units: ug/L		Analysis Date: 14-Jun-2017 00:39					
Client ID:	Run ID: VOA1_296355	SeqNo: 4121564		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	48.24	5.0	50	0	96.5	73 - 121			
Ethylbenzene	46.39	5.0	50	0	92.8	80 - 120			
Toluene	49.93	5.0	50	0	99.9	80 - 120			
Xylenes, Total	151	5.0	150	0	101	80 - 120			
Surr: 1,2-Dichloroethane-d4	46.87	0	50	0	93.7	70 - 125			
Surr: 4-Bromofluorobenzene	47.98	0	50	0	96.0	72 - 125			
Surr: Dibromofluoromethane	46.73	0	50	0	93.5	71 - 125			
Surr: Toluene-d8	51.91	0	50	0	104	75 - 125			

MS	Sample ID: HS17060739-01MS	Units: ug/L		Analysis Date: 14-Jun-2017 02:24					
Client ID:	Run ID: VOA1_296355	SeqNo: 4121567		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	39.81	5.0	50	0	79.6	73 - 121			
Ethylbenzene	43.18	5.0	50	0	86.4	80 - 120			
Toluene	41.88	5.0	50	0	83.8	80 - 120			
Xylenes, Total	127.6	5.0	150	0	85.0	80 - 120			
Surr: 1,2-Dichloroethane-d4	45.26	0	50	0	90.5	70 - 125			
Surr: 4-Bromofluorobenzene	50.75	0	50	0	102	72 - 125			
Surr: Dibromofluoromethane	47.52	0	50	0	95.0	71 - 125			
Surr: Toluene-d8	50.51	0	50	0	101	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296355		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS17060739-01MSD		Units: ug/L		Analysis Date: 14-Jun-2017 02:50				
Client ID:		Run ID: VOA1_296355		SeqNo: 4121568		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	41.26	5.0	50	0	82.5	73 - 121	39.81	3.57	20	
Ethylbenzene	39.94	5.0	50	0	79.9	80 - 120	43.18	7.81	20	S
Toluene	40.55	5.0	50	0	81.1	80 - 120	41.88	3.23	20	
Xylenes, Total	124.3	5.0	150	0	82.9	78 - 121	127.6	2.56	20	
Surr: 1,2-Dichloroethane-d4	45.87	0	50	0	91.7	70 - 125	45.26	1.33	20	
Surr: 4-Bromofluorobenzene	51.04	0	50	0	102	72 - 125	50.75	0.564	20	
Surr: Dibromofluoromethane	48.04	0	50	0	96.1	71 - 125	47.52	1.09	20	
Surr: Toluene-d8	52.32	0	50	0	105	75 - 125	50.51	3.54	20	

The following samples were analyzed in this batch: HS17060578-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296406		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-170614	Units: ug/L		Analysis Date: 14-Jun-2017 13:41					
Client ID:	Run ID: VOA6_296406	SeqNo: 4122849		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	52.18	0	50	0	104	70 - 125			
Surr: 4-Bromofluorobenzene	45.19	0	50	0	90.4	72 - 125			
Surr: Dibromofluoromethane	52	0	50	0	104	71 - 125			
Surr: Toluene-d8	48.48	0	50	0	97.0	75 - 125			

LCS	Sample ID: VLCSW-170614	Units: ug/L		Analysis Date: 14-Jun-2017 12:26					
Client ID:	Run ID: VOA6_296406	SeqNo: 4122848		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	48.04	5.0	50	0	96.1	73 - 121			
Ethylbenzene	43.95	5.0	50	0	87.9	80 - 120			
Toluene	45.75	5.0	50	0	91.5	80 - 120			
Xylenes, Total	133.4	5.0	150	0	88.9	80 - 120			
Surr: 1,2-Dichloroethane-d4	51.19	0	50	0	102	70 - 125			
Surr: 4-Bromofluorobenzene	47.07	0	50	0	94.1	72 - 125			
Surr: Dibromofluoromethane	51.3	0	50	0	103	71 - 125			
Surr: Toluene-d8	49.26	0	50	0	98.5	75 - 125			

MS	Sample ID: HS17060740-01MS	Units: ug/L		Analysis Date: 14-Jun-2017 16:35					
Client ID:	Run ID: VOA6_296406	SeqNo: 4122852		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.64	5.0	50	0	91.3	73 - 121			
Ethylbenzene	41.78	5.0	50	0	83.6	80 - 120			
Toluene	43.1	5.0	50	0	86.2	80 - 120			
Xylenes, Total	125.2	5.0	150	0	83.5	80 - 120			
Surr: 1,2-Dichloroethane-d4	52.49	0	50	0	105	70 - 125			
Surr: 4-Bromofluorobenzene	48.46	0	50	0	96.9	72 - 125			
Surr: Dibromofluoromethane	51.96	0	50	0	104	71 - 125			
Surr: Toluene-d8	49.8	0	50	0	99.6	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296406		Instrument: VOA6		Method: SW8260						
MSD		Sample ID: HS17060740-01MSD		Units: ug/L		Analysis Date: 14-Jun-2017 17:00				
Client ID:		Run ID: VOA6_296406		SeqNo: 4122853		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	46.86	5.0	50	0	93.7	73 - 121	45.64	2.63	20	
Ethylbenzene	42.9	5.0	50	0	85.8	80 - 120	41.78	2.63	20	
Toluene	43.49	5.0	50	0	87.0	80 - 120	43.1	0.901	20	
Xylenes, Total	127.7	5.0	150	0	85.1	78 - 121	125.2	1.96	20	
Surr: 1,2-Dichloroethane-d4	51.71	0	50	0	103	70 - 125	52.49	1.49	20	
Surr: 4-Bromofluorobenzene	48.34	0	50	0	96.7	72 - 125	48.46	0.247	20	
Surr: Dibromofluoromethane	52.06	0	50	0	104	71 - 125	51.96	0.193	20	
Surr: Toluene-d8	50.56	0	50	0	101	75 - 125	49.8	1.52	20	
The following samples were analyzed in this batch:										
HS17060578-01		HS17060578-02		HS17060578-03		HS17060578-04				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296417		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170614	Units: ug/L		Analysis Date: 14-Jun-2017 14:40					
Client ID:	Run ID: VOA1_296417	SeqNo: 4123025		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	45.41	0	50	0	90.8	70 - 125			
Surr: 4-Bromofluorobenzene	48.18	0	50	0	96.4	72 - 125			
Surr: Dibromofluoromethane	46.9	0	50	0	93.8	71 - 125			
Surr: Toluene-d8	52.16	0	50	0	104	75 - 125			

LCS	Sample ID: VLCSW-170614	Units: ug/L		Analysis Date: 14-Jun-2017 13:21					
Client ID:	Run ID: VOA1_296417	SeqNo: 4123024		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.64	5.0	50	0	95.3	73 - 121			
Ethylbenzene	48.8	5.0	50	0	97.6	80 - 120			
Toluene	47.23	5.0	50	0	94.5	80 - 120			
Xylenes, Total	152	5.0	150	0	101	80 - 120			
Surr: 1,2-Dichloroethane-d4	46.05	0	50	0	92.1	70 - 125			
Surr: 4-Bromofluorobenzene	51.09	0	50	0	102	72 - 125			
Surr: Dibromofluoromethane	47.1	0	50	0	94.2	71 - 125			
Surr: Toluene-d8	50.15	0	50	0	100	75 - 125			

MS	Sample ID: HS17060756-05MS	Units: ug/L		Analysis Date: 14-Jun-2017 16:26					
Client ID:	Run ID: VOA1_296417	SeqNo: 4123029		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.37	5.0	50	0	90.7	73 - 121			
Ethylbenzene	46.65	5.0	50	0	93.3	80 - 120			
Toluene	47.4	5.0	50	0	94.8	80 - 120			
Xylenes, Total	138.2	5.0	150	0	92.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	42.81	0	50	0	85.6	70 - 125			
Surr: 4-Bromofluorobenzene	53.56	0	50	0	107	72 - 125			
Surr: Dibromofluoromethane	46.04	0	50	0	92.1	71 - 125			
Surr: Toluene-d8	55.57	0	50	0	111	75 - 125			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296417		Instrument: VOA1		Method: SW8260							
MSD		Sample ID: HS17060756-05MSD		Units: ug/L		Analysis Date: 14-Jun-2017 16:52					
Client ID:		Run ID: VOA1_296417		SeqNo: 4123030		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	155.3	5.0	50	0	311	73 - 121	45.37	110	20	SR	
Ethylbenzene	46.58	5.0	50	0	93.2	80 - 120	46.65	0.15	20		
Toluene	214.2	5.0	50	0	428	80 - 120	47.4	128	20	SRE	
Xylenes, Total	149.8	5.0	150	0	99.9	78 - 121	138.2	8.12	20		
Surr: 1,2-Dichloroethane-d4	43.26	0	50	0	86.5	70 - 125	42.81	1.04	20		
Surr: 4-Bromofluorobenzene	49.28	0	50	0	98.6	72 - 125	53.56	8.33	20		
Surr: Dibromofluoromethane	44.92	0	50	0	89.8	71 - 125	46.04	2.47	20		
Surr: Toluene-d8	52.92	0	50	0	106	75 - 125	55.57	4.87	20		
The following samples were analyzed in this batch: HS17060578-05 HS17060578-06											

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296608		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-061817	Units: mg/L		Analysis Date: 18-Jun-2017 14:12						
Client ID:	Run ID: ICS2100_296608	SeqNo: 4127103		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLC SW1-061817	Units: mg/L		Analysis Date: 18-Jun-2017 14:27						
Client ID:	Run ID: ICS2100_296608	SeqNo: 4127104		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.3	0.500	20	0	96.5	90 - 110				
LCSD	Sample ID: WLCSDW1-061817	Units: mg/L		Analysis Date: 19-Jun-2017 10:15						
Client ID:	Run ID: ICS2100_296608	SeqNo: 4127139		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.96	0.500	20	0	99.8	90 - 110	19.3	3.4	20	
MS	Sample ID: HS17060578-01MS	Units: mg/L		Analysis Date: 18-Jun-2017 18:05						
Client ID: MW-1R	Run ID: ICS2100_296608	SeqNo: 4127109		PrepDate:		DF: 400				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	12210	200	4000	8705	87.7	80 - 120				
MS	Sample ID: HS17060575-04MS	Units: mg/L		Analysis Date: 18-Jun-2017 15:54						
Client ID:	Run ID: ICS2100_296608	SeqNo: 4127106		PrepDate:		DF: 200				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	2089	100	2000	136.6	97.6	80 - 120				
MSD	Sample ID: HS17060578-01MSD	Units: mg/L		Analysis Date: 18-Jun-2017 18:20						
Client ID: MW-1R	Run ID: ICS2100_296608	SeqNo: 4127110		PrepDate:		DF: 400				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	12540	200	4000	8705	95.9	80 - 120	12210	2.65	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

QC BATCH REPORT

Batch ID: R296608		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS17060575-04MSD	Units: mg/L		Analysis Date: 18-Jun-2017 16:09	
Client ID:	Run ID: ICS2100_296608	SeqNo: 4127107		PrepDate:	DF: 200
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	2110	100	2000	136.6 98.7	80 - 120 2089 1.02 20

The following samples were analyzed in this batch:

HS17060578-01	HS17060578-02	HS17060578-03	HS17060578-04
HS17060578-05	HS17060578-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17060578

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kansas	E-10352 2016-2017	31-Jul-2017
Kentucky	123043	30-Apr-2018
Louisiana	03087 2016-2017	30-Jun-2017
North Carolina	624-2017	31-Dec-2017
Oklahoma	2016-122	31-Aug-2017
Texas	T104704231-17-18	30-Apr-2018

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17060578

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS17060578-01	MW-1R	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-01	MW-1R	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-02	MW-2	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-02	MW-2	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-03	MW-3	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-03	MW-3	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-04	MW-4	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-04	MW-4	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-05	MW-5	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-05	MW-5	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-06	DUP	Login	6/10/2017 11:28:30 AM	KRM	WET164
HS17060578-06	DUP	Login	6/10/2017 11:28:30 AM	KRM	VOA046
HS17060578-07	TRIP BLANK - 051717-88	Login	6/10/2017 11:28:30 AM	KRM	VOA046

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **09-Jun-2017 08:20**

Work Order: HS17060578

Received by: **JRM**Checklist completed by: Krysta Mathis
eSignature10-Jun-2017
DateReviewed by: Dane J. Wacasey
eSignature13-Jun-2017
DateMatrices: **WATERS**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☒	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	1.3/1.5 U/C		15
Cooler(s)/Kit(s):	25643		
Date/Time sample(s) sent to storage:	06/09/2017 19:00		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:			

Login Notes: Times differ: MW-2 COC=10:45 labels=11:30, MW-3 COC=11:30 labels=10:45. Logged in per COC.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Fort Collins, CO
+1 970 490 1511

Everett, WA
+1 425 356 2600

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 163819

HS17060578

Glenn Springs Holdings, Inc.

55626DM GSHI PXP Elliot E.M. Federal TB



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	4502201559 ENV 749-4	Project Name	55626DM GSHI PXP Elliot E.M. Feder
Work Order		Project Number	ENV749A006
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.
Send Report To	Angela Bown	Invoice Attn	Accounts Payable
Address	PO Box 2148	Address	PO Box 2148
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston, TX 77252-2148
Phone		Phone	
Fax		Fax	
e-Mail Address		e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	6-8-17	1215	Water	1+8	4	X	X									
2	MW-2	6-8-17	1045	Water	1+8	4	X	X									
3	MW-3	6-8-17	1130	Water	1+8	4	X	X									
4	MW-4	6-8-17	1210	Water	1+8	4	X	X									
5	MW-5	6-8-17	1050	Water	1+8	4	X	X									
6	DUP	6-8-17	NA	Water	1+8	4	X	X									
7	Trip Blank			Water	1+8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Matthew McDaniel</i>		Shipment Method <i>FedEx</i>		Required Turnaround Time: (Check Box) TAT <u>10 days</u> Other: _____		Results Due Date: _____		
Relinquished by: <i>Matthew McDaniel</i>	Date: <u>6-8-17</u>	Time: <u>1500</u>	Received by: <i>[Signature]</i>		Notes: [GSHI PXP Elliot EM Federal TB]			
Relinquished by:	Date:	Time:	Received by (Laboratory): <i>Jim</i>		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory): <i>6-9-17 08:20</i>		<u>25643</u>	<u>1.30</u>	QC Level <u>STD</u>	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				Other: <u>CH-20</u>				

1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions of this contract.



ALS

10450 Stancliff Rd., Suite 210

Houston, Texas 77099

Tel. +1 281 530 5600

Fax +1 281 530 5887

CUSTOMER

Date: 6-8-17 Time: 10:30

Name: Michael M...

Company: 1212 700

Y SEAL

Seal Bro...

JUN 10 2017

FedEx

TRK#
0221

6786 7206 1262

AB SGRA

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**FRI - 09 JUN 10:30A
PRIORITY OVERNIGHT**

TX-US

IAH

77099



10450 Stancliff Rd. Suite 210
Houston, TX 77099
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September 11, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17090045**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Sep 01, 2017 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: Dayna.Fisher
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17090045

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17090045-01	MW-1R	Groundwater		30-Aug-2017 11:40	01-Sep-2017 15:20	☐
HS17090045-02	MW-2	Groundwater		30-Aug-2017 12:25	01-Sep-2017 15:20	☐
HS17090045-03	MW-3	Groundwater		30-Aug-2017 12:50	01-Sep-2017 15:20	☐
HS17090045-04	MW-4	Groundwater		30-Aug-2017 12:15	01-Sep-2017 15:20	☐
HS17090045-05	MW-5	Groundwater		30-Aug-2017 12:50	01-Sep-2017 15:20	☐
HS17090045-06	DUP	Groundwater		30-Aug-2017 00:00	01-Sep-2017 15:20	☐
HS17090045-07	Trip Blank	Water		30-Aug-2017 00:00	01-Sep-2017 15:20	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17090045

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R301018

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R301187

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 30-Aug-2017 11:40

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 05:05
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:05
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:05
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:05
<i>Surr: 1,2-Dichloroethane-d4</i>	98.9			70-126	%REC	1	05-Sep-2017 05:05
<i>Surr: 4-Bromofluorobenzene</i>	97.2			81-113	%REC	1	05-Sep-2017 05:05
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	1	05-Sep-2017 05:05
<i>Surr: Toluene-d8</i>	99.3			82-127	%REC	1	05-Sep-2017 05:05
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,600		80.0	200	mg/L	400	06-Sep-2017 12:54

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 30-Aug-2017 12:25

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 05:32
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:32
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:32
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:32
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>94.0</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>05-Sep-2017 05:32</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>97.4</i>			<i>81-113</i>	<i>%REC</i>	<i>1</i>	<i>05-Sep-2017 05:32</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.1</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>05-Sep-2017 05:32</i>
<i>Surr: Toluene-d8</i>	<i>97.6</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>05-Sep-2017 05:32</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	50.4		1.00	2.50	mg/L	5	06-Sep-2017 13:16

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 30-Aug-2017 12:50

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 05:59
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:59
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:59
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 05:59
Surr: 1,2-Dichloroethane-d4	95.7			70-126	%REC	1	05-Sep-2017 05:59
Surr: 4-Bromofluorobenzene	94.2			81-113	%REC	1	05-Sep-2017 05:59
Surr: Dibromofluoromethane	97.5			77-123	%REC	1	05-Sep-2017 05:59
Surr: Toluene-d8	103			82-127	%REC	1	05-Sep-2017 05:59
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	49.3		1.00	2.50	mg/L	5	06-Sep-2017 13:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 30-Aug-2017 12:15

