



April 6, 2020

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: 2015 to 2018 Groundwater Sampling Report
Occidental Permian, Ltd.
E.C. Hill Abandoned Tank Battery (ATB) at Well #24
Section 34, Township 23 South, Range 37 East
Lea County, New Mexico
NMOCD (AP-087)**

Mr. Rose-Coss,

This report details the results of the groundwater sampling events, which occurred in 2015, 2016, 2017 and 2018, performed at the OXY USA, Inc. (OXY) E. C. Hill Abandoned Tank Battery (ATB) at Well #24 (site). The site is located approximately 12 miles south of Eunice, Lea County, New Mexico. The facility was acquired by OXY in March 2008. Prior to OXY acquiring the property, 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, this site was inspected by Highlander Environmental Corp. Due to visual historic spills, Highlander supervised the installation of auger holes and soil borings at the site.

As part of the investigation, two impacted areas were investigated east of the abandoned facility. A total of eight (8) auger holes were installed in an area measuring 75' x 25'. One auger hole was placed in the second impacted area measuring 12' x 12'. Chloride impact was not observed in any of the analyzed auger samples. Total Petroleum Hydrocarbon (TPH) concentrations were detected below the New Mexico Oil Conservation Division (OCD) Recommended Remedial Action Level (RRAL) in six of the nine auger holes. One borehole was installed near auger hole AH-2. Borehole BH-1 exhibited TPH concentrations the RRAL to a depth of 60'-62' below ground surface (bgs).

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

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The sample from 70'-72' was below the RRAL.

Based on the analytical results, borehole (BH-1) was converted to a temporary 2-inch monitor well. Groundwater was encountered at approximately 82 feet below top of casing (TOC). On September 22 and 29, 2006 and October 4, 2006, Highlander purged and sampled the well per OCD guidelines for analysis of chlorides, TPH and Benzene, Toluene, Ethylene and Xylenes (BTEX). Chloride concentrations did not exceed New Mexico Water Quality Control Commission (NMWQCC) standards, while hydrocarbon constituents (BTEX) were below the NMWQCC action levels and total TPH was 73.3 milligrams per liter (mg/L). The well was scheduled to be sampled on May 16, 2007; however, 2.68' of Phase Separated Hydrocarbons (PSH) was measured in the well. At that time, the well was completed as a permanent well. On July 25, 2007, the Director of the OCD, Environmental Bureau was notified in writing of groundwater impact at the above-referenced site in accordance with NM Rule 116. To complete delineation at the site, three additional monitor wells were installed at the site in September 2007. The monitor well locations are shown on **Figure 3**.

On July 8, 2008, a Stage 1 Abatement Plan was submitted by OXY to the OCD addressing the groundwater and soil impacts at the site. In the abatement plan, a recovery well was proposed in the vicinity of monitor well MW-1. On January 21, 2011, Tetra Tech personnel supervised the installation of the 4-inch recovery well, RW-1, to a depth of 100-feet bgs. Recovery well RW-1 was installed approximately 10-feet from MW-1 with 4-inch PVC casing and 20-feet of 0.020-inch slot screen at the bottom of the well.

According to the Abatement Plan, OXY proposed to excavate the hydrocarbon impacted soils in the southern end of the facility to a depth of 4.0' bgs and place an impermeable infiltration barrier to prevent further vertical migration of hydrocarbons within the soil. The target area for excavation is depicted on the figure from the Abatement Plan which is included as **Appendix A**.

EXCAVATION

Between December 2 and December 9, 2015, approximately 400 cubic yards of impacted soil was excavated to a depth of approximately 4 feet bgs in the target excavation area depicted on the figure from the Abatement Plan which is included as **Appendix A**. Following excavation and prior to backfilling, a 40-mil liner was placed in the excavation. Following placement of the liner, the excavation was backfilled with clean soils and the site was graded in a manner to prevent rainwater infiltration. The excavated soil was transported to Sundance services in Eunice, New Mexico.

RECOVERY SYSTEM OPERATIONS AND MAINTENANCE

In 2016 a solar powered NAPL recovery system (SolarNAPL, TR 52600) was installed in recovery well RW-1 which operated through the reporting period. The system is



solar powered to charge an absorbed glass matt (AGM) deep cycle battery which powers a compressor inside the control panel with an external 7.5-gallon air pressure tank which provides the air power for a pneumatic skimmer pump. The system has a high level shut-off switch installed in a 1,000-gallon poly tank to shut the system down when the tank is full. System schematics are included in **Appendix B**.

GAUGING AND MONITOR WELL SAMPLING

Tetra Tech personnel were onsite to gauge monitor well MW-1 on ten dates during 2015 and during the first quarter of 2016. Monitor well MW-1 was not gauged following the first quarter of 2016 due to casing damage. Monitor wells MW-2, MW-3, MW-4, and RW-1 were gauged on a quarterly basis in 2015 and 2016. In 2017 and 2018, all monitor wells were gauged in the first and third quarters. All the wells on site were gauged with an electronic interface probe that measures to the nearest 0.01 foot. The gauging data is summarized in **Table 1**.

PSH was not observed in monitor wells MW-2, MW-3, and MW-4 during the reporting period. PSH was measured in monitor well MW-1 each time it was gauged in 2015 and 2016. PSH was first measured in recovery well RW-1 during the third quarter of 2015 and was subsequently measured during each monitoring event in 2016, 2017, and 2018. PSH thicknesses ranged from 0.03 to 0.63 feet in monitor well MW-1 and from 0.01 to 0.70 feet in recovery well RW-1. Groundwater gradient maps were generated for the third quarter sampling events for 2015, 2016 and 2017 and for the first and third quarter sampling events for 2018. The groundwater gradient was generally to the southeast throughout the reporting period. Groundwater gradient maps for 2015, 2016, 2017, and 2018 sampling events are included as **Figures 4 through 8**.

During each groundwater sampling event, the wells not containing PSH 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.

With two exceptions, laboratory analytical results indicated no detected BTEX concentrations above the method detection limits in each of the sampled wells during each of the sampling events. Laboratory analytical results of groundwater samples collected on August 31, 2017 from monitor wells MW-2 and MW-4 indicated a "J flagged" 'estimated toluene concentration of 0.64 mg/L monitor well MW-2 and a "J flagged" 'estimated toluene concentration of 0.62 mg/L monitor well MW-4. These concentrations are below the 1.0 mg/L NMWQCC action level for toluene. Toluene has not been historically detected in either well and it has not been detected again following this one sampling event.



Chloride analytical results for monitor wells MW-3 and MW-4 were below the NMWQCC standard of 250 mg/L during all 2015, 2016, 2017 and 2018 sampling events. Chloride analytical results for recovery well RW-1 was below the NMWQCC standard during its two sample events in 2015. Monitor well MW-1 was not sampled in 2015, 2016, 2017, or 2018 due to casing damage which makes the well inaccessible. Chloride analytical results for monitor well MW-2 exceeded the NMWQCC standard during the 2015, 2016, 2017 and 2018 sampling events with two exceptions (third quarter 2017 and third quarter 2018). In monitor well MW-2, chloride concentrations ranged from 216 mg/L on August 23, 2018 to 364 mg/L on March 24, 2015.

Graphs of chloride concentrations versus groundwater elevations for monitor wells MW-2, MW-3, and MW-4 are included in **Appendix C**. These graphs indicate generally stable and declining chloride concentrations in monitor well MW-3 and an increasing chloride concentration trend in monitor well MW-4; however, chloride concentrations remain below the NMWQCC standard in both wells. For monitor well MW-2, the only monitor well with chloride concentrations exceeding the NMWQCC standard, a generally declining trend is evident from 364 mg/L reported during the first quarter of 2015 to 259 mg/L reported during the third quarter of 2018.

Chloride concentration maps for 2015, 2016, 2017, and 2018 sampling events are included as **Figures 9** through **13**. The groundwater analytical data is summarized in **Table 2**. Copies of the laboratory analytical reports are included in **Appendix D**.

CONCLUSIONS

1. Between December 2 and December 9, 2015, approximately 400 cubic yards of impacted soil was excavated to a depth of approximately 4 feet bgs and a 40-mil liner was placed in the excavation. Following placement of the liner, the excavation was backfilled with clean soils and the site was graded in a manner to prevent rainwater infiltration.
2. Chloride concentrations for monitor well MW-2 exceeded the NMWQCC standard of 250 mg/L during all but two sampling events; however, a generally declining trend is evident from 364 mg/L reported during the first quarter of 2015 to 259 mg/L reported during the third quarter of 2018.
3. Chloride concentrations for monitor wells MW-3, MW-4, and RW-1 were below the NMWQCC standard of 250 mg/L each time they were sampled during 2015, 2016, 2017 and 2018. Recovery well RW-1 was sampled two times during 2015 when it did not contain PSH. Chloride concentrations are generally stable and declining in monitor well MW-3. An increasing chloride



concentration trend in apparent in monitor well MW-4; however, chloride concentrations remain below the NMWQCC standard.

4. With two exceptions, laboratory analytical results indicated no detected BTEX concentrations above the method detection limits in each of the sampled wells during each of the sampling events. Laboratory analytical results of groundwater samples collected on August 31, 2017 from monitor wells MW-2 and MW-4 indicated a "J flagged" 'estimated toluene concentrations below the NMWQCC action level for toluene. Toluene has not been historically detected in either well and it has not been detected again following this one sampling event.
5. In 2016 a solar powered NAPL recovery system (SolarNAPL, TR 52600) was installed in recovery well RW-1 which operated through the reporting period. The system is solar powered to charge an absorbed glass matt (AGM) deep cycle battery which powers a compressor inside the control panel with an external 7.5-gallon air pressure tank which provides the air power for a pneumatic skimmer pump.