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 06:25
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:25
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:25
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:25
Surr: 1,2-Dichloroethane-d4	94.2			70-126	%REC	1	05-Sep-2017 06:25
Surr: 4-Bromofluorobenzene	102			81-113	%REC	1	05-Sep-2017 06:25
Surr: Dibromofluoromethane	99.4			77-123	%REC	1	05-Sep-2017 06:25
Surr: Toluene-d8	101			82-127	%REC	1	05-Sep-2017 06:25
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	905		8.00	20.0	mg/L	40	06-Sep-2017 13:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 30-Aug-2017 12:50

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 06:52
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:52
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:52
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 06:52
Surr: 1,2-Dichloroethane-d4	95.5			70-126	%REC	1	05-Sep-2017 06:52
Surr: 4-Bromofluorobenzene	94.0			81-113	%REC	1	05-Sep-2017 06:52
Surr: Dibromofluoromethane	98.6			77-123	%REC	1	05-Sep-2017 06:52
Surr: Toluene-d8	104			82-127	%REC	1	05-Sep-2017 06:52
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	47.2		1.00	2.50	mg/L	5	06-Sep-2017 14:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 30-Aug-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17090045
 Lab ID:HS17090045-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 07:19
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:19
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:19
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:19
Surr: 1,2-Dichloroethane-d4	98.7			70-126	%REC	1	05-Sep-2017 07:19
Surr: 4-Bromofluorobenzene	103			81-113	%REC	1	05-Sep-2017 07:19
Surr: Dibromofluoromethane	100			77-123	%REC	1	05-Sep-2017 07:19
Surr: Toluene-d8	108			82-127	%REC	1	05-Sep-2017 07:19
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	8,860		80.0	200	mg/L	400	06-Sep-2017 14:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 30-Aug-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17090045
Lab ID:HS17090045-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Sep-2017 07:46
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:46
Toluene	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:46
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Sep-2017 07:46
Surr: 1,2-Dichloroethane-d4	92.7			70-126	%REC	1	05-Sep-2017 07:46
Surr: 4-Bromofluorobenzene	101			81-113	%REC	1	05-Sep-2017 07:46
Surr: Dibromofluoromethane	95.8			77-123	%REC	1	05-Sep-2017 07:46
Surr: Toluene-d8	104			82-127	%REC	1	05-Sep-2017 07:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R301018		Test Name : VOLATILES - SW8260C		Matrix: Water		
HS17090045-07	Trip Blank	30 Aug 2017 00:00			05 Sep 2017 07:46	1
Batch ID R301018		Test Name : VOLATILES - SW8260C		Matrix: Groundwater		
HS17090045-01	MW-1R	30 Aug 2017 11:40			05 Sep 2017 05:05	1
HS17090045-02	MW-2	30 Aug 2017 12:25			05 Sep 2017 05:32	1
HS17090045-03	MW-3	30 Aug 2017 12:50			05 Sep 2017 05:59	1
HS17090045-04	MW-4	30 Aug 2017 12:15			05 Sep 2017 06:25	1
HS17090045-05	MW-5	30 Aug 2017 12:50			05 Sep 2017 06:52	1
HS17090045-06	DUP	30 Aug 2017 00:00			05 Sep 2017 07:19	1
Batch ID R301187		Test Name : ANIONS BY E300.0		Matrix: Groundwater		
HS17090045-01	MW-1R	30 Aug 2017 11:40			06 Sep 2017 12:54	400
HS17090045-02	MW-2	30 Aug 2017 12:25			06 Sep 2017 13:16	5
HS17090045-03	MW-3	30 Aug 2017 12:50			06 Sep 2017 13:38	5
HS17090045-04	MW-4	30 Aug 2017 12:15			06 Sep 2017 13:59	40
HS17090045-05	MW-5	30 Aug 2017 12:50			06 Sep 2017 14:21	5
HS17090045-06	DUP	30 Aug 2017 00:00			06 Sep 2017 14:43	400

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

QC BATCH REPORT

Batch ID: R301018		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170904	Units: ug/L		Analysis Date: 05-Sep-2017 02:25					
Client ID:	Run ID: VOA1_301018	SeqNo: 4217336		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	46.68	0	50	0	93.4	70 - 123			
Surr: 4-Bromofluorobenzene	49.42	0	50	0	98.8	82 - 115			
Surr: Dibromofluoromethane	46.41	0	50	0	92.8	73 - 126			
Surr: Toluene-d8	53.04	0	50	0	106	81 - 119			

LCS	Sample ID: VLCSW-170904	Units: ug/L		Analysis Date: 05-Sep-2017 01:31					
Client ID:	Run ID: VOA1_301018	SeqNo: 4217335		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.71	5.0	50	0	95.4	74 - 120			
Ethylbenzene	46.48	5.0	50	0	93.0	77 - 117			
Toluene	48.72	5.0	50	0	97.4	77 - 118			
Xylenes, Total	143.1	5.0	150	0	95.4	75 - 122			
Surr: 1,2-Dichloroethane-d4	49.11	0	50	0	98.2	70 - 130			
Surr: 4-Bromofluorobenzene	50.18	0	50	0	100	82 - 115			
Surr: Dibromofluoromethane	46.44	0	50	0	92.9	73 - 126			
Surr: Toluene-d8	48	0	50	0	96.0	81 - 119			

MS	Sample ID: HS17090043-04MS	Units: ug/L		Analysis Date: 05-Sep-2017 03:18					
Client ID:	Run ID: VOA1_301018	SeqNo: 4217338		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.9	5.0	50	0	87.8	70 - 127			
Ethylbenzene	40.66	5.0	50	0	81.3	70 - 124			
Toluene	46.18	5.0	50	0	92.4	70 - 123			
Xylenes, Total	128.2	5.0	150	0	85.5	70 - 130			
Surr: 1,2-Dichloroethane-d4	49.12	0	50	0	98.2	70 - 126			
Surr: 4-Bromofluorobenzene	49.23	0	50	0	98.5	81 - 113			
Surr: Dibromofluoromethane	48.04	0	50	0	96.1	77 - 123			
Surr: Toluene-d8	49.33	0	50	0	98.7	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

QC BATCH REPORT

Batch ID: R301018		Instrument: VOA1		Method: SW8260					
MSD	Sample ID: HS17090043-04MSD	Units: ug/L			Analysis Date: 05-Sep-2017 03:45				
Client ID:	Run ID: VOA1_301018	SeqNo: 4217339		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Benzene	40.96	5.0	50	0	81.9	70 - 127	43.9	6.94	20
Ethylbenzene	42.18	5.0	50	0	84.4	70 - 124	40.66	3.66	20
Toluene	46.24	5.0	50	0	92.5	70 - 123	46.18	0.116	20
Xylenes, Total	134.2	5.0	150	0	89.4	70 - 130	128.2	4.52	20
Surr: 1,2-Dichloroethane-d4	51.03	0	50	0	102	70 - 126	49.12	3.81	20
Surr: 4-Bromofluorobenzene	50.93	0	50	0	102	81 - 113	49.23	3.41	20
Surr: Dibromofluoromethane	49.04	0	50	0	98.1	77 - 123	48.04	2.06	20
Surr: Toluene-d8	49.7	0	50	0	99.4	82 - 127	49.33	0.757	20
The following samples were analyzed in this batch:		HS17090045-01 HS17090045-05		HS17090045-02 HS17090045-06		HS17090045-03 HS17090045-07		HS17090045-04	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

QC BATCH REPORT

Batch ID: R301187		Instrument: ICS3K2		Method: E300						
MBLK	Sample ID: WBLKW1-090517	Units: mg/L		Analysis Date: 05-Sep-2017 11:04						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220164		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-090517	Units: mg/L		Analysis Date: 05-Sep-2017 11:26						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220165		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.61	0.500	20	0	98.0	90 - 110				
LCSD	Sample ID: WLCSDW1-090517	Units: mg/L		Analysis Date: 05-Sep-2017 11:47						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220166		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.58	0.500	20	0	97.9	90 - 110	19.61	0.174	20	
MS	Sample ID: HS17090043-01MS	Units: mg/L		Analysis Date: 05-Sep-2017 21:11						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220686		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	332.2	5.00	100	240.5	91.7	80 - 120				
MS	Sample ID: HS17081307-01MS	Units: mg/L		Analysis Date: 05-Sep-2017 13:36						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220171		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	25.25	0.500	10	14.79	105	80 - 120				
MSD	Sample ID: HS17090043-01MSD	Units: mg/L		Analysis Date: 05-Sep-2017 21:33						
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220687		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	330.6	5.00	100	240.5	90.0	80 - 120	332.2	0.505	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

QC BATCH REPORT

Batch ID: R301187		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS17081307-01MSD	Units: mg/L		Analysis Date: 05-Sep-2017 13:57	
Client ID:	Run ID: ICS3K2_301187	SeqNo: 4220172		PrepDate:	DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	25.32	0.500	10	14.79 105	80 - 120 25.25 0.269 20

The following samples were analyzed in this batch:

HS17090045-01	HS17090045-02	HS17090045-03	HS17090045-04
HS17090045-05	HS17090045-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17090045

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Texas	T104704231-17-19	30-Apr-2018

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **01-Sep-2017 15:20**

Work Order: HS17090045

Received by: **JRM**Checklist completed by: Nilesh D. Ranchod
eSignature Date 1-Sep-2017Reviewed by: Dane J. Wacasey
eSignature Date 7-Sep-2017Matrices: **WATER**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☒	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 1.6C/ 2.1C UC/C IR # 15

Cooler(s)/Kit(s): 24565

Date/Time sample(s) sent to storage: 09/01/2017 8:00

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐pH adjusted? Yes ☐ No ☐ N/A ☒pH adjusted by:

Login Notes: Sample times do not match . MW-4 COC=12:15 Labels=12:25. Logged in per COC.

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Fort Collins, CO
+1 970 490 1511

Everett, WA
+1 425 356 2600

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 166116

HS17090045

Glenn Springs Holdings, Inc.
55626DM GSHI PXP Elliot E.M. Federal TB



Customer Information		Project Information	
Purchase Order	4502201559 ENV 749-4	Project Name	55626DM GSHI PXP Elliot EM Fed TB
Work Order		Project Number	ENV749A006
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.
Send Report To	Angela Bown	Invoice Attn	Accounts Payable
Address	PO Box 2148	Address	PO Box 2148
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148
Phone		Phone	
Fax		Fax	
e-Mail Address	Angela.Bown@ghd.com	e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	8/30	11:40	Groundwa	1,8	4	X	X									
2	MW-2	8/30	12:25	Groundwa	1,8	4	X	X									
3	MW-3	8/30	12:50	Groundwa	1,8	4	X	X									
4	MW-4	8/30	12:15	Groundwa	1,8	4	X	X									
5	MW-5	8/30	12:50	Groundwa	1,8	4	X	X									
6	DUP	8/30		Groundwa	1,8	4	X	X									
7	Trip Blank	8/30		Water	1,8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
		FedEx		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour			
Relinquished by: <i>K. K. K. K.</i>		Date: 8/31	Time: 16:00	Received by:		Notes: [GSHI PXP Elliot EM Federal TB]	
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID	Cooler Temp.
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		24565	1.6
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035						QC Package: (Check One Box Below)	
						☒ Level II Std QC ☐ TRRP Checklist	
						☐ Level III Std QC/Raw Date ☐ TRRP Level IV	
						☐ Level IV SW846/CLP	
						☐ Other	

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.



10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

24565

CUSTODY SEAL

Date: 9/31 Time: 10:00
Name: Kyle Wiedeck
Company: Tetra Tech

Seal Broken By:

NR
Date: 09/01



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

24565

CUSTODY SEAL

Date: 9/31 Time: 10:00
Name: Kyle Wiedeck
Company: Tetra Tech

Seal Broken By:

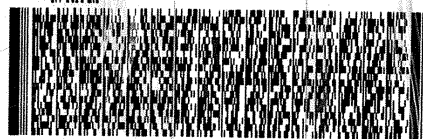
NR
Date: 09/01

SUITE 210
HOUSTON TX 77099

(281) 630-5656

REF: 55626 GSHI-DW

RMA: 01111111



FedEx
Express



FedEx 24565

TRK#
0221 7376 9748 0313

FRI - 01 SEP 10:30A
PRIORITY OVERNIGHT

4
3130
10:00



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

December 01, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17111123**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Angela,

ALS Environmental received 7 sample(s) on Nov 21, 2017 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: Dayna.Fisher
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17111123

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17111123-01	MW-1R	Groundwater		20-Nov-2017 11:45	21-Nov-2017 08:40	☐
HS17111123-02	MW-2	Groundwater		20-Nov-2017 11:45	21-Nov-2017 08:40	☐
HS17111123-03	MW-3	Groundwater		20-Nov-2017 12:00	21-Nov-2017 08:40	☐
HS17111123-04	MW-4	Groundwater		20-Nov-2017 11:25	21-Nov-2017 08:40	☐
HS17111123-05	MW-5	Groundwater		20-Nov-2017 12:15	21-Nov-2017 08:40	☐
HS17111123-06	DUP	Groundwater		20-Nov-2017 00:00	21-Nov-2017 08:40	☐
HS17111123-07	Trip Blank	Water	ALS- 111417-2	20-Nov-2017 00:00	21-Nov-2017 08:40	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS17111123

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R306030,R306113

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R306246

Sample ID: CCB

- All reported Chloride for samples bracketed by this QC greater than 10X this resultant CCB value
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 20-Nov-2017 11:45

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2017 01:22
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:22
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:22
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:22
Surr: 1,2-Dichloroethane-d4	97.0			70-126	%REC	1	25-Nov-2017 01:22
Surr: 4-Bromofluorobenzene	101			82-124	%REC	1	25-Nov-2017 01:22
Surr: Dibromofluoromethane	94.1			77-123	%REC	1	25-Nov-2017 01:22
Surr: Toluene-d8	95.0			82-127	%REC	1	25-Nov-2017 01:22
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	12,500		80.0	200	mg/L	400	29-Nov-2017 20:11

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 20-Nov-2017 11:45

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2017 01:47
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:47
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:47
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2017 01:47
Surr: 1,2-Dichloroethane-d4	91.9			70-126	%REC	1	25-Nov-2017 01:47
Surr: 4-Bromofluorobenzene	103			82-124	%REC	1	25-Nov-2017 01:47
Surr: Dibromofluoromethane	93.0			77-123	%REC	1	25-Nov-2017 01:47
Surr: Toluene-d8	108			82-127	%REC	1	25-Nov-2017 01:47
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	57.5		1.00	2.50	mg/L	5	29-Nov-2017 21:09

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 20-Nov-2017 12:00

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2017 02:11
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 02:11
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2017 02:11
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2017 02:11
<i>Surr: 1,2-Dichloroethane-d4</i>	92.5			70-126	%REC	1	25-Nov-2017 02:11
<i>Surr: 4-Bromofluorobenzene</i>	91.0			82-124	%REC	1	25-Nov-2017 02:11
<i>Surr: Dibromofluoromethane</i>	93.5			77-123	%REC	1	25-Nov-2017 02:11
<i>Surr: Toluene-d8</i>	95.4			82-127	%REC	1	25-Nov-2017 02:11
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	55.5		1.00	2.50	mg/L	5	29-Nov-2017 21:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 20-Nov-2017 11:25

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Nov-2017 13:43
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:43
Toluene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:43
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:43
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>81.7</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>27-Nov-2017 13:43</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>103</i>			<i>82-124</i>	<i>%REC</i>	<i>1</i>	<i>27-Nov-2017 13:43</i>
<i>Surr: Dibromofluoromethane</i>	<i>87.9</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>27-Nov-2017 13:43</i>
<i>Surr: Toluene-d8</i>	<i>92.1</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>27-Nov-2017 13:43</i>
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	1,270		10.0	25.0	mg/L	50	29-Nov-2017 22:08

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 20-Nov-2017 12:15

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Nov-2017 16:38
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 16:38
Toluene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 16:38
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Nov-2017 16:38
Surr: 1,2-Dichloroethane-d4	77.0			70-126	%REC	1	27-Nov-2017 16:38
Surr: 4-Bromofluorobenzene	98.7			82-124	%REC	1	27-Nov-2017 16:38
Surr: Dibromofluoromethane	85.5			77-123	%REC	1	27-Nov-2017 16:38
Surr: Toluene-d8	96.8			82-127	%REC	1	27-Nov-2017 16:38
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	52.7		0.200	0.500	mg/L	1	30-Nov-2017 10:34