PROPOSED 2019 GROUNDWATER MONITORING PROGRAM

Continued semi-annual groundwater monitoring and PSH recovery system operation are 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 'Mike Carmona'.

Mike Carmona
Project Manager

Attachments:

Figures

Tables

Appendix A – Abatement Plan Excavation Map

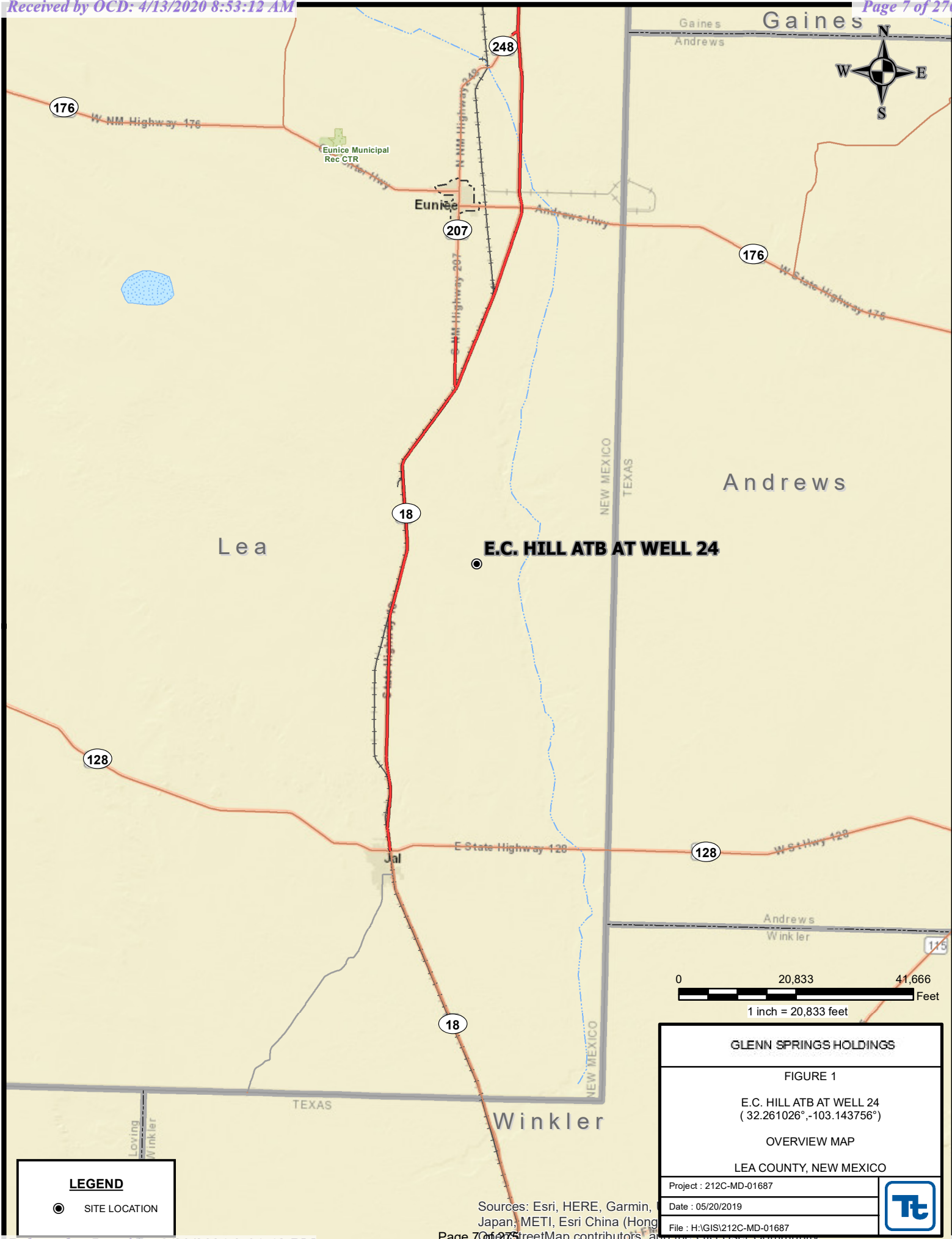
Appendix B – NAPL Recovery System Schematic

Appendix C – Graphs of Chloride Concentrations Versus Groundwater Elevations

Appendix D – Laboratory Reports

cc: Dusty Wilson – Glenn Springs Holdings, Inc.

Figures



LEGEND

● SITE LOCATION

GLENN SPRINGS HOLDINGS

FIGURE 1

E.C. HILL ATB AT WELL 24
(32.261026°,-103.143756°)

OVERVIEW MAP

LEA COUNTY, NEW MEXICO

Project : 212C-MD-01687

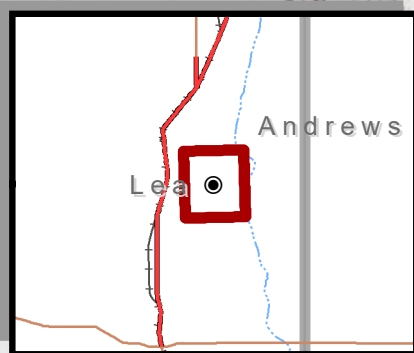
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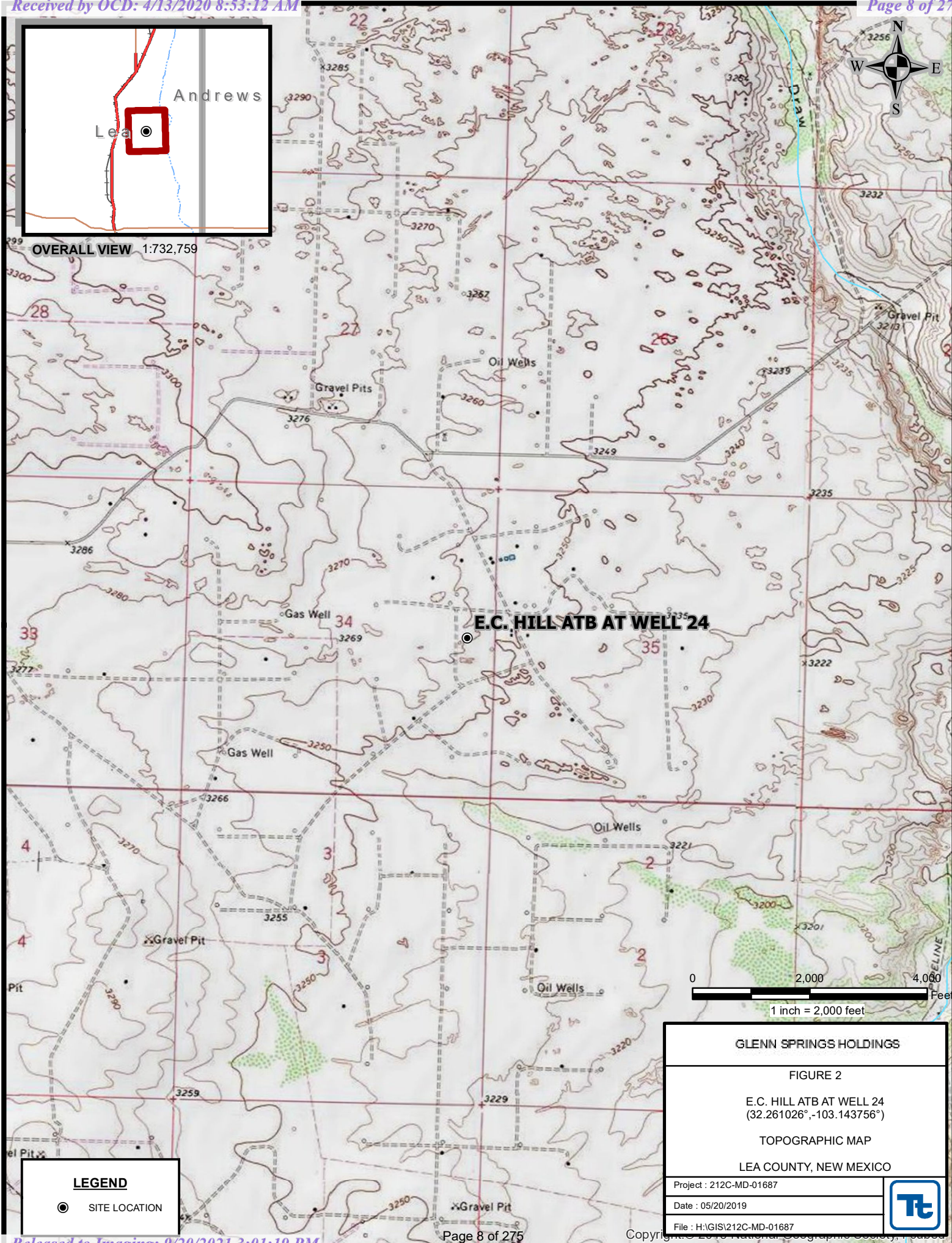


Sources: Esri, HERE, Garmin,
Japan, METI, Esri China (Hong

Page 7 of 275 StreetMap contributors, and the Open Street Community



OVERALL VIEW 1:732,759



LEGEND

● SITE LOCATION

GLENN SPRINGS HOLDINGS

FIGURE 2

E.C. HILL ATB AT WELL 24
(32.261026°, -103.143756°)

TOPOGRAPHIC MAP

LEA COUNTY, NEW MEXICO

Project : 212C-MD-01687

Date : 05/20/2019

File : H:\GIS\212C-MD-01687





FIGURE NO. 3

LEGEND  MONITOR WELL LOCATIONS	NOTES:	 TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559 Page 9 of 275	GLENN SPRINGS HOLDINGS NORTH 0 20 50ft	SITE MAP E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01087</td><td rowspan="2">REV.</td></tr><tr><td>Date: 7/31/2019</td></tr></table>	Project: 212C-MD-01087	REV.	Date: 7/31/2019
Project: 212C-MD-01087	REV.						
Date: 7/31/2019							



FIGURE NO. 4

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION
CONTOUR INTERVAL = .25 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

GROUNDWATER GRADIENT MAP
SEPTEMBER 08, 2015

E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01087	REV.
Date: 10/2/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\212C-MD-01087 ATB @ WELL 24	



FIGURE NO. 5

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION
CONTOUR INTERVAL = .25 FT.

GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

APPARENT GROUNDWATER GRADIENT

NOTES:

N/A = NOT AVAILABLE DUE TO CASING DAMAGE.

TETRA TECH

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

GLENN SPRINGS HOLDINGS

NORTH

0 20 50ft

GROUNDWATER GRADIENT MAP
SEPTEMBER 07, 2016

E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01087	REV.
Date: 10/2/2019	
File: H:\Acad Data\GLENN SPRINGS\2016\212C-MD EC HILL WELL 24 TB	



FIGURE NO. 6

LEGEND MONITOR WELL LOCATIONS GROUNDWATER ELEVATION CONTOUR INTERVAL = .50 FT. GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) APPARENT GROUNDWATER GRADIENT	NOTES: N/A = NOT AVAILABLE DUE TO CASING DAMAGE.	TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS NORTH	GROUNDWATER GRADIENT MAP AUGUST 29, 2017 E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01687</td><td>REV.</td></tr><tr><td>Date: 10/2/2019</td><td></td></tr><tr><td colspan="2">File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01687 E.C.ATB @ WELL #24</td></tr></table>	Project: 212C-MD-01687	REV.	Date: 10/2/2019		File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01687 E.C.ATB @ WELL #24	
Project: 212C-MD-01687	REV.									
Date: 10/2/2019										
File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01687 E.C.ATB @ WELL #24										



FIGURE NO. 7

LEGEND

MONITOR WELL LOCATIONS

GROUNDWATER ELEVATION
CONTOUR INTERVAL = .50 FT.

GROUNDWATER ELEVATION
(FEET ABOVE MEAN SEA LEVEL)

APPARENT GROUNDWATER GRADIENT

NOTES:

N/A = NOT AVAILABLE DUE TO CASING DAMAGE.

TETRA TECH

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

GLENN SPRINGS HOLDINGS

NORTH

0 20 50ft

GROUNDWATER GRADIENT MAP
FEBRUARY 20, 2018

E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01087	REV.
Date: 10/2/2019	
File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01087 E.C HILL ATB 24 18	



FIGURE NO. 8

LEGEND - MONITOR WELL LOCATIONS - GROUNDWATER ELEVATION CONTOUR INTERVAL = .25 FT. - GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) - APPARENT GROUNDWATER GRADIENT	NOTES: N/A = NOT AVAILABLE DUE TO CASING DAMAGE.	TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559 GLENN SPRINGS HOLDINGS	NORTH 0 20 50ft	GROUNDWATER GRADIENT MAP AUGUST 23, 2018 E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"> <tr> <td>Project: 212C-MD-01687</td> <td rowspan="3">REV.</td> </tr> <tr> <td>Date: 10/2/2019</td> </tr> <tr> <td>File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01687 E.C HILL ATB 24 18</td> </tr> </table>	Project: 212C-MD-01687	REV.	Date: 10/2/2019	File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01687 E.C HILL ATB 24 18
Project: 212C-MD-01687	REV.							
Date: 10/2/2019								
File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01687 E.C HILL ATB 24 18								



FIGURE NO. 9

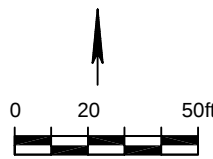
LEGEND ⊕ MONITOR WELL LOCATIONS RESULTS IN mg/L	NOTES:	 TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS	NORTH 	BTEX & CHLORIDE CONCENTRATION MAP SEPTEMBER 08, 2015 E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01087</td><td rowspan="3">REV.</td></tr><tr><td>Date: 10/2/2019</td></tr><tr><td>File: H:\Acad Data\GLENN SPRINGS\2015\212C-MD-01087 ATB @ WELL 24</td></tr></table>	Project: 212C-MD-01087	REV.	Date: 10/2/2019	File: H:\Acad Data\GLENN SPRINGS\2015\212C-MD-01087 ATB @ WELL 24
Project: 212C-MD-01087	REV.								
Date: 10/2/2019									
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FIGURE NO. 10

LEGEND

MONITOR WELL LOCATIONS

RESULTS IN mg/L

NOTES:
N/A = NOT AVAILABLE DUE TO CASING DAMAGE.