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 20-Nov-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17111123
 Lab ID:HS17111123-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Nov-2017 17:03
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 17:03
Toluene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 17:03
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Nov-2017 17:03
Surr: 1,2-Dichloroethane-d4	79.1			70-126	%REC	1	27-Nov-2017 17:03
Surr: 4-Bromofluorobenzene	100			82-124	%REC	1	27-Nov-2017 17:03
Surr: Dibromofluoromethane	85.0			77-123	%REC	1	27-Nov-2017 17:03
Surr: Toluene-d8	96.7			82-127	%REC	1	27-Nov-2017 17:03
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	9,330		80.0	200	mg/L	400	29-Nov-2017 22:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 20-Nov-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17111123
Lab ID:HS17111123-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Nov-2017 13:18
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:18
Toluene	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:18
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Nov-2017 13:18
Surr: 1,2-Dichloroethane-d4	86.3			70-126	%REC	1	27-Nov-2017 13:18
Surr: 4-Bromofluorobenzene	96.7			82-124	%REC	1	27-Nov-2017 13:18
Surr: Dibromofluoromethane	89.5			77-123	%REC	1	27-Nov-2017 13:18
Surr: Toluene-d8	94.5			82-127	%REC	1	27-Nov-2017 13:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R306030 Test Name : VOLATILES - SW8260C Matrix: Groundwater						
HS17111123-01	MW-1R	20 Nov 2017 11:45			25 Nov 2017 01:22	1
HS17111123-02	MW-2	20 Nov 2017 11:45			25 Nov 2017 01:47	1
HS17111123-03	MW-3	20 Nov 2017 12:00			25 Nov 2017 02:11	1
Batch ID R306113 Test Name : VOLATILES - SW8260C Matrix: Water						
HS17111123-07	Trip Blank	20 Nov 2017 00:00			27 Nov 2017 13:18	1
Batch ID R306113 Test Name : VOLATILES - SW8260C Matrix: Groundwater						
HS17111123-04	MW-4	20 Nov 2017 11:25			27 Nov 2017 13:43	1
HS17111123-05	MW-5	20 Nov 2017 12:15			27 Nov 2017 16:38	1
HS17111123-06	DUP	20 Nov 2017 00:00			27 Nov 2017 17:03	1
Batch ID R306246 Test Name : ANIONS BY E300.0 Matrix: Groundwater						
HS17111123-01	MW-1R	20 Nov 2017 11:45			29 Nov 2017 20:11	400
HS17111123-02	MW-2	20 Nov 2017 11:45			29 Nov 2017 21:09	5
HS17111123-03	MW-3	20 Nov 2017 12:00			29 Nov 2017 21:53	5
HS17111123-04	MW-4	20 Nov 2017 11:25			29 Nov 2017 22:08	50
HS17111123-05	MW-5	20 Nov 2017 12:15			30 Nov 2017 10:34	1
HS17111123-06	DUP	20 Nov 2017 00:00			29 Nov 2017 22:37	400

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306030		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-171124	Units: ug/L		Analysis Date: 24-Nov-2017 16:43					
Client ID:	Run ID: VOA6_306030	SeqNo: 4323556		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	46.13	0	50	0	92.3	70 - 123			
Surr: 4-Bromofluorobenzene	49.89	0	50	0	99.8	83 - 122			
Surr: Dibromofluoromethane	46.74	0	50	0	93.5	73 - 126			
Surr: Toluene-d8	49.34	0	50	0	98.7	81 - 119			

LCS	Sample ID: VLCSW-171124	Units: ug/L		Analysis Date: 24-Nov-2017 15:53					
Client ID:	Run ID: VOA6_306030	SeqNo: 4323555		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	41.82	5.0	50	0	83.6	74 - 120			
Ethylbenzene	42.09	5.0	50	0	84.2	77 - 117			
Toluene	43.93	5.0	50	0	87.9	77 - 118			
Xylenes, Total	125.4	5.0	150	0	83.6	75 - 122			
Surr: 1,2-Dichloroethane-d4	45.46	0	50	0	90.9	70 - 130			
Surr: 4-Bromofluorobenzene	50.33	0	50	0	101	83 - 122			
Surr: Dibromofluoromethane	45.96	0	50	0	91.9	73 - 126			
Surr: Toluene-d8	49.64	0	50	0	99.3	81 - 119			

MS	Sample ID: HS17111106-06MS	Units: ug/L		Analysis Date: 24-Nov-2017 18:22					
Client ID:	Run ID: VOA6_306030	SeqNo: 4323559		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	39.09	5.0	50	0	78.2	70 - 127			
Ethylbenzene	43.14	5.0	50	0	86.3	70 - 124			
Toluene	45.35	5.0	50	0	90.7	70 - 123			
Xylenes, Total	130.5	5.0	150	0	87.0	70 - 130			
Surr: 1,2-Dichloroethane-d4	45.02	0	50	0	90.0	70 - 126			
Surr: 4-Bromofluorobenzene	53.35	0	50	0	107	82 - 124			
Surr: Dibromofluoromethane	45.95	0	50	0	91.9	77 - 123			
Surr: Toluene-d8	51.66	0	50	0	103	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306030		Instrument: VOA6		Method: SW8260					
MSD		Sample ID: HS17111106-06MSD		Units: ug/L		Analysis Date: 24-Nov-2017 18:47			
Client ID:		Run ID: VOA6_306030		SeqNo: 4323560		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	42.27	5.0	50	0	84.5	70 - 127	39.09	7.82	20
Ethylbenzene	43.07	5.0	50	0	86.1	70 - 124	43.14	0.162	20
Toluene	44.93	5.0	50	0	89.9	70 - 123	45.35	0.922	20
Xylenes, Total	131.5	5.0	150	0	87.7	70 - 130	130.5	0.814	20
Surr: 1,2-Dichloroethane-d4	44.55	0	50	0	89.1	70 - 126	45.02	1.05	20
Surr: 4-Bromofluorobenzene	53.05	0	50	0	106	82 - 124	53.35	0.575	20
Surr: Dibromofluoromethane	43.78	0	50	0	87.6	77 - 123	45.95	4.82	20
Surr: Toluene-d8	51	0	50	0	102	82 - 127	51.66	1.28	20
The following samples were analyzed in this batch:		HS17111123-01		HS17111123-02		HS17111123-03			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306113		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-171127	Units: ug/L		Analysis Date: 27-Nov-2017 12:53					
Client ID:	Run ID: VOA6_306113	SeqNo: 4325441		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	40.29	0	50	0	80.6	70 - 123			
Surr: 4-Bromofluorobenzene	49.71	0	50	0	99.4	83 - 122			
Surr: Dibromofluoromethane	43.39	0	50	0	86.8	73 - 126			
Surr: Toluene-d8	50.07	0	50	0	100	81 - 119			

LCS	Sample ID: VLCSW-171127	Units: ug/L		Analysis Date: 27-Nov-2017 11:37					
Client ID:	Run ID: VOA6_306113	SeqNo: 4325440		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.06	5.0	50	0	86.1	74 - 120			
Ethylbenzene	43.41	5.0	50	0	86.8	77 - 117			
Toluene	45.35	5.0	50	0	90.7	77 - 118			
Xylenes, Total	130.6	5.0	150	0	87.1	75 - 122			
Surr: 1,2-Dichloroethane-d4	44.2	0	50	0	88.4	70 - 130			
Surr: 4-Bromofluorobenzene	55.21	0	50	0	110	83 - 122			
Surr: Dibromofluoromethane	46.25	0	50	0	92.5	73 - 126			
Surr: Toluene-d8	49.96	0	50	0	99.9	81 - 119			

MS	Sample ID: HS17111123-04MS	Units: ug/L		Analysis Date: 27-Nov-2017 14:33					
Client ID: MW-4	Run ID: VOA6_306113	SeqNo: 4325445		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.47	5.0	50	0	86.9	70 - 127			
Ethylbenzene	41.45	5.0	50	0	82.9	70 - 124			
Toluene	44.49	5.0	50	0	89.0	70 - 123			
Xylenes, Total	125.8	5.0	150	0	83.9	70 - 130			
Surr: 1,2-Dichloroethane-d4	42.54	0	50	0	85.1	70 - 126			
Surr: 4-Bromofluorobenzene	55.04	0	50	0	110	82 - 124			
Surr: Dibromofluoromethane	42.75	0	50	0	85.5	77 - 123			
Surr: Toluene-d8	49.74	0	50	0	99.5	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306113		Instrument: VOA6		Method: SW8260					
MSD		Sample ID: HS17111123-04MSD		Units: ug/L		Analysis Date: 27-Nov-2017 14:58			
Client ID: MW-4		Run ID: VOA6_306113		SeqNo: 4325446		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	43.87	5.0	50	0	87.7	70 - 127	43.47	0.909	20
Ethylbenzene	42.18	5.0	50	0	84.4	70 - 124	41.45	1.75	20
Toluene	44.5	5.0	50	0	89.0	70 - 123	44.49	0.0302	20
Xylenes, Total	127.4	5.0	150	0	85.0	70 - 130	125.8	1.31	20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>44.28</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>88.6</i>	<i>70 - 126</i>	<i>42.54</i>	<i>4.02</i>	<i>20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>51.51</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>82 - 124</i>	<i>55.04</i>	<i>6.63</i>	<i>20</i>
<i>Surr: Dibromofluoromethane</i>	<i>46.09</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>92.2</i>	<i>77 - 123</i>	<i>42.75</i>	<i>7.53</i>	<i>20</i>
<i>Surr: Toluene-d8</i>	<i>49.45</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.9</i>	<i>82 - 127</i>	<i>49.74</i>	<i>0.581</i>	<i>20</i>
The following samples were analyzed in this batch:									
HS17111123-04		HS17111123-05		HS17111123-06		HS17111123-07			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306246		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-112917	Units: mg/L		Analysis Date: 29-Nov-2017 15:20						
Client ID:	Run ID: ICS2100_306246	SeqNo: 4329807		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCBW1-112917	Units: mg/L		Analysis Date: 29-Nov-2017 15:35						
Client ID:	Run ID: ICS2100_306246	SeqNo: 4329808		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.68	0.500	20	0	103	90 - 110				
LCSD	Sample ID: WLCSDW1-112917	Units: mg/L		Analysis Date: 29-Nov-2017 15:49						
Client ID:	Run ID: ICS2100_306246	SeqNo: 4329809		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.8	0.500	20	0	104	90 - 110	20.68	0.579	20	
MS	Sample ID: HS17111180-05MS	Units: mg/L		Analysis Date: 30-Nov-2017 01:02						
Client ID:	Run ID: ICS2100_306246	SeqNo: 4330011		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	814.4	10.0	200	613.3	101	80 - 120				
MS	Sample ID: HS17111123-02MS	Units: mg/L		Analysis Date: 29-Nov-2017 21:24						
Client ID: MW-2	Run ID: ICS2100_306246	SeqNo: 4330004		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	109	2.50	50	57.53	103	80 - 120				
MSD	Sample ID: HS17111180-05MSD	Units: mg/L		Analysis Date: 30-Nov-2017 01:17						
Client ID:	Run ID: ICS2100_306246	SeqNo: 4330012		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	829.4	10.0	200	613.3	108	80 - 120	814.4	1.83	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

QC BATCH REPORT

Batch ID: R306246		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS17111123-02MSD	Units: mg/L		Analysis Date: 29-Nov-2017 21:38	
Client ID: MW-2	Run ID: ICS2100_306246		SeqNo: 4330005	PrepDate:	DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	114.9	2.50	50	57.53 115	80 - 120 109 5.24 20

The following samples were analyzed in this batch:

HS17111123-01	HS17111123-02	HS17111123-03	HS17111123-04
HS17111123-05	HS17111123-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS17111123

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **21-Nov-2017 08:40**

Work Order: HS17111123

Received by: **RPG**Checklist completed by: Nelson D. Dusara
eSignature22-Nov-2017
DateReviewed by: Dane J. Wacasey
eSignature27-Nov-2017
DateMatrices: **Ground water**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):

2.1 C/ 2.4C UC/C

IR 25

Cooler(s)/Kit(s):

42759

Date/Time sample(s) sent to storage:

11/21/2017 18:00

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☐N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 170570

Houston, TX
+1 281 530 5656

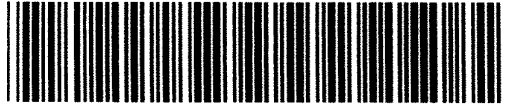
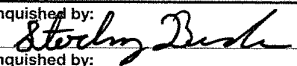
Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information			Project Information				Parameter/Method Request for Analysis										
Purchase Order	4502201559 ENV 749-4		Project Name	55626DM GSHI PXP Elliot E.M. F		A	8260_W (BTEX)										
Work Order			Project Number	ENV749A006		B	300_W (Chloride)										
Company Name	Glenn Springs Holdings, Inc.		Bill To Company	Glenn Springs Holdings, Inc.		C	8260_W (BTEX-Trip Blank)										
Send Report To	Angela Bown		Invoice Attn	Accounts Payable		D	HS17111123 Glenn Springs Holdings, Inc. 55626DM GSHI PXP Elliot E.M. Federal TB 										
Address	PO Box 2148		Address	PO Box 2148		E											
						F											
City/State/Zip	Houston, TX 77252-2148		City/State/Zip	Houston TX 77252-2148		G											
Phone			Phone			H											
Fax			Fax			I											
e-Mail Address	Angela.Bown@ghd.com		e-Mail Address			J											
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	11-20-17	1115	Groundwa	1,8	4	X	X									
2	MW-2	11-20-17	1145	Groundwa	1,8	4	X	X									
3	MW-3	11-20-17	1200	Groundwa	1,8	4	X	X									
4	MW-4	11-20-17	1125	Groundwa	1,8	4	X	X									
5	MW-5	11-20-17	1245	Groundwa	1,8	4	X	X									
6	DUP	11-20-17		Groundwa	1,8	4	X	X									
7	Trip Blank			Water	1,8	2			X								
8																	
9																	
10																	
Sampler(s) Please Print & Sign			Shipment Method		Required Turnaround Time: (Check Box)				Other				Results Due Date:				
			FedEx		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour												
Relinquished by:		Date:	Time:	Received by:		Notes: [GSHI PXP Elliot EM Federal TB]											
		11-20-17	1500	R Cipes 11/21/17 0840													
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)									
						42759	2.1C	☒ Level II Std QC					☐ TRRP Checklist				
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		1125		☐ Level III Std QC/Raw Data					☐ TRRP Level IV				
						CF+03		☐ Level IV SW/846/CLP									
								☐ Other									
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035																	

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

42759 NOV 21 2017

FedEx
TRK# 7376 9750 1955
0221

TUE - 21 NOV 10:30A
PRIORITY OVERNIGHT

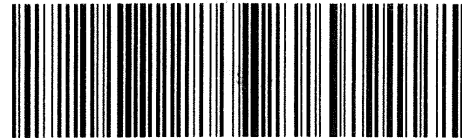
AB SGRA

42759

77099

TX-US

IAH



7-436
XP 07/18

2018 Lab Data



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

March 09, 2018

Todd Wells
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18021256**

Laboratory Results for: **GSHI PXP Elliot E.M. Federal TB**

Dear Todd,

ALS Environmental received 7 sample(s) on Feb 24, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: Jumokey.Lawal
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
Work Order: HS18021256

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18021256-01	MW-1R	Groundwater		21-Feb-2018 11:10	24-Feb-2018 09:15	☐
HS18021256-02	MW-2	Groundwater		21-Feb-2018 12:20	24-Feb-2018 09:15	☐
HS18021256-03	MW-3	Groundwater		21-Feb-2018 12:50	24-Feb-2018 09:15	☐
HS18021256-04	MW-4	Groundwater		21-Feb-2018 11:50	24-Feb-2018 09:15	☐
HS18021256-05	MW-5	Groundwater		21-Feb-2018 13:25	24-Feb-2018 09:15	☐
HS18021256-06	DUP	Groundwater		21-Feb-2018 10:00	24-Feb-2018 09:15	☐
HS18021256-07	Trip Blank	Water	ALS 020218-18	21-Feb-2018 00:00	24-Feb-2018 09:15	☐

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
Work Order: HS18021256

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R311659

Sample ID: HS18021108-08MS

- MS and MSD are for an unrelated sample

Batch ID: R311722

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R312270

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 21-Feb-2018 11:10

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 13:19
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:19
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:19
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:19
Surr: 1,2-Dichloroethane-d4	95.4			70-126	%REC	1	28-Feb-2018 13:19
Surr: 4-Bromofluorobenzene	98.8			82-124	%REC	1	28-Feb-2018 13:19
Surr: Dibromofluoromethane	97.0			77-123	%REC	1	28-Feb-2018 13:19
Surr: Toluene-d8	112			82-127	%REC	1	28-Feb-2018 13:19
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	9,380		100	250	mg/L	500	09-Mar-2018 11:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 21-Feb-2018 12:20

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Feb-2018 20:14
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Feb-2018 20:14
Toluene	U		0.00050	0.0050	mg/L	1	27-Feb-2018 20:14
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Feb-2018 20:14
Surr: 1,2-Dichloroethane-d4	76.7			70-126	%REC	1	27-Feb-2018 20:14
Surr: 4-Bromofluorobenzene	87.4			82-124	%REC	1	27-Feb-2018 20:14
Surr: Dibromofluoromethane	84.9			77-123	%REC	1	27-Feb-2018 20:14
Surr: Toluene-d8	87.9			82-127	%REC	1	27-Feb-2018 20:14
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	56.0		2.00	5.00	mg/L	10	09-Mar-2018 05:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 21-Feb-2018 12:50

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 13:46
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:46
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:46
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 13:46
Surr: 1,2-Dichloroethane-d4	88.6			70-126	%REC	1	28-Feb-2018 13:46
Surr: 4-Bromofluorobenzene	96.0			82-124	%REC	1	28-Feb-2018 13:46
Surr: Dibromofluoromethane	93.8			77-123	%REC	1	28-Feb-2018 13:46
Surr: Toluene-d8	101			82-127	%REC	1	28-Feb-2018 13:46
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	52.7		2.00	5.00	mg/L	10	09-Mar-2018 05:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 21-Feb-2018 11:50

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 14:13
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:13
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:13
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:13
Surr: 1,2-Dichloroethane-d4	92.0			70-126	%REC	1	28-Feb-2018 14:13
Surr: 4-Bromofluorobenzene	94.0			82-124	%REC	1	28-Feb-2018 14:13
Surr: Dibromofluoromethane	102			77-123	%REC	1	28-Feb-2018 14:13
Surr: Toluene-d8	107			82-127	%REC	1	28-Feb-2018 14:13
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	1,110		4.00	10.0	mg/L	20	09-Mar-2018 12:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 21-Feb-2018 13:25

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 14:40
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:40
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:40
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 14:40
Surr: 1,2-Dichloroethane-d4	86.8			70-126	%REC	1	28-Feb-2018 14:40
Surr: 4-Bromofluorobenzene	86.7			82-124	%REC	1	28-Feb-2018 14:40
Surr: Dibromofluoromethane	94.3			77-123	%REC	1	28-Feb-2018 14:40
Surr: Toluene-d8	102			82-127	%REC	1	28-Feb-2018 14:40
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	51.3		2.00	5.00	mg/L	10	09-Mar-2018 07:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 21-Feb-2018 10:00

ANALYTICAL REPORT

WorkOrder:HS18021256
 Lab ID:HS18021256-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 15:07
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 15:07
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 15:07
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 15:07
Surr: 1,2-Dichloroethane-d4	92.8			70-126	%REC	1	28-Feb-2018 15:07
Surr: 4-Bromofluorobenzene	90.9			82-124	%REC	1	28-Feb-2018 15:07
Surr: Dibromofluoromethane	97.7			77-123	%REC	1	28-Feb-2018 15:07
Surr: Toluene-d8	101			82-127	%REC	1	28-Feb-2018 15:07
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	9,340		100	250	mg/L	500	09-Mar-2018 12:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 21-Feb-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18021256
Lab ID:HS18021256-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	28-Feb-2018 12:53
Ethylbenzene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 12:53
Toluene	U		0.00050	0.0050	mg/L	1	28-Feb-2018 12:53
Xylenes, Total	U		0.00050	0.0050	mg/L	1	28-Feb-2018 12:53
Surr: 1,2-Dichloroethane-d4	93.7			70-126	%REC	1	28-Feb-2018 12:53
Surr: 4-Bromofluorobenzene	93.5			82-124	%REC	1	28-Feb-2018 12:53
Surr: Dibromofluoromethane	96.9			77-123	%REC	1	28-Feb-2018 12:53
Surr: Toluene-d8	103			82-127	%REC	1	28-Feb-2018 12:53

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R311659	Test Name : VOLATILES - SW8260C		Matrix: Groundwater			
HS18021256-02	MW-2	21 Feb 2018 12:20			27 Feb 2018 20:14	1
Batch ID R311722	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS18021256-07	Trip Blank	21 Feb 2018 00:00			28 Feb 2018 12:53	1
Batch ID R311722	Test Name : VOLATILES - SW8260C		Matrix: Groundwater			
HS18021256-01	MW-1R	21 Feb 2018 11:10			28 Feb 2018 13:19	1
HS18021256-03	MW-3	21 Feb 2018 12:50			28 Feb 2018 13:46	1
HS18021256-04	MW-4	21 Feb 2018 11:50			28 Feb 2018 14:13	1
HS18021256-05	MW-5	21 Feb 2018 13:25			28 Feb 2018 14:40	1
HS18021256-06	DUP	21 Feb 2018 10:00			28 Feb 2018 15:07	1
Batch ID R312270	Test Name : ANIONS BY E300.0		Matrix: Groundwater			
HS18021256-01	MW-1R	21 Feb 2018 11:10			09 Mar 2018 11:53	500
HS18021256-02	MW-2	21 Feb 2018 12:20			09 Mar 2018 05:03	10
HS18021256-03	MW-3	21 Feb 2018 12:50			09 Mar 2018 05:24	10
HS18021256-04	MW-4	21 Feb 2018 11:50			09 Mar 2018 12:15	20
HS18021256-05	MW-5	21 Feb 2018 13:25			09 Mar 2018 07:13	10
HS18021256-06	DUP	21 Feb 2018 10:00			09 Mar 2018 12:37	500

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R311659		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-180227	Units: ug/L		Analysis Date: 27-Feb-2018 13:19					
Client ID:	Run ID: VOA6_311659	SeqNo: 4455213		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	48.72	0	50	0	97.4	70 - 123			
Surr: 4-Bromofluorobenzene	46.13	0	50	0	92.3	83 - 122			
Surr: Dibromofluoromethane	47.79	0	50	0	95.6	73 - 126			
Surr: Toluene-d8	47.59	0	50	0	95.2	81 - 119			

LCS	Sample ID: VLCSW-180227	Units: ug/L		Analysis Date: 27-Feb-2018 12:06					
Client ID:	Run ID: VOA6_311659	SeqNo: 4455212		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.1	5.0	50	0	94.2	74 - 120			
Ethylbenzene	46.53	5.0	50	0	93.1	77 - 117			
Toluene	51.85	5.0	50	0	104	77 - 118			
Xylenes, Total	137.9	5.0	150	0	91.9	75 - 122			
Surr: 1,2-Dichloroethane-d4	45.3	0	50	0	90.6	70 - 130			
Surr: 4-Bromofluorobenzene	46.91	0	50	0	93.8	83 - 122			
Surr: Dibromofluoromethane	45.53	0	50	0	91.1	73 - 126			
Surr: Toluene-d8	48	0	50	0	96.0	81 - 119			

MS	Sample ID: HS18021108-08MS	Units: ug/L		Analysis Date: 27-Feb-2018 14:32					
Client ID:	Run ID: VOA6_311659	SeqNo: 4455216		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	36.53	5.0	50	0	73.1	70 - 127			
Ethylbenzene	43.72	5.0	50	0	87.4	70 - 124			
Toluene	45.69	5.0	50	0	91.4	70 - 123			
Xylenes, Total	132.6	5.0	150	0	88.4	70 - 130			
Surr: 1,2-Dichloroethane-d4	34.5	0	50	0	69.0	70 - 126			S
Surr: 4-Bromofluorobenzene	44.62	0	50	0	89.2	82 - 124			
Surr: Dibromofluoromethane	37.53	0	50	0	75.1	77 - 123			S
Surr: Toluene-d8	44.93	0	50	0	89.9	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R311659		Instrument: VOA6		Method: SW8260						
MSD	Sample ID:	HS18021108-08MSD			Units: ug/L		Analysis Date: 27-Feb-2018 14:57			
	Client ID:	Run ID: VOA6_311659		SeqNo: 4455217		PrepDate:		DF: 1		
	Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
	Benzene	42.06	5.0	50	0	84.1	70 - 127	36.53	14.1	20
	Ethylbenzene	42.12	5.0	50	0	84.2	70 - 124	43.72	3.74	20
	Toluene	48.86	5.0	50	0	97.7	70 - 123	45.69	6.69	20
	Xylenes, Total	127.2	5.0	150	0	84.8	70 - 130	132.6	4.14	20
	Surr: 1,2-Dichloroethane-d4	38.31	0	50	0	76.6	70 - 126	34.5	10.5	20
	Surr: 4-Bromofluorobenzene	44.46	0	50	0	88.9	82 - 124	44.62	0.364	20
	Surr: Dibromofluoromethane	42.35	0	50	0	84.7	77 - 123	37.53	12.1	20
	Surr: Toluene-d8	48.22	0	50	0	96.4	82 - 127	44.93	7.06	20

The following samples were analyzed in this batch: HS18021256-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R311722		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-180228	Units: ug/L		Analysis Date: 28-Feb-2018 11:59					
Client ID:	Run ID: VOA1_311722	SeqNo: 4456447		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	43.84	0	50	0	87.7	70 - 123			
Surr: 4-Bromofluorobenzene	47.4	0	50	0	94.8	83 - 122			
Surr: Dibromofluoromethane	47.53	0	50	0	95.1	73 - 126			
Surr: Toluene-d8	53.17	0	50	0	106	81 - 119			

LCS	Sample ID: VLCSW-180228	Units: ug/L		Analysis Date: 28-Feb-2018 11:05					
Client ID:	Run ID: VOA1_311722	SeqNo: 4456446		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.36	5.0	50	0	92.7	74 - 120			
Ethylbenzene	46.59	5.0	50	0	93.2	77 - 117			
Toluene	44.88	5.0	50	0	89.8	77 - 118			
Xylenes, Total	130	5.0	150	0	86.7	75 - 122			
Surr: 1,2-Dichloroethane-d4	47.74	0	50	0	95.5	70 - 130			
Surr: 4-Bromofluorobenzene	48.2	0	50	0	96.4	83 - 122			
Surr: Dibromofluoromethane	49.07	0	50	0	98.1	73 - 126			
Surr: Toluene-d8	50.23	0	50	0	100	81 - 119			

MS	Sample ID: HS18021255-10MS	Units: ug/L		Analysis Date: 28-Feb-2018 15:33					
Client ID:	Run ID: VOA1_311722	SeqNo: 4456455		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.28	5.0	50	0	90.6	70 - 127			
Ethylbenzene	43.81	5.0	50	0	87.6	70 - 124			
Toluene	43.14	5.0	50	0	86.3	70 - 123			
Xylenes, Total	126.3	5.0	150	0	84.2	70 - 130			
Surr: 1,2-Dichloroethane-d4	45.13	0	50	0	90.3	70 - 126			
Surr: 4-Bromofluorobenzene	49.09	0	50	0	98.2	82 - 124			
Surr: Dibromofluoromethane	46.47	0	50	0	92.9	77 - 123			
Surr: Toluene-d8	51.87	0	50	0	104	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R311722		Instrument: VOA1		Method: SW8260					
MSD	Sample ID: HS18021255-10MSD	Units: ug/L			Analysis Date: 28-Feb-2018 16:00				
Client ID:	Run ID: VOA1_311722	SeqNo: 4456456		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	42.81	5.0	50	0	85.6	70 - 127	45.28	0	20
Ethylbenzene	46.4	5.0	50	0	92.8	70 - 124	43.81	0	20
Toluene	43.76	5.0	50	0	87.5	70 - 123	43.14	0	20
Xylenes, Total	138.2	5.0	150	0	92.2	70 - 130	126.3	0	20
Surr: 1,2-Dichloroethane-d4	49.06	0	50	0	98.1	70 - 126	45.13	0	20
Surr: 4-Bromofluorobenzene	47.39	0	50	0	94.8	82 - 124	49.09	0	20
Surr: Dibromofluoromethane	49.55	0	50	0	99.1	77 - 123	46.47	0	20
Surr: Toluene-d8	46.61	0	50	0	93.2	82 - 127	51.87	0	20
The following samples were analyzed in this batch:		HS18021256-01 HS18021256-06		HS18021256-03 HS18021256-07		HS18021256-04		HS18021256-05	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R312270		Instrument: ICS3K2		Method: E300						
MBLK	Sample ID: WBLKW1-030818	Units: mg/L		Analysis Date: 09-Mar-2018 00:21						
Client ID:	Run ID: ICS3K2_312270	SeqNo: 4468147		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-030818	Units: mg/L		Analysis Date: 09-Mar-2018 00:42						
Client ID:	Run ID: ICS3K2_312270	SeqNo: 4468148		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.47	0.500	20	0	102	90 - 110				
LCSD	Sample ID: WLCSDW1-030818	Units: mg/L		Analysis Date: 09-Mar-2018 01:04						
Client ID:	Run ID: ICS3K2_312270	SeqNo: 4468149		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.49	0.500	20	0	102	90 - 110	20.47	0.137	20	
MS	Sample ID: HS18021256-03MS	Units: mg/L		Analysis Date: 09-Mar-2018 05:46						
Client ID: MW-3	Run ID: ICS3K2_312270	SeqNo: 4468161		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	152.1	5.00	100	52.7	99.4	80 - 120				
MS	Sample ID: HS18021255-02MS	Units: mg/L		Analysis Date: 09-Mar-2018 02:09						
Client ID:	Run ID: ICS3K2_312270	SeqNo: 4468152		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	268.1	5.00	100	171.1	97.1	80 - 120				
MSD	Sample ID: HS18021256-03MSD	Units: mg/L		Analysis Date: 09-Mar-2018 06:08						
Client ID: MW-3	Run ID: ICS3K2_312270	SeqNo: 4468162		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	151.6	5.00	100	52.7	98.9	80 - 120	152.1	0.275	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

QC BATCH REPORT

Batch ID: R312270		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS18021255-02MSD	Units: mg/L		Analysis Date: 09-Mar-2018 02:31	
Client ID:	Run ID: ICS3K2_312270	SeqNo: 4468153		PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	267.3	5.00	100	171.1 96.3	80 - 120 268.1 0.289 20

The following samples were analyzed in this batch:

HS18021256-01	HS18021256-02	HS18021256-03	HS18021256-04
HS18021256-05	HS18021256-06		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18021256

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018
North Carolina	624-2018	31-Dec-2018

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **24-Feb-2018 09:15**

Work Order: HS18021256

Received by: **JRM**Checklist completed by: Jared R. Makan 24-Feb-2018
eSignature DateReviewed by: Dane J. Wacasey 26-Feb-2018
eSignature DateMatrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 2.0c/2.4c UC/C IR30

Cooler(s)/Kit(s): 43722

Date/Time sample(s) sent to storage: 02/24/2018 15:00

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐pH adjusted? Yes ☐ No ☐ N/A ☒pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

COC ID: 174476

Customer Information		Project Information		Parameter/Method Request for Analysis														
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Elliot E.M. Federal TB	A	8260_W (BTEX)													
Work Order		Project Number	55626DM (ENV749A006)	B	300_W (Chloride)													
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.	C	8260_W (BTEX) Trip Blank													
Send Report To	Angela Bown	Invoice Attn	Accounts Payable	D														
Address	PO Box 2148	Address	PO Box 2148	E														
				F														
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148	G														
Phone		Phone		H														
Fax		Fax		I														
e-Mail Address	Angela.Bown@ghd.com	e-Mail Address		J														

HS18021256

Glenn Springs Holdings, Inc.
GSHI PXP Elliot E.M. Federal TB

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	2-21-18	1110	Groundwa	1,8	4	X	X									
2	MW-2	I	1220	Groundwa	1,8	4	X	X									
3	MW-3		1250	Groundwa	1,8	4	X	X									
4	MW-4		1150	Groundwa	1,8	4	X	X									
5	MW-5		1325	Groundwa	1,8	4	X	X									
6	DUP				Groundwa	1,8	4	X	X								
7	Trip Blank			Water	1,8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
		FedEx		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour					

Relinquished by:	Date:	Time:	Received by:	Notes:			
	2-23-18	1120		[GSHI PXP Elliot EM Federal TB]			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
	2/24/18	09:15	Sm	40722	2.0	☒ Level II Std QC ☐ TRRP Checklist	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		1230	☐ Level III Std QC/Raw Date ☐ TRRP Level IV	
					CE0-4	☐ Level IV SW648/CLP	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4°C 9-5035				☐ Other			

Note:

1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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FedEx
TRK# 7376 9752 3309
0221

SATURDAY 12:00P
PRIORITY OVERNIGHT

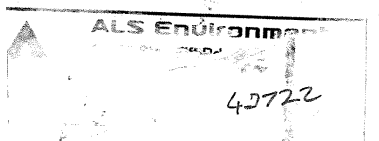
XO SGRA

43722

77099
TX-US IAH



*2625664 02/23 55211/1220/BCnS



CUSTODY SEAL		Seal Broken By:
Date: 2-23-18	Time: 1120	JM
Name: Brian Zick		Date: 2/24/18
Company: TetraTech		



10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

June 06, 2018

Todd Wells
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18051525**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Todd,

ALS Environmental received 7 sample(s) on May 31, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18051525

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18051525-01	MW-1R	Groundwater		24-May-2018 14:00	31-May-2018 09:00	☐
HS18051525-02	MW-2	Groundwater		24-May-2018 13:19	31-May-2018 09:00	☐
HS18051525-03	MW-3	Groundwater		24-May-2018 13:48	31-May-2018 09:00	☐
HS18051525-04	MW-4	Groundwater		24-May-2018 13:34	31-May-2018 09:00	☐
HS18051525-05	MW-5	Groundwater		24-May-2018 13:05	31-May-2018 09:00	☐
HS18051525-06	DUP	Groundwater		24-May-2018 00:00	31-May-2018 09:00	☐
HS18051525-07	Trip Blank	Water	ALS- 050418-11	24-May-2018 00:00	31-May-2018 09:00	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18051525

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R317346,R317409,R317426,R317497

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R317466

Sample ID: CCB

- All reported samples bracketed by this CCB are 10 times greater than the Chloride and Sulfate content in this CCB.
- All reported samples bracketed by this CCB are 10 times greater than the Chloride content in this CCB.