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

GLENN SPRINGS HOLDINGS

NORTH

0 20 50ft

BTEX & CHLORIDE CONCENTRATION MAP
SEPTEMBER 07, 2016

E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01087	REV.
Date: 10/2/2019	
File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD EC HILL WELL 24 TB	



FIGURE NO. 11

LEGEND ⊕ MONITOR WELL LOCATIONS RESULTS IN mg/L	NOTES: N/A = NOT AVAILABLE DUE TO CASING DAMAGE.	 TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS NORTH 0 20 50ft	BTEX & CHLORIDE CONCENTRATION MAP AUGUST 29, 2017 E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01087</td><td>REV.</td></tr><tr><td>Date: 10/2/2019</td><td></td></tr><tr><td colspan="2">File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01087 E.C.ATB @ WELL #24</td></tr></table>	Project: 212C-MD-01087	REV.	Date: 10/2/2019		File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01087 E.C.ATB @ WELL #24	
Project: 212C-MD-01087	REV.									
Date: 10/2/2019										
File: H:\Acad Data\GLENN SPRINGS\2017\212C-MD-01087 E.C.ATB @ WELL #24										



FIGURE NO. 12

LEGEND MONITOR WELL LOCATIONS RESULTS IN mg/L	NOTES: N/A = NOT AVAILABLE DUE TO CASING DAMAGE.	 TETRA TECH 901 W. WALL STREET STE. 100 MIDLAND, TEXAS (432) 682-4559	GLENN SPRINGS HOLDINGS NORTH 0 20 50ft	BTEX & CHLORIDE CONCENTRATION MAP FEBRUARY 20, 2018 E.C. HILL ATB @ WELL #24 LEA COUNTY, NEW MEXICO <table border="1"><tr><td>Project: 212C-MD-01087</td><td>REV.</td></tr><tr><td>Date: 10/2/2019</td><td></td></tr><tr><td colspan="2">File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01087 E.C HILL ATB 24 18</td></tr></table>	Project: 212C-MD-01087	REV.	Date: 10/2/2019		File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01087 E.C HILL ATB 24 18	
Project: 212C-MD-01087	REV.									
Date: 10/2/2019										
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FIGURE NO. 13

LEGEND

MONITOR WELL LOCATIONS

RESULTS IN mg/L

NOTES:
N/A = NOT AVAILABLE DUE TO CASING DAMAGE.



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

GLENN SPRINGS HOLDINGS

NORTH



BTEX & CHLORIDE CONCENTRATION MAP
AUGUST 23, 2018

E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

Project: 212C-MD-01687	REV.
Date: 10/2/2019	
File: H:\Acad Data\GLENN SPRINGS\2018\212C-MD-01687 E.C HILL ATB #24 TB	

Tables

TABLE 1
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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	3,260.03	98	82.00	85.03	3.03	3,177.27
	12/12/08			81.98	84.97	2.99	3,177.30
	03/12/09			81.98	85.02	3.04	3,177.29
	06/22/09			81.99	85.05	3.06	3,177.28
	09/16/09			82.03	85.13	3.10	3,177.23
	12/10/09			82.07	85.13	3.06	3,177.20
	03/10/10			82.02	85.08	3.06	3,177.25
	06/08/10			82.08	85.30	3.22	3,177.15
	09/13/10			82.08	85.03	2.95	3,177.21
	12/14/10			82.04	85.10	3.06	3,177.23
	03/10/11			82.13	85.07	2.94	3,177.17
	06/13/11			82.18	85.13	2.95	3,177.11
	09/20/11			82.36	85.01	2.65	3,177.01
	12/12/11			83.32	84.92	1.60	3,176.31
	04/05/12			82.32	84.70	2.38	3,177.12
	06/20/12			82.35	84.71	2.36	3,177.09
	09/25/12			82.37	85.11	2.74	3,176.98
	12/14/12			82.57	83.96	1.39	3,177.11
	03/27/13			82.71	83.09	0.38	3,177.23
	06/07/13			81.78	83.82	2.04	3,177.74
	06/24/13			82.68	83.96	1.28	3,177.03
	07/08/13			82.80	83.31	0.51	3,177.10
	07/23/13			82.80	83.20	0.40	3,177.13
	08/06/13			82.77	83.37	0.60	3,177.11
	09/19/13			NG	-	-	-
	11/07/13			82.67	83.82	1.15	3,177.07
	12/26/13			82.75	83.30	0.55	3,177.14
	03/26/14		97.85	82.73	83.44	0.71	3,177.12
	06/17/14			82.72	83.64	0.92	3,177.08
	09/26/14			82.74	83.67	0.93	3,177.06
	12/15/14			82.80	83.34	0.54	3,177.10
	01/29/15			82.89	83.52	0.63	3,176.98
	02/04/15			82.81	83.13	0.32	3,177.14
	03/24/15			82.85	82.91	0.06	3,177.17
	06/17/15			82.87	82.96	0.09	3,177.14
	07/30/15			82.77	82.85	0.08	3,177.24
	08/06/15			82.79	82.83	0.04	3,177.23
	08/12/15			82.74	82.77	0.03	3,177.28
	08/18/15			82.71	82.74	0.03	3,177.31
	09/08/15		-	82.74	82.77	0.03	3,177.28
	12/18/15	3,260.06	-	82.85	82.95	0.10	3,177.19
	03/14/16	3,260.06	-	82.67	82.71	0.04	3,177.38
	06/28/16	3,260.06	-	NA			
	09/07/16	3,260.06	-	NA			
	12/06/16			NA			
	03/01/17			NA			
	08/29/17			NA			
	02/20/18			NA			
	08/23/18			NA			