Sample ID: HS18060151-01MS

- MS and MSD are for an unrelated sample (Chloride)
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 24-May-2018 14:00

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	04-Jun-2018 12:39
Ethylbenzene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 12:39
Toluene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 12:39
Xylenes, Total	U		0.00050	0.0050	mg/L	1	04-Jun-2018 12:39
Surr: 1,2-Dichloroethane-d4	94.6			70-126	%REC	1	04-Jun-2018 12:39
Surr: 4-Bromofluorobenzene	99.4			82-124	%REC	1	04-Jun-2018 12:39
Surr: Dibromofluoromethane	91.3			77-123	%REC	1	04-Jun-2018 12:39
Surr: Toluene-d8	101			82-127	%REC	1	04-Jun-2018 12:39
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	8,490		100	250	mg/L	500	06-Jun-2018 00:36

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: MW-2
Collection Date: 24-May-2018 13:19

ANALYTICAL REPORT

WorkOrder:HS18051525
Lab ID:HS18051525-02
Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	04-Jun-2018 13:04
Ethylbenzene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:04
Toluene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:04
Xylenes, Total	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:04
Surr: 1,2-Dichloroethane-d4	94.4			70-126	%REC	1	04-Jun-2018 13:04
Surr: 4-Bromofluorobenzene	101			82-124	%REC	1	04-Jun-2018 13:04
Surr: Dibromofluoromethane	91.2			77-123	%REC	1	04-Jun-2018 13:04
Surr: Toluene-d8	101			82-127	%REC	1	04-Jun-2018 13:04
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	58.6		0.200	0.500	mg/L	1	06-Jun-2018 01:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 24-May-2018 13:48

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	04-Jun-2018 13:28
Ethylbenzene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:28
Toluene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:28
Xylenes, Total	U		0.00050	0.0050	mg/L	1	04-Jun-2018 13:28
Surr: 1,2-Dichloroethane-d4	95.8			70-126	%REC	1	04-Jun-2018 13:28
Surr: 4-Bromofluorobenzene	99.2			82-124	%REC	1	04-Jun-2018 13:28
Surr: Dibromofluoromethane	93.8			77-123	%REC	1	04-Jun-2018 13:28
Surr: Toluene-d8	101			82-127	%REC	1	04-Jun-2018 13:28
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	55.9		0.200	0.500	mg/L	1	06-Jun-2018 02:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 24-May-2018 13:34

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	05-Jun-2018 20:17
Ethylbenzene	U		0.00050	0.0050	mg/L	1	05-Jun-2018 20:17
Toluene	U		0.00050	0.0050	mg/L	1	05-Jun-2018 20:17
Xylenes, Total	U		0.00050	0.0050	mg/L	1	05-Jun-2018 20:17
Surr: 1,2-Dichloroethane-d4	103			70-126	%REC	1	05-Jun-2018 20:17
Surr: 4-Bromofluorobenzene	101			82-124	%REC	1	05-Jun-2018 20:17
Surr: Dibromofluoromethane	101			77-123	%REC	1	05-Jun-2018 20:17
Surr: Toluene-d8	96.2			82-127	%REC	1	05-Jun-2018 20:17
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	985		4.00	10.0	mg/L	20	06-Jun-2018 02:47

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 24-May-2018 13:05

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	06-Jun-2018 11:55
Ethylbenzene	U		0.00050	0.0050	mg/L	1	06-Jun-2018 11:55
Toluene	U		0.00050	0.0050	mg/L	1	06-Jun-2018 11:55
Xylenes, Total	U		0.00050	0.0050	mg/L	1	06-Jun-2018 11:55
Surr: 1,2-Dichloroethane-d4	102			70-126	%REC	1	06-Jun-2018 11:55
Surr: 4-Bromofluorobenzene	101			82-124	%REC	1	06-Jun-2018 11:55
Surr: Dibromofluoromethane	102			77-123	%REC	1	06-Jun-2018 11:55
Surr: Toluene-d8	97.7			82-127	%REC	1	06-Jun-2018 11:55
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	54.1		0.200	0.500	mg/L	1	06-Jun-2018 03:01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	06-Jun-2018 12:19
Ethylbenzene	U		0.00050	0.0050	mg/L	1	06-Jun-2018 12:19
Toluene	U		0.00050	0.0050	mg/L	1	06-Jun-2018 12:19
Xylenes, Total	U		0.00050	0.0050	mg/L	1	06-Jun-2018 12:19
Surr: 1,2-Dichloroethane-d4	103			70-126	%REC	1	06-Jun-2018 12:19
Surr: 4-Bromofluorobenzene	99.8			82-124	%REC	1	06-Jun-2018 12:19
Surr: Dibromofluoromethane	103			77-123	%REC	1	06-Jun-2018 12:19
Surr: Toluene-d8	96.9			82-127	%REC	1	06-Jun-2018 12:19
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	9,810		100	250	mg/L	500	06-Jun-2018 03:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: Trip Blank
 Collection Date: 24-May-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18051525
 Lab ID:HS18051525-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C	Method:SW8260						Analyst: PC
Benzene	U		0.00060	0.0050	mg/L	1	04-Jun-2018 20:06
Ethylbenzene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 20:06
Toluene	U		0.00050	0.0050	mg/L	1	04-Jun-2018 20:06
Xylenes, Total	U		0.00050	0.0050	mg/L	1	04-Jun-2018 20:06
Surr: 1,2-Dichloroethane-d4	101			70-126	%REC	1	04-Jun-2018 20:06
Surr: 4-Bromofluorobenzene	99.7			82-124	%REC	1	04-Jun-2018 20:06
Surr: Dibromofluoromethane	100			77-123	%REC	1	04-Jun-2018 20:06
Surr: Toluene-d8	97.4			82-127	%REC	1	04-Jun-2018 20:06

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R317346	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS18051525-07	Trip Blank	24 May 2018 00:00			04 Jun 2018 20:06	1
Batch ID R317409	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18051525-01	MW-1R	24 May 2018 14:00			04 Jun 2018 12:39	1
HS18051525-02	MW-2	24 May 2018 13:19			04 Jun 2018 13:04	1
HS18051525-03	MW-3	24 May 2018 13:48			04 Jun 2018 13:28	1
Batch ID R317426	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18051525-04	MW-4	24 May 2018 13:34			05 Jun 2018 20:17	1
Batch ID R317466	Test Name : ANIONS BY E300.0			Matrix: Groundwater		
HS18051525-01	MW-1R	24 May 2018 14:00			06 Jun 2018 00:36	500
HS18051525-02	MW-2	24 May 2018 13:19			06 Jun 2018 01:19	1
HS18051525-03	MW-3	24 May 2018 13:48			06 Jun 2018 02:18	1
HS18051525-04	MW-4	24 May 2018 13:34			06 Jun 2018 02:47	20
HS18051525-05	MW-5	24 May 2018 13:05			06 Jun 2018 03:01	1
HS18051525-06	DUP	24 May 2018 00:00			06 Jun 2018 03:30	500
Batch ID R317497	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18051525-05	MW-5	24 May 2018 13:05			06 Jun 2018 11:55	1
HS18051525-06	DUP	24 May 2018 00:00			06 Jun 2018 12:19	1

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317346		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-180604	Units: ug/L		Analysis Date: 04-Jun-2018 11:30					
Client ID:	Run ID: VOA6_317346	SeqNo: 4585803		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	50.39	0	50	0	101	70 - 123			
Surr: 4-Bromofluorobenzene	49.56	0	50	0	99.1	83 - 122			
Surr: Dibromofluoromethane	50.36	0	50	0	101	73 - 126			
Surr: Toluene-d8	48.6	0	50	0	97.2	81 - 119			

LCS	Sample ID: VLCSW-180604	Units: ug/L		Analysis Date: 04-Jun-2018 10:16					
Client ID:	Run ID: VOA6_317346	SeqNo: 4585802		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.06	5.0	50	0	90.1	74 - 120			
Ethylbenzene	43.12	5.0	50	0	86.2	77 - 117			
Toluene	43.56	5.0	50	0	87.1	77 - 118			
Xylenes, Total	126.7	5.0	150	0	84.5	75 - 122			
Surr: 1,2-Dichloroethane-d4	48.4	0	50	0	96.8	70 - 130			
Surr: 4-Bromofluorobenzene	49.29	0	50	0	98.6	83 - 122			
Surr: Dibromofluoromethane	48.7	0	50	0	97.4	73 - 126			
Surr: Toluene-d8	47.68	0	50	0	95.4	81 - 119			

MS	Sample ID: HS18060040-01MS	Units: ug/L		Analysis Date: 04-Jun-2018 13:08					
Client ID:	Run ID: VOA6_317346	SeqNo: 4585807		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.99	5.0	50	0	92.0	70 - 127			
Ethylbenzene	43.57	5.0	50	0	87.1	70 - 124			
Toluene	44.36	5.0	50	0	88.7	70 - 123			
Xylenes, Total	130.1	5.0	150	0	86.8	70 - 130			
Surr: 1,2-Dichloroethane-d4	49.29	0	50	0	98.6	70 - 126			
Surr: 4-Bromofluorobenzene	50.41	0	50	0	101	82 - 124			
Surr: Dibromofluoromethane	50.4	0	50	0	101	77 - 123			
Surr: Toluene-d8	48.42	0	50	0	96.8	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317346		Instrument: VOA6		Method: SW8260						
MSD	Sample ID: HS18060040-01MSD	Units: ug/L			Analysis Date: 04-Jun-2018 13:33					
Client ID:	Run ID: VOA6_317346	SeqNo: 4585808		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Benzene	45.23	5.0	50	0	90.5	70 - 127	45.99	1.65	20	
Ethylbenzene	43.63	5.0	50	0	87.3	70 - 124	43.57	0.15	20	
Toluene	44.29	5.0	50	0	88.6	70 - 123	44.36	0.169	20	
Xylenes, Total	130.1	5.0	150	0	86.7	70 - 130	130.1	0.0483	20	
Surr: 1,2-Dichloroethane-d4	48.2	0	50	0	96.4	70 - 126	49.29	2.24	20	
Surr: 4-Bromofluorobenzene	48.37	0	50	0	96.7	82 - 124	50.41	4.13	20	
Surr: Dibromofluoromethane	48.56	0	50	0	97.1	77 - 123	50.4	3.72	20	
Surr: Toluene-d8	47.05	0	50	0	94.1	82 - 127	48.42	2.87	20	

The following samples were analyzed in this batch: HS18051525-07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317409		Instrument: VOA9		Method: SW8260					
MBLK	Sample ID: VBLKW-180601	Units: ug/L		Analysis Date: 04-Jun-2018 12:15					
Client ID:	Run ID: VOA9_317409		SeqNo: 4587462		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	46.27	0	50	0	92.5	70 - 123			
Surr: 4-Bromofluorobenzene	49.8	0	50	0	99.6	83 - 122			
Surr: Dibromofluoromethane	45.65	0	50	0	91.3	73 - 126			
Surr: Toluene-d8	50.52	0	50	0	101	81 - 119			

MBLK	Sample ID: CCB	Units: ug/L		Analysis Date: 04-Jun-2018 10:28					
Client ID:	Run ID: VOA9_317409		SeqNo: 4587460		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	45.72	0	50	0	91.4	70 - 123			
Surr: 4-Bromofluorobenzene	50.39	0	50	0	101	83 - 122			
Surr: Dibromofluoromethane	45.63	0	50	0	91.3	73 - 126			
Surr: Toluene-d8	50.19	0	50	0	100	81 - 119			

LCS	Sample ID: VLCSW-180601	Units: ug/L		Analysis Date: 04-Jun-2018 11:02					
Client ID:	Run ID: VOA9_317409		SeqNo: 4587461		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	47.4	5.0	50	0	94.8	74 - 120			
Ethylbenzene	47.38	5.0	50	0	94.8	77 - 117			
Toluene	46.94	5.0	50	0	93.9	77 - 118			
Xylenes, Total	144.2	5.0	150	0	96.2	75 - 122			
Surr: 1,2-Dichloroethane-d4	44.45	0	50	0	88.9	70 - 130			
Surr: 4-Bromofluorobenzene	51.42	0	50	0	103	83 - 122			
Surr: Dibromofluoromethane	47.43	0	50	0	94.9	73 - 126			
Surr: Toluene-d8	49.89	0	50	0	99.8	81 - 119			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317409		Instrument: VOA9		Method: SW8260						
MS		Sample ID: HS18051329-24MS		Units: ug/L		Analysis Date: 04-Jun-2018 14:17				
Client ID:		Run ID: VOA9_317409		SeqNo: 4587467		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.63	5.0	50	0	109	70 - 127				
Ethylbenzene	57.32	5.0	50	0	115	70 - 124				
Toluene	56.64	5.0	50	0	113	70 - 123				
Xylenes, Total	176.5	5.0	150	0	118	70 - 130				
Surr: 1,2-Dichloroethane-d4	46.27	0	50	0	92.5	70 - 126				
Surr: 4-Bromofluorobenzene	50.58	0	50	0	101	82 - 124				
Surr: Dibromofluoromethane	48.09	0	50	0	96.2	77 - 123				
Surr: Toluene-d8	50.77	0	50	0	102	82 - 127				

MSD		Sample ID: HS18051329-24MSD		Units: ug/L		Analysis Date: 04-Jun-2018 14:42				
Client ID:		Run ID: VOA9_317409		SeqNo: 4587468		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.78	5.0	50	0	110	70 - 127	54.63	0.271	20	
Ethylbenzene	57.42	5.0	50	0	115	70 - 124	57.32	0.186	20	
Toluene	56.12	5.0	50	0	112	70 - 123	56.64	0.937	20	
Xylenes, Total	175.9	5.0	150	0	117	70 - 130	176.5	0.354	20	
Surr: 1,2-Dichloroethane-d4	44.97	0	50	0	89.9	70 - 126	46.27	2.85	20	
Surr: 4-Bromofluorobenzene	50.4	0	50	0	101	82 - 124	50.58	0.344	20	
Surr: Dibromofluoromethane	47.59	0	50	0	95.2	77 - 123	48.09	1.03	20	
Surr: Toluene-d8	51.2	0	50	0	102	82 - 127	50.77	0.832	20	

The following samples were analyzed in this batch:

HS18051525-01	HS18051525-02	HS18051525-03
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317426		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-180605	Units: ug/L		Analysis Date: 05-Jun-2018 12:06					
Client ID:	Run ID: VOA6_317426	SeqNo: 4587822		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	50.8	0	50	0	102	70 - 123			
Surr: 4-Bromofluorobenzene	50.66	0	50	0	101	83 - 122			
Surr: Dibromofluoromethane	50.39	0	50	0	101	73 - 126			
Surr: Toluene-d8	49.56	0	50	0	99.1	81 - 119			

LCS	Sample ID: VLCSW-180605	Units: ug/L		Analysis Date: 05-Jun-2018 10:53					
Client ID:	Run ID: VOA6_317426	SeqNo: 4587821		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.13	5.0	50	0	92.3	74 - 120			
Ethylbenzene	45.22	5.0	50	0	90.4	77 - 117			
Toluene	43.99	5.0	50	0	88.0	77 - 118			
Xylenes, Total	132.9	5.0	150	0	88.6	75 - 122			
Surr: 1,2-Dichloroethane-d4	48.78	0	50	0	97.6	70 - 130			
Surr: 4-Bromofluorobenzene	48.08	0	50	0	96.2	83 - 122			
Surr: Dibromofluoromethane	49.03	0	50	0	98.1	73 - 126			
Surr: Toluene-d8	46.83	0	50	0	93.7	81 - 119			

MS	Sample ID: HS18051474-02MS	Units: ug/L		Analysis Date: 05-Jun-2018 13:20					
Client ID:	Run ID: VOA6_317426	SeqNo: 4587825		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	45.29	5.0	50	0	90.6	70 - 127			
Ethylbenzene	44.09	5.0	50	0	88.2	70 - 124			
Toluene	45.07	5.0	50	0	90.1	70 - 123			
Xylenes, Total	130.9	5.0	150	0	87.3	70 - 130			
Surr: 1,2-Dichloroethane-d4	50.63	0	50	0	101	70 - 126			
Surr: 4-Bromofluorobenzene	49.56	0	50	0	99.1	82 - 124			
Surr: Dibromofluoromethane	50.79	0	50	0	102	77 - 123			
Surr: Toluene-d8	48.26	0	50	0	96.5	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317426		Instrument: VOA6		Method: SW8260						
MSD		Sample ID: HS18051474-02MSD		Units: ug/L		Analysis Date: 05-Jun-2018 13:44				
Client ID:		Run ID: VOA6_317426		SeqNo: 4587826		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	44.2	5.0	50	0	88.4	70 - 127	45.29	2.42	20	
Ethylbenzene	44.17	5.0	50	0	88.3	70 - 124	44.09	0.175	20	
Toluene	43.84	5.0	50	0	87.7	70 - 123	45.07	2.78	20	
Xylenes, Total	130.1	5.0	150	0	86.7	70 - 130	130.9	0.647	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>49.43</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.9</i>	<i>70 - 126</i>	<i>50.63</i>	<i>2.41</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.12</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.2</i>	<i>82 - 124</i>	<i>49.56</i>	<i>0.878</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>49.66</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>77 - 123</i>	<i>50.79</i>	<i>2.26</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>48.13</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>96.3</i>	<i>82 - 127</i>	<i>48.26</i>	<i>0.273</i>	<i>20</i>	

The following samples were analyzed in this batch: HS18051525-04

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317497		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-180606	Units: ug/L		Analysis Date: 06-Jun-2018 11:30					
Client ID:	Run ID: VOA6_317497	SeqNo: 4589461		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	50.95	0	50	0	102	70 - 123			
Surr: 4-Bromofluorobenzene	49.86	0	50	0	99.7	83 - 122			
Surr: Dibromofluoromethane	51.42	0	50	0	103	73 - 126			
Surr: Toluene-d8	49.47	0	50	0	98.9	81 - 119			

LCS	Sample ID: VLCSW-180606	Units: ug/L		Analysis Date: 06-Jun-2018 09:52					
Client ID:	Run ID: VOA6_317497	SeqNo: 4589460		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.14	5.0	50	0	94.3	74 - 120			
Ethylbenzene	44.83	5.0	50	0	89.7	77 - 117			
Toluene	44.98	5.0	50	0	90.0	77 - 118			
Xylenes, Total	132.4	5.0	150	0	88.2	75 - 122			
Surr: 1,2-Dichloroethane-d4	50.49	0	50	0	101	70 - 130			
Surr: 4-Bromofluorobenzene	49.26	0	50	0	98.5	83 - 122			
Surr: Dibromofluoromethane	50.87	0	50	0	102	73 - 126			
Surr: Toluene-d8	48.81	0	50	0	97.6	81 - 119			

MS	Sample ID: HS18051525-05MS	Units: ug/L		Analysis Date: 06-Jun-2018 14:22					
Client ID: MW-5	Run ID: VOA6_317497	SeqNo: 4589626		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	42.66	5.0	50	0	85.3	70 - 127			
Ethylbenzene	39.92	5.0	50	0	79.8	70 - 124			
Toluene	40.45	5.0	50	0	80.9	70 - 123			
Xylenes, Total	118.1	5.0	150	0	78.8	70 - 130			
Surr: 1,2-Dichloroethane-d4	50.23	0	50	0	100	70 - 126			
Surr: 4-Bromofluorobenzene	48.94	0	50	0	97.9	82 - 124			
Surr: Dibromofluoromethane	50.28	0	50	0	101	77 - 123			
Surr: Toluene-d8	48.04	0	50	0	96.1	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317497		Instrument: VOA6		Method: SW8260						
MSD		Sample ID: HS18051525-05MSD	Units: ug/L			Analysis Date: 06-Jun-2018 14:47				
Client ID: MW-5	Run ID: VOA6_317497		SeqNo: 4589627		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.28	5.0	50	0	86.6	70 - 127	42.66	1.43	20	
Ethylbenzene	41.87	5.0	50	0	83.7	70 - 124	39.92	4.78	20	
Toluene	41.74	5.0	50	0	83.5	70 - 123	40.45	3.13	20	
Xylenes, Total	123.6	5.0	150	0	82.4	70 - 130	118.1	4.51	20	
Surr: 1,2-Dichloroethane-d4	50.82	0	50	0	102	70 - 126	50.23	1.17	20	
Surr: 4-Bromofluorobenzene	49.81	0	50	0	99.6	82 - 124	48.94	1.76	20	
Surr: Dibromofluoromethane	50.9	0	50	0	102	77 - 123	50.28	1.22	20	
Surr: Toluene-d8	48.21	0	50	0	96.4	82 - 127	48.04	0.353	20	
The following samples were analyzed in this batch:		HS18051525-05		HS18051525-06						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317466		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-060518	Units: mg/L		Analysis Date: 05-Jun-2018 15:49						
Client ID:	Run ID: ICS2100_317466	SeqNo: 4588808		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-060518	Units: mg/L		Analysis Date: 05-Jun-2018 16:03						
Client ID:	Run ID: ICS2100_317466	SeqNo: 4588809		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.42	0.500	20	0	102	90 - 110				
LCSD	Sample ID: WLCSDW1-060518	Units: mg/L		Analysis Date: 05-Jun-2018 16:18						
Client ID:	Run ID: ICS2100_317466	SeqNo: 4588810		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.41	0.500	20	0	102	90 - 110	20.42	0.0686	20	
MS	Sample ID: HS18060151-01MS	Units: mg/L		Analysis Date: 05-Jun-2018 21:27						
Client ID:	Run ID: ICS2100_317466	SeqNo: 4588823		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	83.82	0.500	10	76.76	70.6	80 - 120				SO
MS	Sample ID: HS18060151-01MS	Units: mg/L		Analysis Date: 05-Jun-2018 16:47						
Client ID:	Run ID: ICS2100_317466	SeqNo: 4588812		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	79.5	0.500	10	76.76	27.4	80 - 120				SO
MS	Sample ID: HS18051525-01MS	Units: mg/L		Analysis Date: 06-Jun-2018 00:50						
Client ID: MW-1R	Run ID: ICS2100_317466	SeqNo: 4588832		PrepDate:		DF: 500				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13910	250	5000	8488	108	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

QC BATCH REPORT

Batch ID: R317466		Instrument: ICS2100			Method: E300					
MSD	Sample ID: HS18060151-01MSD	Units: mg/L			Analysis Date: 05-Jun-2018 17:01					
Client ID:	Run ID: ICS2100_317466			SeqNo: 4588813		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	73.53	0.500	10	76.76	-32.4	80 - 120	83.82	13.1	20	SO
MSD	Sample ID: HS18060151-01MSD	Units: mg/L			Analysis Date: 05-Jun-2018 21:41					
Client ID:	Run ID: ICS2100_317466			SeqNo: 4588824		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	73.75	0.500	10	76.76	-30.1	80 - 120	83.82	12.8	20	SO
MSD	Sample ID: HS18051525-01MSD	Units: mg/L			Analysis Date: 06-Jun-2018 01:05					
Client ID: MW-1R	Run ID: ICS2100_317466			SeqNo: 4588833		PrepDate:		DF: 500		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13600	250	5000	8488	102	80 - 120	13910	2.25	20	
The following samples were analyzed in this batch:										
		HS18051525-01		HS18051525-02		HS18051525-03		HS18051525-04		
		HS18051525-05		HS18051525-06						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18051525

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919 2016-2018	31-Jul-2018
Oklahoma	2017-088	31-Aug-2018
North Carolina	624-2018	31-Dec-2018
Louisiana	03087 2017-2018	30-Jun-2018
Arkansas	88-0356	27-Mar-2019
Kansas	E-10352 2017-218	31-Jul-2018
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193	30-Apr-2019

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **31-May-2018 09:00**

Work Order: HS18051525

Received by: **NDR**Checklist completed by: Paresh M. Giga
eSignature31-May-2018
DateReviewed by: Dane J. Wacasey
eSignature5-Jun-2018
DateMatrices: **Groundwater/Water**Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☒No ☐Not Present ☐

Custody seals intact on sample bottles?

Yes ☐No ☐Not Present ☒

Chain of custody present?

Yes ☒No ☐

Chain of custody signed when relinquished and received?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☐No ☒

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

TX1005 solids received in hermetically sealed vials?

Yes ☐No ☐N/A ☒

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Container/Temp Blank temperature in compliance?

Yes ☒No ☐

Temperature(s)/Thermometer(s):

2.0c/1.6c U/c

IR30

Cooler(s)/Kit(s):

Blue

Date/Time sample(s) sent to storage:

5/31/18 17:00

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☒N/A ☐

pH adjusted by:

Login Notes:

Sampling dates differ for all samples. Labels dates :
MW-1R - 5/25/18. MW-2 - 5/15/18. MW-3 - 5/25/18. MW-4 - 5/25/18. MW-5 - 5/25/18 & DUP - 5/25/18. Lgged in per dates on COC

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
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Chain of Custody Form

Page ____ of ____

COC ID: 181276

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South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information			Project Information				ALS Work Order #:													
Parameter/Method Request for Analysis																				
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Elliot E.M. Federal TB				A	8260_W (BTEX)												
Work Order		Project Number	55626DM (ENV749A006)				B	300_W (Chloride)												
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.				C	8260_W (BTEX) Trip Blank												
Send Report To	Todd Wells	Invoice Attn	Accounts Payable				D													
Address	PO Box 2148	Address	PO Box 2148				E	HS18051525 Glenn Springs Holdings, Inc. 55626DM GSHI PXP Elliot E.M. Federal TB 												
							F													
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148				G													
Phone		Phone					H													
Fax		Fax					I													
e-Mail Address	todd.wells@tetrattech.com	e-Mail Address					J													

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	5-24-2018	14:00	Groundwa	1,8	4	X	X									
2	MW-2	5-24-2018	13:19	Groundwa	1,8	4	X	X									
3	MW-3	5-24-2018	13:48	Groundwa	1,8	4	X	X									
4	MW-4	5-24-2018	13:34	Groundwa	1,8	4	X	X									
5	MW-5	5-24-2018	13:05	Groundwa	1,8	4	X	X									
6	DUP	5-24-2018		Groundwa	1,8	4	X	X									
7	Trip Blank			Water	1,8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Bill Smith</i>		Shipment Method FedEx		Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		Results Due Date:	
Relinquished by: <i>Bill Smith</i>		Date: 5/30/18	Time: 16:10	Received by: <i>NR</i>		Notes: [GSHI PXP Elliot EM Federal TB]	
Relinquished by:		Date: 5/31/18	Time: 09:00	Received by (Laboratory):		QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		☒ Level II Std QC ☐ Level III Std QC/Raw Date ☐ Level IV SW846/CLP ☐ Other	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035							

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.

3. The Chain of Custody is a legal document. All information must be completed accurately.

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CUSTODY SEAL	
Time: <u>30-70</u>	Seal Broken By: <u>ALS</u>
Date: <u>MAY 31 2019</u>	

	ALS	Date:
	10450 Stancliff Rd., Suite 210	Name:
	Houston, Texas 77099	Company:
	Tel. +1 281 530 5656	
	Fax. +1 281 530 5887	

	ALS	Date:
	10450 Stancliff Rd., Suite 210	Name:
	Houston, Texas 77099	Company:
	Tel. +1 281 530 5656	
	Fax. +1 281 530 5887	

CUSTODY SEAL	
Time: <u>30-70</u>	Seal Broken By: <u>ALS</u>
Date: <u>MAY 31 2019</u>	

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THU - 31 MAY 10:30A
PRIORITY OVERNIGHT

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10450 Stancliff Rd. Suite 210
Houston, TX 77099
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September 05, 2018

Todd Wells
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18081355**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Todd,

ALS Environmental received 7 sample(s) on Aug 28, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18081355

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18081355-01	MW-1R	Groundwater		24-Aug-2018 11:55	28-Aug-2018 08:50	☐
HS18081355-02	MW-2	Groundwater		24-Aug-2018 12:00	28-Aug-2018 08:50	☐
HS18081355-03	MW-3	Groundwater		24-Aug-2018 10:50	28-Aug-2018 08:50	☐
HS18081355-04	MW-4	Groundwater		24-Aug-2018 09:45	28-Aug-2018 08:50	☐
HS18081355-05	MW-5	Groundwater		24-Aug-2018 11:45	28-Aug-2018 08:50	☐
HS18081355-06	DUP	Groundwater		24-Aug-2018 00:00	28-Aug-2018 08:50	☐
HS18081355-07	Trip Blank	Water	ALS- 080918-36	24-Aug-2018 00:00	28-Aug-2018 08:50	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18081355

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R322792

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R322687

Sample ID: HS18081351-01MSD

- MSD is for an unrelated sample

WetChemistry by Method E300

Batch ID: R322848

Sample ID: HS18081359-01MS

- MS and MSD are for an unrelated sample (Chloride)
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 24-Aug-2018 11:55

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	31-Aug-2018 23:13
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 23:13
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 23:13
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 23:13
Surr: 1,2-Dichloroethane-d4	119			70-126	%REC	1	31-Aug-2018 23:13
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	31-Aug-2018 23:13
Surr: Dibromofluoromethane	97.6			77-123	%REC	1	31-Aug-2018 23:13
Surr: Toluene-d8	106			82-127	%REC	1	31-Aug-2018 23:13
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	9,160		100	250	mg/L	500	04-Sep-2018 16:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 24-Aug-2018 12:00

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	31-Aug-2018 23:38
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 23:38
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 23:38
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 23:38
Surr: 1,2-Dichloroethane-d4	121			70-126	%REC	1	31-Aug-2018 23:38
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	31-Aug-2018 23:38
Surr: Dibromofluoromethane	100			77-123	%REC	1	31-Aug-2018 23:38
Surr: Toluene-d8	106			82-127	%REC	1	31-Aug-2018 23:38
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	54.7		0.200	0.500	mg/L	1	04-Sep-2018 16:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-3
 Collection Date: 24-Aug-2018 10:50

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-03
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	01-Sep-2018 00:03
Ethylbenzene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:03
Toluene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:03
Xylenes, Total	U		0.50	5.0	ug/L	1	01-Sep-2018 00:03
Surr: 1,2-Dichloroethane-d4	121			70-126	%REC	1	01-Sep-2018 00:03
Surr: 4-Bromofluorobenzene	111			82-124	%REC	1	01-Sep-2018 00:03
Surr: Dibromofluoromethane	101			77-123	%REC	1	01-Sep-2018 00:03
Surr: Toluene-d8	107			82-127	%REC	1	01-Sep-2018 00:03
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	56.7		0.200	0.500	mg/L	1	04-Sep-2018 17:14

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 24-Aug-2018 09:45

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	01-Sep-2018 00:28
Ethylbenzene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:28
Toluene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:28
Xylenes, Total	U		0.50	5.0	ug/L	1	01-Sep-2018 00:28
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>121</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>01-Sep-2018 00:28</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>110</i>			<i>82-124</i>	<i>%REC</i>	<i>1</i>	<i>01-Sep-2018 00:28</i>
<i>Surr: Dibromofluoromethane</i>	<i>99.8</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>01-Sep-2018 00:28</i>
<i>Surr: Toluene-d8</i>	<i>106</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>01-Sep-2018 00:28</i>
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	877		4.00	10.0	mg/L	20	04-Sep-2018 17:57

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 24-Aug-2018 11:45

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	01-Sep-2018 00:53
Ethylbenzene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:53
Toluene	U		0.50	5.0	ug/L	1	01-Sep-2018 00:53
Xylenes, Total	U		0.50	5.0	ug/L	1	01-Sep-2018 00:53
Surr: 1,2-Dichloroethane-d4	122			70-126	%REC	1	01-Sep-2018 00:53
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	01-Sep-2018 00:53
Surr: Dibromofluoromethane	98.2			77-123	%REC	1	01-Sep-2018 00:53
Surr: Toluene-d8	104			82-127	%REC	1	01-Sep-2018 00:53
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	51.0		0.200	0.500	mg/L	1	04-Sep-2018 18:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 24-Aug-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18081355
 Lab ID:HS18081355-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.60	5.0	ug/L	1	31-Aug-2018 14:07
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 14:07
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 14:07
Xylenes, Total	0.81	J	0.50	5.0	ug/L	1	31-Aug-2018 14:07
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>119</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>31-Aug-2018 14:07</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>110</i>			<i>82-124</i>	<i>%REC</i>	<i>1</i>	<i>31-Aug-2018 14:07</i>
<i>Surr: Dibromofluoromethane</i>	<i>98.7</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>31-Aug-2018 14:07</i>
<i>Surr: Toluene-d8</i>	<i>105</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>31-Aug-2018 14:07</i>
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	9,300		100	250	mg/L	500	04-Sep-2018 18:26

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 24-Aug-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18081355
Lab ID:HS18081355-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	31-Aug-2018 14:32
Ethylbenzene	U		0.00050	0.0050	mg/L	1	31-Aug-2018 14:32
Toluene	U		0.00050	0.0050	mg/L	1	31-Aug-2018 14:32
Xylenes, Total	U		0.00050	0.0050	mg/L	1	31-Aug-2018 14:32
Surr: 1,2-Dichloroethane-d4	118			70-126	%REC	1	31-Aug-2018 14:32
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	31-Aug-2018 14:32
Surr: Dibromofluoromethane	99.5			77-123	%REC	1	31-Aug-2018 14:32
Surr: Toluene-d8	105			82-127	%REC	1	31-Aug-2018 14:32

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R322687		Test Name : VOLATILES - SW8260C		Matrix: Water		
HS18081355-07	Trip Blank	24 Aug 2018 00:00			31 Aug 2018 14:32	1
Batch ID R322687		Test Name : VOLATILES - SW8260C		Matrix: Groundwater		
HS18081355-06	DUP	24 Aug 2018 00:00			31 Aug 2018 14:07	1
Batch ID R322792		Test Name : VOLATILES - SW8260C		Matrix: Groundwater		
HS18081355-01	MW-1R	24 Aug 2018 11:55			31 Aug 2018 23:13	1
HS18081355-02	MW-2	24 Aug 2018 12:00			31 Aug 2018 23:38	1
HS18081355-03	MW-3	24 Aug 2018 10:50			01 Sep 2018 00:03	1
HS18081355-04	MW-4	24 Aug 2018 09:45			01 Sep 2018 00:28	1
HS18081355-05	MW-5	24 Aug 2018 11:45			01 Sep 2018 00:53	1
Batch ID R322848		Test Name : ANIONS BY E300.0		Matrix: Groundwater		
HS18081355-01	MW-1R	24 Aug 2018 11:55			04 Sep 2018 16:15	500
HS18081355-02	MW-2	24 Aug 2018 12:00			04 Sep 2018 16:59	1
HS18081355-03	MW-3	24 Aug 2018 10:50			04 Sep 2018 17:14	1
HS18081355-04	MW-4	24 Aug 2018 09:45			04 Sep 2018 17:57	20
HS18081355-05	MW-5	24 Aug 2018 11:45			04 Sep 2018 18:12	1
HS18081355-06	DUP	24 Aug 2018 00:00			04 Sep 2018 18:26	500

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322687		Instrument: VOA9		Method: SW8260					
MBLK	Sample ID: VBLKW-180830	Units: ug/L		Analysis Date: 31-Aug-2018 07:43					
Client ID:	Run ID: VOA9_322687		SeqNo: 4711925		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	58.96	0	50	0	118	70 - 130			
Surr: 4-Bromofluorobenzene	55.11	0	50	0	110	82 - 115			
Surr: Dibromofluoromethane	50.13	0	50	0	100	73 - 126			
Surr: Toluene-d8	52.68	0	50	0	105	81 - 120			

LCS	Sample ID: VLCSW-180830	Units: ug/L		Analysis Date: 31-Aug-2018 06:53					
Client ID:	Run ID: VOA9_322687		SeqNo: 4711924		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	20.53	5.0	20	0	103	74 - 120			
Ethylbenzene	20.59	5.0	20	0	103	77 - 117			
Toluene	20.45	5.0	20	0	102	77 - 118			
Xylenes, Total	62.92	5.0	60	0	105	75 - 122			
Surr: 1,2-Dichloroethane-d4	58.15	0	50	0	116	70 - 130			
Surr: 4-Bromofluorobenzene	57.18	0	50	0	114	82 - 115			
Surr: Dibromofluoromethane	52.09	0	50	0	104	73 - 126			
Surr: Toluene-d8	51.54	0	50	0	103	81 - 120			