TABLE 1
 Glenn Springs Holdings, Inc.
 E.C. Hill 'B' ATB at Well #24
 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-2	10/23/08	3,265.85	95	-	87.69	-	3,178.16
	12/12/08			-	87.62	-	3,178.23
	03/12/09			-	87.63	-	3,178.22
	06/22/09			-	87.60	-	3,178.25
	09/16/09			-	87.69	-	3,178.16
	12/10/09			-	87.68	-	3,178.17
	03/10/10			-	87.61	-	3,178.24
	06/08/10			-	87.64	-	3,178.21
	09/13/10			-	87.64	-	3,178.21
	12/14/10			-	88.57	-	3,177.28
	03/10/11			-	87.78	-	3,178.07
	06/13/11			-	87.79	-	3,178.06
	09/20/11			-	87.85	-	3,178.00
	12/12/11			-	87.98	-	3,177.87
	04/05/12			-	87.83	-	3,178.02
	06/20/12			-	87.99	-	3,177.86
	09/25/12			-	87.84	-	3,178.01
	12/14/12			-	87.94	-	3,177.91
	03/27/13			-	87.92	-	3,177.93
	06/07/13			-	88.00	-	3,177.85
	09/19/13			-	87.98	-	3,177.87
	11/07/13			-	88.10	-	3,177.75
	12/26/13			-	88.03	-	3,177.82
	03/26/14		92.50	-	88.02	-	3,177.83
	06/17/14		92.50	-	87.95	-	3,177.90
	09/26/14		92.50	-	88.05	-	3,177.80
	12/15/14		92.50	-	88.12	-	3,177.73
	03/24/15		92.50	-	88.05	-	3,177.80
	06/17/15		92.50	-	88.01	-	3,177.84
	08/06/15		-	-	88.04	-	3,177.81
	09/08/15		92.50	-	87.98	-	3,177.87
	12/18/15	3,265.86	92.08	-	88.02	-	3,177.84
	03/14/16	3,265.86	-	-	87.88	-	3,177.98
	06/28/16	3,265.86	92.50	-	87.94	-	3,177.92
	09/07/16	3,265.86	-	-	87.90	-	3,177.96
	12/06/16	3,265.86	-	-	87.87	-	3,177.99
	03/01/17	3,265.86	92.50	-	87.98	-	3,177.88
	08/29/17	3,265.86	92.50	-	87.90	-	3,177.96
	02/20/18	3,265.86	92.44	-	87.50	-	3,178.36
	08/23/18	3,265.86	-	-	88.01	-	3,177.85

TABLE 1
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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	10/23/08	3,257.76	93	-	80.72	-	3,177.04
	12/12/08			-	80.67	-	3,177.09
	03/12/09			-	80.68	-	3,177.08
	06/22/09			-	79.65	-	3,178.11
	09/16/09			-	80.74	-	3,177.02
	12/10/09			-	80.73	-	3,177.03
	03/10/10			-	80.69	-	3,177.07
	06/08/10			-	80.72	-	3,177.04
	09/13/10			-	80.70	-	3,177.06
	12/14/10			-	81.61	-	3,176.15
	03/10/11			-	80.80	-	3,176.96
	06/13/11			-	80.86	-	3,176.90
	09/20/11			-	80.93	-	3,176.83
	12/12/11			-	81.05	-	3,176.71
	04/05/12			-	80.92	-	3,176.84
	06/20/12			-	80.96	-	3,176.80
	09/25/12			-	80.97	-	3,176.79
	12/14/12			-	81.02	-	3,176.74
	03/27/13			-	81.00	-	3,176.76
	06/07/13			-	81.05	-	3,176.71
	09/19/13			-	81.02	-	3,176.74
	11/07/13			-	81.15	-	3,176.61
	12/26/13		85.97	-	81.09	-	3,176.67
	03/26/14		84.23	-	81.09	-	3,176.67
	06/17/14		84.23	-	81.07	-	3,176.69
	09/26/14		84.23	-	81.11	-	3,176.65
	12/15/14		84.10	-	81.17	-	3,176.59
	03/24/15		84.10	-	81.09	-	3,176.67
	06/17/15		84.09	-	81.08	-	3,176.68
	08/06/15		-	-	81.03	-	3,176.73
	09/08/15		84.09	-	80.98	-	3,176.78
	12/18/15	3,257.76	83.95	-	81.05	-	3,176.71
	03/14/16	"	83.95	-	80.97	-	3,176.79
	06/28/16	"	84.09	-	81.01	-	3,176.75
	09/07/16	"	-	-	80.95	-	3,176.81
	12/06/16	"	-	-	81.05	-	3,176.71
	03/01/17	"	-	-	81.00	-	3,176.76
	08/29/17	"	-	-	81.92	-	3,175.84
	02/20/18	"	84.09	-	80.90	-	3,176.86
	08/23/18	"	-	-	81.04	-	3,176.72