MS	Sample ID: HS18081351-01MS	Units: ug/L		Analysis Date: 31-Aug-2018 08:58					
Client ID:	Run ID: VOA9_322687		SeqNo: 4711928		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	23.02	5.0	20	0	115	70 - 127			
Ethylbenzene	23.86	5.0	20	0	119	70 - 124			
Toluene	23.62	5.0	20	0	118	70 - 123			
Xylenes, Total	71.26	5.0	60	0	119	70 - 130			
Surr: 1,2-Dichloroethane-d4	57.94	0	50	0	116	70 - 126			
Surr: 4-Bromofluorobenzene	57.34	0	50	0	115	82 - 124			
Surr: Dibromofluoromethane	52.05	0	50	0	104	77 - 123			
Surr: Toluene-d8	51.56	0	50	0	103	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322687		Instrument: VOA9		Method: SW8260					
MSD		Sample ID: HS18081351-01MSD		Units: ug/L		Analysis Date: 31-Aug-2018 12:01			
Client ID:		Run ID: VOA9_322687		SeqNo: 4712319		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	19	5.0	20	0	95.0	70 - 127	23.02	19.1	20
Ethylbenzene	18.67	5.0	20	0	93.4	70 - 124	23.86	24.4	20
Toluene	18.35	5.0	20	0	91.8	70 - 123	23.62	25.1	20
Xylenes, Total	61.6	5.0	60	0	103	70 - 130	71.26	14.5	20
Surr: 1,2-Dichloroethane-d4	58.4	0	50	0	117	70 - 126	57.94	0.784	20
Surr: 4-Bromofluorobenzene	56.12	0	50	0	112	82 - 124	57.34	2.15	20
Surr: Dibromofluoromethane	52.84	0	50	0	106	77 - 123	52.05	1.52	20
Surr: Toluene-d8	51.34	0	50	0	103	82 - 127	51.56	0.417	20
The following samples were analyzed in this batch: HS18081355-06 HS18081355-07									

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322792		Instrument: VOA9		Method: SW8260					
MBLK	Sample ID: VBLKW-180831	Units: ug/L		Analysis Date: 31-Aug-2018 20:18					
Client ID:	Run ID: VOA9_322792	SeqNo: 4714128		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	59.58	0	50	0	119	70 - 130			
Surr: 4-Bromofluorobenzene	55.13	0	50	0	110	82 - 115			
Surr: Dibromofluoromethane	49.67	0	50	0	99.3	73 - 126			
Surr: Toluene-d8	53.58	0	50	0	107	81 - 120			

LCS	Sample ID: VLCSW-180831	Units: ug/L		Analysis Date: 31-Aug-2018 19:28					
Client ID:	Run ID: VOA9_322792	SeqNo: 4714127		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	20.5	5.0	20	0	102	74 - 120			
Ethylbenzene	20.61	5.0	20	0	103	77 - 117			
Toluene	20.99	5.0	20	0	105	77 - 118			
Xylenes, Total	63.53	5.0	60	0	106	75 - 122			
Surr: 1,2-Dichloroethane-d4	58.58	0	50	0	117	70 - 130			
Surr: 4-Bromofluorobenzene	56.84	0	50	0	114	82 - 115			
Surr: Dibromofluoromethane	52.43	0	50	0	105	73 - 126			
Surr: Toluene-d8	52.1	0	50	0	104	81 - 120			

MS	Sample ID: HS18081351-03MS	Units: ug/L		Analysis Date: 31-Aug-2018 21:08					
Client ID:	Run ID: VOA9_322792	SeqNo: 4714130		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	22.76	5.0	20	0	114	70 - 127			
Ethylbenzene	23.38	5.0	20	0	117	70 - 124			
Toluene	22.73	5.0	20	0	114	70 - 123			
Xylenes, Total	70.59	5.0	60	0	118	70 - 130			
Surr: 1,2-Dichloroethane-d4	59.25	0	50	0	119	70 - 126			
Surr: 4-Bromofluorobenzene	56.72	0	50	0	113	82 - 124			
Surr: Dibromofluoromethane	53.22	0	50	0	106	77 - 123			
Surr: Toluene-d8	51.64	0	50	0	103	82 - 127			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322792		Instrument: VOA9		Method: SW8260						
MSD	Sample ID: HS18081351-03MSD	Units: ug/L			Analysis Date: 31-Aug-2018 21:33					
Client ID:	Run ID: VOA9_322792	SeqNo: 4714131		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Benzene	21.81	5.0	20	0	109	70 - 127	22.76	4.24	20	
Ethylbenzene	22.59	5.0	20	0	113	70 - 124	23.38	3.44	20	
Toluene	22.18	5.0	20	0	111	70 - 123	22.73	2.42	20	
Xylenes, Total	68.16	5.0	60	0	114	70 - 130	70.59	3.5	20	
Surr: 1,2-Dichloroethane-d4	59.77	0	50	0	120	70 - 126	59.25	0.865	20	
Surr: 4-Bromofluorobenzene	57.16	0	50	0	114	82 - 124	56.72	0.781	20	
Surr: Dibromofluoromethane	52.64	0	50	0	105	77 - 123	53.22	1.09	20	
Surr: Toluene-d8	52.23	0	50	0	104	82 - 127	51.64	1.14	20	
The following samples were analyzed in this batch:		HS18081355-01 HS18081355-05		HS18081355-02		HS18081355-03		HS18081355-04		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322848		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-090418	Units: mg/L		Analysis Date: 04-Sep-2018 13:46						
Client ID:	Run ID: ICS2100_322848	SeqNo: 4715157		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-090418	Units: mg/L		Analysis Date: 04-Sep-2018 14:01						
Client ID:	Run ID: ICS2100_322848	SeqNo: 4715158		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.52	0.500	20	0	103	90 - 110				
LCSD	Sample ID: WLCSDW1-090418	Units: mg/L		Analysis Date: 04-Sep-2018 14:15						
Client ID:	Run ID: ICS2100_322848	SeqNo: 4715159		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.52	0.500	20	0	103	90 - 110	20.52	0.0439	20	
MS	Sample ID: HS18081359-01MS	Units: mg/L		Analysis Date: 04-Sep-2018 18:55						
Client ID:	Run ID: ICS2100_322848	SeqNo: 4715647		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	96.47	0.500	10	88.55	79.2	80 - 120				SO
MS	Sample ID: HS18081355-03MS	Units: mg/L		Analysis Date: 04-Sep-2018 17:28						
Client ID: MW-3	Run ID: ICS2100_322848	SeqNo: 4715170		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	66.41	0.500	10	56.7	97.1	80 - 120				O
MSD	Sample ID: HS18081359-01MSD	Units: mg/L		Analysis Date: 04-Sep-2018 19:10						
Client ID:	Run ID: ICS2100_322848	SeqNo: 4715648		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	94.92	0.500	10	88.55	63.7	80 - 120	96.47	1.61	20	SO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

QC BATCH REPORT

Batch ID: R322848		Instrument: ICS2100		Method: E300						
MSD	Sample ID: HS18081355-03MSD	Units: mg/L		Analysis Date: 04-Sep-2018 17:43						
Client ID: MW-3	Run ID: ICS2100_322848		SeqNo: 4715171		PrepDate: DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	65.94	0.500	10	56.7	92.3	80 - 120	66.41	0.715	20	O
The following samples were analyzed in this batch:										
HS18081355-01		HS18081355-02		HS18081355-03		HS18081355-04				
HS18081355-05		HS18081355-06								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18081355

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	L2231 Rev 3-30-2018	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18081355

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18081355-01	MW-1R	Login	8/28/2018 12:09:09 PM	NDR	WET069
HS18081355-01	MW-1R	Login	8/28/2018 12:09:09 PM	NDR	VOA161
HS18081355-02	MW-2	Login	8/28/2018 12:09:09 PM	NDR	WET069
HS18081355-02	MW-2	Login	8/28/2018 12:09:09 PM	NDR	VOA161
HS18081355-03	MW-3	Login	8/28/2018 12:09:09 PM	NDR	WET069
HS18081355-03	MW-3	Login	8/28/2018 12:09:09 PM	NDR	VOA161
HS18081355-04	MW-4	Login	8/28/2018 12:09:09 PM	NDR	WET069
HS18081355-04	MW-4	Login	8/28/2018 12:09:09 PM	NDR	VOA161

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **28-Aug-2018 08:50**

Work Order: HS18081355

Received by: **RPG**Checklist completed by: Nilesh D. Ranchod 28-Aug-2018
eSignature DateReviewed by: Dane J. Wacasey 28-Aug-2018
eSignature DateMatrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s): 1.3C / 1.0C UC/C IR # 25

Cooler(s)/Kit(s): 25693

Date/Time sample(s) sent to storage: 08/28/2018 12:30pm

Water - VOA vials have zero headspace? Yes ☒ No ☐ No VOA vials submitted ☐Water - pH acceptable upon receipt? Yes ☒ No ☐ N/A ☐pH adjusted? Yes ☐ No ☐ N/A ☒pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 190395

HS18081355

Glenn Springs Holdings, Inc.
55626DM GSHI PXP Elliot E.M. Federal TB



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Elliot E.M. Federal TB
Work Order		Project Number	55626DM (ENV749A006)
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.
Send Report To	Todd Wells	Invoice Attn	Accounts Payable
Address	PO Box 2148	Address	PO Box 2148
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148
Phone		Phone	
Fax		Fax	
e-Mail Address	todd.wells@tetratech.com	e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	8/24/18	1155	Groundwa	1,8	4	X	X									
2	MW-2	8/24/18	1200	Groundwa	1,8	4	X	X									
3	MW-3	8/24/18	1050	Groundwa	1,8	4	X	X									
4	MW-4	8/24/18	0945	Groundwa	1,8	4	X	X									
5	MW-5	8/24/18	1145	Groundwa	1,8	4	X	X									
6	DUP	8/24/18	—	Groundwa	1,8	4	X	X									
7	Trip Blank			Water	1,8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
<i>[Signature]</i>		FedEx		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour			
Relinquished by:	Date: 8/24/18	Time:	Received by:	Notes: [GSHI PXP Elliot EM Federal TB]			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	25693	1.3c	☒ Level II Std QC ☐ TRRP Checklist	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				1P 25		☐ Level III Std QC/Raw Data ☐ TRRP Level IV	
				CF-0.3c		☐ Level IV SW846/CLP ☐ Other	

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5653 Fax. +1 281 530 5887	CUSTOMY SEAL		Seal Broken By: <u>SM</u>
	Date: <u>8/28/18</u>	Time: <u>16:10</u>	Date: <u>08/28/18</u>
	Name: <u>ALB</u>	Company: <u>ALB</u>	

25693 AUG 28 2018

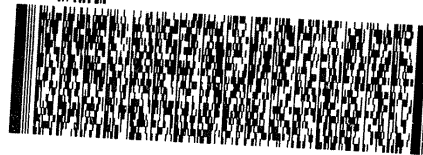
 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTOMY SEAL		Seal Broken By: <u>SM</u>
	Date: <u>8/28/18</u>	Time: <u>16:10</u>	Date: <u>08/28/18</u>
	Name: <u>ALB</u>	Company: <u>ALB</u>	

10 CLIENT SERVICES
 ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099

25693

(281) 530-5656
 REF: GSHI PXP-DW

RMA: ||| ||| |||



FedEx
Express



FedEx
 TRK#
 0221 4380 9531 8005

TUE - 28 AUG 10:30A
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US IAH





10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

November 28, 2018

Todd Wells
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18110923**

Laboratory Results for: **55626DM GSHI PXP Elliot E.M. Federal TB**

Dear Todd,

ALS Environmental received 7 sample(s) on Nov 16, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER
Dane J. Wacasey

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18110923

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18110923-01	MW-1R	Groundwater		15-Nov-2018 13:15	16-Nov-2018 09:30	☐
HS18110923-02	MW-2	Groundwater		15-Nov-2018 13:45	16-Nov-2018 09:30	☐
HS18110923-03	MW-3	Groundwater		15-Nov-2018 14:35	16-Nov-2018 09:30	☐
HS18110923-04	MW-4	Groundwater		15-Nov-2018 14:20	16-Nov-2018 09:30	☐
HS18110923-05	MW-5	Groundwater		15-Nov-2018 12:45	16-Nov-2018 09:30	☐
HS18110923-06	DUP	Groundwater		15-Nov-2018 00:00	16-Nov-2018 09:30	☐
HS18110923-07	Trip Blank	Water	ALS- 110718-52	15-Nov-2018 00:00	16-Nov-2018 09:30	☐

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Work Order: HS18110923

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R327993

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: R327998

Sample ID: HS18111147-01MS

- MS and MSD is for an unrelated sample

Batch ID: R328041

Sample ID: HS18110941-08MS

- MS is for an unrelated sample

WetChemistry by Method E300

Batch ID: R328214

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
-

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-1R
 Collection Date: 15-Nov-2018 13:15

ANALYTICAL REPORT

WorkOrder:HS18110923
 Lab ID:HS18110923-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2018 17:34
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 17:34
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 17:34
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2018 17:34
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>90.0</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>25-Nov-2018 17:34</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>96.3</i>			<i>82-124</i>	<i>%REC</i>	<i>1</i>	<i>25-Nov-2018 17:34</i>
<i>Surr: Dibromofluoromethane</i>	<i>86.3</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>25-Nov-2018 17:34</i>
<i>Surr: Toluene-d8</i>	<i>105</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>25-Nov-2018 17:34</i>
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	7,850		40.0	100	mg/L	200	28-Nov-2018 07:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-2
 Collection Date: 15-Nov-2018 13:45

ANALYTICAL REPORT

WorkOrder:HS18110923
 Lab ID:HS18110923-02
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2018 21:17
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:17
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:17
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:17
Surr: 1,2-Dichloroethane-d4	92.2			70-126	%REC	1	25-Nov-2018 21:17
Surr: 4-Bromofluorobenzene	97.5			82-124	%REC	1	25-Nov-2018 21:17
Surr: Dibromofluoromethane	87.6			77-123	%REC	1	25-Nov-2018 21:17
Surr: Toluene-d8	104			82-127	%REC	1	25-Nov-2018 21:17
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	55.3		1.00	2.50	mg/L	5	28-Nov-2018 07:51

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: MW-3
Collection Date: 15-Nov-2018 14:35

ANALYTICAL REPORT

WorkOrder:HS18110923
Lab ID:HS18110923-03
Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2018 21:42
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:42
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:42
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2018 21:42
Surr: 1,2-Dichloroethane-d4	90.9			70-126	%REC	1	25-Nov-2018 21:42
Surr: 4-Bromofluorobenzene	96.0			82-124	%REC	1	25-Nov-2018 21:42
Surr: Dibromofluoromethane	87.6			77-123	%REC	1	25-Nov-2018 21:42
Surr: Toluene-d8	105			82-127	%REC	1	25-Nov-2018 21:42
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	56.4		0.400	1.00	mg/L	2	28-Nov-2018 08:13

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-4
 Collection Date: 15-Nov-2018 14:20

ANALYTICAL REPORT

WorkOrder:HS18110923
 Lab ID:HS18110923-04
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	25-Nov-2018 22:06
Ethylbenzene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 22:06
Toluene	U		0.00050	0.0050	mg/L	1	25-Nov-2018 22:06
Xylenes, Total	U		0.00050	0.0050	mg/L	1	25-Nov-2018 22:06
Surr: 1,2-Dichloroethane-d4	92.6			70-126	%REC	1	25-Nov-2018 22:06
Surr: 4-Bromofluorobenzene	97.5			82-124	%REC	1	25-Nov-2018 22:06
Surr: Dibromofluoromethane	88.6			77-123	%REC	1	25-Nov-2018 22:06
Surr: Toluene-d8	105			82-127	%REC	1	25-Nov-2018 22:06
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	1,090		4.00	10.0	mg/L	20	28-Nov-2018 08:35

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: MW-5
 Collection Date: 15-Nov-2018 12:45

ANALYTICAL REPORT

WorkOrder:HS18110923
 Lab ID:HS18110923-05
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	26-Nov-2018 23:36
Ethylbenzene	U		0.00050	0.0050	mg/L	1	26-Nov-2018 23:36
Toluene	U		0.00050	0.0050	mg/L	1	26-Nov-2018 23:36
Xylenes, Total	U		0.00050	0.0050	mg/L	1	26-Nov-2018 23:36
Surr: 1,2-Dichloroethane-d4	121			70-126	%REC	1	26-Nov-2018 23:36
Surr: 4-Bromofluorobenzene	105			82-124	%REC	1	26-Nov-2018 23:36
Surr: Dibromofluoromethane	107			77-123	%REC	1	26-Nov-2018 23:36
Surr: Toluene-d8	107			82-127	%REC	1	26-Nov-2018 23:36
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	52.2		1.00	2.50	mg/L	5	28-Nov-2018 08:56

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
 Project: 55626DM GSHI PXP Elliot E.M. Federal TB
 Sample ID: DUP
 Collection Date: 15-Nov-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18110923
 Lab ID:HS18110923-06
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	27-Nov-2018 00:00
Ethylbenzene	U		0.00050	0.0050	mg/L	1	27-Nov-2018 00:00
Toluene	U		0.00050	0.0050	mg/L	1	27-Nov-2018 00:00
Xylenes, Total	U		0.00050	0.0050	mg/L	1	27-Nov-2018 00:00
Surr: 1,2-Dichloroethane-d4	118			70-126	%REC	1	27-Nov-2018 00:00
Surr: 4-Bromofluorobenzene	106			82-124	%REC	1	27-Nov-2018 00:00
Surr: Dibromofluoromethane	108			77-123	%REC	1	27-Nov-2018 00:00
Surr: Toluene-d8	101			82-127	%REC	1	27-Nov-2018 00:00
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	1,100		4.00	10.0	mg/L	20	28-Nov-2018 09:18

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
Sample ID: Trip Blank
Collection Date: 15-Nov-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18110923
Lab ID:HS18110923-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		Method:SW8260				Analyst: PC	
Benzene	U		0.00060	0.0050	mg/L	1	26-Nov-2018 01:25
Ethylbenzene	U		0.00050	0.0050	mg/L	1	26-Nov-2018 01:25
Toluene	U		0.00050	0.0050	mg/L	1	26-Nov-2018 01:25
Xylenes, Total	U		0.00050	0.0050	mg/L	1	26-Nov-2018 01:25
Surr: 1,2-Dichloroethane-d4	93.7			70-126	%REC	1	26-Nov-2018 01:25
Surr: 4-Bromofluorobenzene	96.4			82-124	%REC	1	26-Nov-2018 01:25
Surr: Dibromofluoromethane	88.0			77-123	%REC	1	26-Nov-2018 01:25
Surr: Toluene-d8	106			82-127	%REC	1	26-Nov-2018 01:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R327993	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18110923-01	MW-1R	15 Nov 2018 13:15			25 Nov 2018 17:34	1
HS18110923-02	MW-2	15 Nov 2018 13:45			25 Nov 2018 21:17	1
HS18110923-03	MW-3	15 Nov 2018 14:35			25 Nov 2018 21:42	1
HS18110923-04	MW-4	15 Nov 2018 14:20			25 Nov 2018 22:06	1
Batch ID R327998	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS18110923-07	Trip Blank	15 Nov 2018 00:00			26 Nov 2018 01:25	1
Batch ID R328041	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18110923-05	MW-5	15 Nov 2018 12:45			26 Nov 2018 23:36	1
HS18110923-06	DUP	15 Nov 2018 00:00			27 Nov 2018 00:00	1
Batch ID R328214	Test Name : ANIONS BY E300.0			Matrix: Groundwater		
HS18110923-01	MW-1R	15 Nov 2018 13:15			28 Nov 2018 07:29	200
HS18110923-02	MW-2	15 Nov 2018 13:45			28 Nov 2018 07:51	5
HS18110923-03	MW-3	15 Nov 2018 14:35			28 Nov 2018 08:13	2
HS18110923-04	MW-4	15 Nov 2018 14:20			28 Nov 2018 08:35	20
HS18110923-05	MW-5	15 Nov 2018 12:45			28 Nov 2018 08:56	5
HS18110923-06	DUP	15 Nov 2018 00:00			28 Nov 2018 09:18	20

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R327993		Instrument: VOA9		Method: SW8260					
MBLK	Sample ID: VBLKW-181125	Units: ug/L		Analysis Date: 25-Nov-2018 13:01					
Client ID:	Run ID: VOA9_327993	SeqNo: 4834819		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	43.62	0	50	0	87.2	70 - 130			
Surr: 4-Bromofluorobenzene	48.51	0	50	0	97.0	82 - 115			
Surr: Dibromofluoromethane	42.08	0	50	0	84.2	73 - 126			
Surr: Toluene-d8	52.76	0	50	0	106	81 - 120			

LCS	Sample ID: VLCSW-181125	Units: ug/L		Analysis Date: 25-Nov-2018 12:11					
Client ID:	Run ID: VOA9_327993	SeqNo: 4834818		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	20.87	5.0	20	0	104	74 - 120			
Ethylbenzene	20.52	5.0	20	0	103	77 - 117			
Toluene	20.94	5.0	20	0	105	77 - 118			
Xylenes, Total	63.98	5.0	60	0	107	75 - 122			
Surr: 1,2-Dichloroethane-d4	41.36	0	50	0	82.7	70 - 130			
Surr: 4-Bromofluorobenzene	49.74	0	50	0	99.5	82 - 115			
Surr: Dibromofluoromethane	42.83	0	50	0	85.7	73 - 126			
Surr: Toluene-d8	52.79	0	50	0	106	81 - 120			

MS	Sample ID: HS18110975-02MS	Units: ug/L		Analysis Date: 25-Nov-2018 14:40					
Client ID:	Run ID: VOA9_327993	SeqNo: 4834823		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	22.49	5.0	20	0	112	70 - 127			
Ethylbenzene	23.42	5.0	20	0	117	70 - 124			
Toluene	22.62	5.0	20	0	113	70 - 123			
Xylenes, Total	69.71	5.0	60	0	116	70 - 130			
Surr: 1,2-Dichloroethane-d4	43.28	0	50	0	86.6	70 - 126			
Surr: 4-Bromofluorobenzene	50.73	0	50	0	101	82 - 124			
Surr: Dibromofluoromethane	43.62	0	50	0	87.2	77 - 123			
Surr: Toluene-d8	52.47	0	50	0	105	82 - 127			

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R327993		Instrument: VOA9		Method: SW8260						
MSD		Sample ID: HS18110975-02MSD		Units: ug/L		Analysis Date: 25-Nov-2018 15:05				
Client ID:		Run ID: VOA9_327993		SeqNo: 4834824		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.55	5.0	20	0	108	70 - 127	22.49	4.26	20	
Ethylbenzene	22.47	5.0	20	0	112	70 - 124	23.42	4.16	20	
Toluene	22.18	5.0	20	0	111	70 - 123	22.62	1.96	20	
Xylenes, Total	68.28	5.0	60	0	114	70 - 130	69.71	2.08	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>43.09</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>86.2</i>	<i>70 - 126</i>	<i>43.28</i>	<i>0.439</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.75</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>82 - 124</i>	<i>50.73</i>	<i>0.0376</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>43.15</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>86.3</i>	<i>77 - 123</i>	<i>43.62</i>	<i>1.09</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>52.62</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>82 - 127</i>	<i>52.47</i>	<i>0.284</i>	<i>20</i>	
The following samples were analyzed in this batch:										
HS18110923-01		HS18110923-02		HS18110923-03		HS18110923-04				

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R327998		Instrument: VOA9		Method: SW8260					
MBLK	Sample ID: VBLKW-181125	Units: ug/L		Analysis Date: 26-Nov-2018 00:35					
Client ID:	Run ID: VOA9_327998	SeqNo: 4834917		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	45.38	0	50	0	90.8	70 - 130			
Surr: 4-Bromofluorobenzene	48.48	0	50	0	97.0	82 - 115			
Surr: Dibromofluoromethane	43.66	0	50	0	87.3	73 - 126			
Surr: Toluene-d8	51.88	0	50	0	104	81 - 120			

LCS	Sample ID: VLCSW-181125	Units: ug/L		Analysis Date: 25-Nov-2018 23:46					
Client ID:	Run ID: VOA9_327998	SeqNo: 4834916		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	21.51	5.0	20	0	108	74 - 120			
Ethylbenzene	20.99	5.0	20	0	105	77 - 117			
Toluene	21.45	5.0	20	0	107	77 - 118			
Xylenes, Total	64.89	5.0	60	0	108	75 - 122			
Surr: 1,2-Dichloroethane-d4	44.84	0	50	0	89.7	70 - 130			
Surr: 4-Bromofluorobenzene	51.1	0	50	0	102	82 - 115			
Surr: Dibromofluoromethane	44.61	0	50	0	89.2	73 - 126			
Surr: Toluene-d8	52.74	0	50	0	105	81 - 120			

MS	Sample ID: HS18111147-01MS	Units: ug/L		Analysis Date: 26-Nov-2018 02:14					
Client ID:	Run ID: VOA9_327998	SeqNo: 4834920		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	17.05	5.0	20	0	85.3	70 - 127			
Ethylbenzene	4.006	5.0	20	0	20.0	70 - 124			JS
Toluene	13.15	5.0	20	0	65.7	70 - 123			S
Xylenes, Total	29.88	5.0	60	0	49.8	70 - 130			S
Surr: 1,2-Dichloroethane-d4	45	0	50	0	90.0	70 - 126			
Surr: 4-Bromofluorobenzene	50.69	0	50	0	101	82 - 124			
Surr: Dibromofluoromethane	44.11	0	50	0	88.2	77 - 123			
Surr: Toluene-d8	53.07	0	50	0	106	82 - 127			

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R327998		Instrument: VOA9		Method: SW8260						
MSD		Sample ID: HS18111147-01MSD		Units: ug/L		Analysis Date: 26-Nov-2018 02:39				
Client ID:		Run ID: VOA9_327998		SeqNo: 4834921		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.9	5.0	20	0	79.5	70 - 127	17.05	7	20	
Ethylbenzene	3.694	5.0	20	0	18.5	70 - 124	4.006	0	20	JS
Toluene	12.47	5.0	20	0	62.4	70 - 123	13.15	5.26	20	S
Xylenes, Total	28.86	5.0	60	0	48.1	70 - 130	29.88	3.47	20	S
Surr: 1,2-Dichloroethane-d4	45.17	0	50	0	90.3	70 - 126	45	0.376	20	
Surr: 4-Bromofluorobenzene	50.51	0	50	0	101	82 - 124	50.69	0.354	20	
Surr: Dibromofluoromethane	44.13	0	50	0	88.3	77 - 123	44.11	0.0405	20	
Surr: Toluene-d8	53.69	0	50	0	107	82 - 127	53.07	1.16	20	

The following samples were analyzed in this batch: HS18110923-07

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R328041		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-181126	Units: ug/L		Analysis Date: 26-Nov-2018 23:12					
Client ID:	Run ID: VOA6_328041	SeqNo: 4837119		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	U	5.0							
Ethylbenzene	U	5.0							
Toluene	U	5.0							
Xylenes, Total	U	5.0							
Surr: 1,2-Dichloroethane-d4	59.99	0	50	0	120	70 - 130			
Surr: 4-Bromofluorobenzene	53.48	0	50	0	107	82 - 115			
Surr: Dibromofluoromethane	54.08	0	50	0	108	73 - 126			
Surr: Toluene-d8	54.11	0	50	0	108	81 - 120			

LCS	Sample ID: VLCSW-181126	Units: ug/L		Analysis Date: 26-Nov-2018 22:24					
Client ID:	Run ID: VOA6_328041	SeqNo: 4837117		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	21.58	5.0	20	0	108	74 - 120			
Ethylbenzene	20.65	5.0	20	0	103	77 - 117			
Toluene	21.81	5.0	20	0	109	77 - 118			
Xylenes, Total	63.22	5.0	60	0	105	75 - 122			
Surr: 1,2-Dichloroethane-d4	58.83	0	50	0	118	70 - 130			
Surr: 4-Bromofluorobenzene	46.8	0	50	0	93.6	82 - 115			
Surr: Dibromofluoromethane	54.23	0	50	0	108	73 - 126			
Surr: Toluene-d8	53	0	50	0	106	81 - 120			

MS	Sample ID: HS18110941-08MS	Units: ug/L		Analysis Date: 27-Nov-2018 02:24					
Client ID:	Run ID: VOA6_328041	SeqNo: 4837127		PrepDate:		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	320.5	25	100	229.4	91.1	70 - 127			
Ethylbenzene	121.8	25	100	24.82	97.0	70 - 124			
Toluene	142.6	25	100	37.81	105	70 - 123			
Xylenes, Total	325.9	25	300	36.07	96.6	70 - 130			
Surr: 1,2-Dichloroethane-d4	320.5	0	250	0	128	70 - 126			S
Surr: 4-Bromofluorobenzene	264.8	0	250	0	106	82 - 124			
Surr: Dibromofluoromethane	281.5	0	250	0	113	77 - 123			
Surr: Toluene-d8	272.6	0	250	0	109	82 - 127			

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R328041		Instrument: VOA6		Method: SW8260						
MSD		Sample ID: HS18110941-08MSD		Units: ug/L		Analysis Date: 27-Nov-2018 02:49				
Client ID:		Run ID: VOA6_328041		SeqNo: 4837128		PrepDate:		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	324.1	25	100	229.4	94.8	70 - 127	320.5	1.13	20	
Ethylbenzene	119	25	100	24.82	94.2	70 - 124	121.8	2.34	20	
Toluene	141.9	25	100	37.81	104	70 - 123	142.6	0.515	20	
Xylenes, Total	322.7	25	300	36.07	95.5	70 - 130	325.9	1	20	
Surr: 1,2-Dichloroethane-d4	314.2	0	250	0	126	70 - 126	320.5	1.99	20	
Surr: 4-Bromofluorobenzene	263.1	0	250	0	105	82 - 124	264.8	0.655	20	
Surr: Dibromofluoromethane	275	0	250	0	110	77 - 123	281.5	2.34	20	
Surr: Toluene-d8	274.9	0	250	0	110	82 - 127	272.6	0.827	20	
The following samples were analyzed in this batch: HS18110923-05 HS18110923-06										

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R328214		Instrument: ICS3K2		Method: E300						
MBLK	Sample ID: WBLKW1-112718	Units: mg/L		Analysis Date: 27-Nov-2018 22:49						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839180		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
LCS	Sample ID: WLCSW1-112718	Units: mg/L		Analysis Date: 27-Nov-2018 23:10						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839181		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.18	0.500	20	0	95.9	90 - 110				
LCSD	Sample ID: WLCSDW1-112718	Units: mg/L		Analysis Date: 27-Nov-2018 23:32						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839182		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.26	0.500	20	0	96.3	90 - 110	19.18	0.458	20	
MS	Sample ID: HS18111307-01MS	Units: mg/L		Analysis Date: 28-Nov-2018 04:36						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839196		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.51	0.500	10	1.709	98.0	80 - 120				
MS	Sample ID: HS18110564-03MS	Units: mg/L		Analysis Date: 28-Nov-2018 01:42						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839188		PrepDate:		DF: 200				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	9717	100	2000	7763	97.7	80 - 120				
MSD	Sample ID: HS18111307-01MSD	Units: mg/L		Analysis Date: 28-Nov-2018 04:57						
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839197		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.52	0.500	10	1.709	98.1	80 - 120	11.51	0.0781	20	

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

QC BATCH REPORT

Batch ID: R328214		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS18110564-03MSD	Units: mg/L		Analysis Date: 28-Nov-2018 02:04	
Client ID:	Run ID: ICS3K2_328214	SeqNo: 4839189		PrepDate:	DF: 200
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual

Chloride	9732	100	2000	7763	98.5	80 - 120	9717	0.154	20
----------	------	-----	------	------	------	----------	------	-------	----

The following samples were analyzed in this batch:

HS18110923-01	HS18110923-02	HS18110923-03	HS18110923-04
HS18110923-05	HS18110923-06		

Client: Glenn Springs Holdings, Inc.
Project: 55626DM GSHI PXP Elliot E.M. Federal TB
WorkOrder: HS18110923

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **16-Nov-2018 09:30**

Work Order: HS18110923

Received by: **NDR**

Checklist completed by:	<u>Pablo Martinez</u>	<u>17-Nov-2018</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>21-Nov-2018</u>
	eSignature	Date		eSignature	Date

Matrices: **WATER**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
TX1005 solids received in hermetically sealed vials?	Yes ☐	No ☐	N/A ☒
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	

Temperature(s)/Thermometer(s):	1.0C/1.4C UC/C	IR # 11	
Cooler(s)/Kit(s):	5734		
Date/Time sample(s) sent to storage:	11/17/18 12:15		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☒
pH adjusted by:			

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 192068

HS18110923

Glenn Springs Holdings, Inc.
55626DM GSHI PXP Elliot E.M. Federal TB

vv

Customer Information			Project Information		
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Elliot E.M. Federal TB		
Work Order		Project Number	55626DM (ENV749A006)		
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.		
Send Report To	Todd Wells	Invoice Attn	Accounts Payable		
Address	PO Box 2148	Address	PO Box 2148		
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148		
Phone		Phone			
Fax		Fax			
e-Mail Address	todd.wells@tetrattech.com	e-Mail Address			

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1R	11/15/18	1315	Groundwa	1,8	4	X	X									
2	MW-2	11/15/18	1345	Groundwa	1,8	4	X	X									
3	MW-3	11/15/18	1435	Groundwa	1,8	4	X	X									
4	MW-4	11/15/18	1420	Groundwa	1,8	4	X	X									
5	MW-5	11/15/18	1245	Groundwa	1,8	4	X	X									
6	DUP	11/15/18		Groundwa	1,8	4	X	X									
7	Trip Blank	11/15/18		Water	1,8	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Preston Paterint</i>		Shipment Method FedEx		Required Turnaround Time: (Check Box) ☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		Results Due Date:	
Relinquished by: <i>Preston Paterint</i>	Date: 11-15-18 Time: 5:00	Received by:		Notes: [GSHI PXP Elliot EM Federal TB]			
Relinquished by:	Date: 11/16/18 Time: 09:30	Received by (Laboratory):		Cooler ID: 5734	Cooler Temp: 1.0	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date: Time:	Checked by (Laboratory):		☒ Level II Std QC ☐ TRRP Checklist		☐ Level III Std QC/Raw Data ☐ TRRP Level IV	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035				☐ Level IV SWB46/CLP ☐ Other			

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>SM</i>
	Date: <i>11-15-18</i>	Time: <i>5:00</i>	Date: <i>11/16/18</i>
	Name: <i>Proton Partners</i>		
	Company: <i>Tetra Tech</i>		

5734

NOV 16 2018

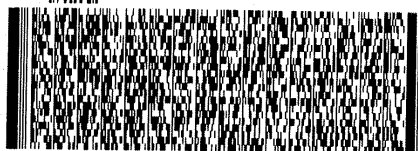
 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>SM</i>
	Date: <i>11-15-18</i>	Time: <i>5:00</i>	Date: <i>11/16/18</i>
	Name: <i>Proton Partners</i>		
	Company: <i>Tetra Tech</i>		

TO CLIENT SERVICES
 ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099

(281) 530-5656

REF: 55626/55627 GSHI-DW

RMA: ||| ||| |||



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Express



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0221

FRI - 16 NOV 10:30A
PRIORITY OVERNIGHT

AB SGRA

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TX-US IAH