TABLE 1
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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-4	10/23/08	3,260.41	93	-	82.90	-	3,177.51
	12/12/08			-	82.87	-	3,177.54
	03/12/09			-	82.88	-	3,177.53
	06/22/09			-	82.82	-	3,177.59
	09/16/09			-	82.91	-	3,177.50
	12/10/09			-	82.91	-	3,177.50
	03/10/10			-	82.83	-	3,177.58
	06/08/10			-	82.83	-	3,177.58
	09/13/10			-	82.88	-	3,177.53
	12/14/10			-	83.79	-	3,176.62
	03/10/11			-	82.99	-	3,177.42
	06/13/11			-	83.02	-	3,177.39
	09/20/11			-	83.06	-	3,177.35
	12/12/11			-	83.19	-	3,177.22
	04/05/12			-	83.06	-	3,177.35
	06/20/12			-	83.07	-	3,177.34
	09/25/12			-	83.05	-	3,177.36
	12/14/12			-	83.15	-	3,177.26
	03/27/13			-	83.19	-	3,177.22
	06/07/13			-	83.28	-	3,177.13
	09/19/13			-	83.15	-	3,177.26
	11/07/13			-	83.31	-	3,177.10
	12/26/13			-	83.24	-	3,177.17
	03/26/14		86.25	-	83.22	-	3,177.19
	06/17/14		86.25	-	83.18	-	3,177.23
	09/26/14		86.25	-	83.27	-	3,177.14
	12/15/14		86.05	-	83.34	-	3,177.07
	03/24/15		86.05	-	83.24	-	3,177.17
	06/17/15		86.07	-	83.29	-	3,177.12
	08/06/15		-	-	83.25	-	3,177.16
	09/08/15		86.07	-	83.16	-	3,177.25
	12/18/15	3,260.40	85.96	-	83.22	-	3,177.18
	03/14/16	"	-	-	83.10	-	3,177.30
	06/28/16	"	86.07	-	83.17	-	3,177.23
	09/07/16	"	-	-	83.12	-	3,177.28
	12/06/16	"	-	-	83.12	-	3,177.28
	03/01/17	"	87.55	-	83.20	-	3,177.20
	08/29/17	"	87.55	-	83.09	-	3,177.31
	02/20/18	"	85.90	-	83.06	-	3,177.34
	08/23/18	"	-	-	83.13	-	3,177.27

TABLE 1
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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)
RW-1	06/13/11	3,260.81		-	83.36	-	3,177.45
	09/20/11			-	83.48	-	3,177.33
	12/12/11			-	83.51	-	3,177.30
	04/05/12			-	84.70	-	3,176.11
	06/20/12			-	83.43	-	3,177.38
	09/25/12			-	83.42	-	3,177.39
	12/14/12			-	83.53	-	3,177.28
	03/27/13			-	83.53	-	3,177.28
	06/07/13			-	83.49	-	3,177.32
	09/19/13			-	NG	-	-
	11/07/13			-	83.60	-	3,177.21
	12/26/13			-	83.58	-	3,177.23
	03/26/14		103.10	-	83.58	-	3,177.23
	06/17/14		103.10	-	83.60	-	3,177.21
	09/26/14		103.10	-	83.59	-	3,177.22
	12/15/14		103.01	-	83.61	-	3,177.20
	03/24/15		102.99	-	83.61	-	3,177.20
	06/18/15		102.93	-	83.65	-	3,177.16
	08/06/15		-	-	83.54	-	3,177.27
	08/12/15		-	-	83.51	-	3,177.30
	08/18/15	3,260.81	-	83.48	83.51	0.03	3,177.32
	09/08/15	"	-	83.90	83.94	0.04	3,176.90
	12/18/15	"	102.93	83.60	83.70	0.10	3,177.19
	03/14/16	"	-	83.40	83.41	0.01	3,177.41
	06/28/16	"	-	83.48	83.49	0.01	3,177.33
	09/07/16	"	-	83.46	83.60	0.14	3,177.32
	12/06/16	"	-	83.45	83.59	0.14	3,177.33
	03/01/17	"	-	83.45	83.70	0.25	3,177.30
	08/29/17	"	-	83.44	83.88	0.44	3,177.26
	02/20/18	"	-	83.34	83.91	0.57	3,177.33
	08/23/18	"	-	83.32	84.02	0.70	3,177.32

(-) No data (TOC) Top of casing

(MW-1) Groundwater elevation corrected using 0.75 specific gravity

AMSL - Above Mean Sea Level

NG - Not Gauged, instrument malfunction

NA - Not Available, Top of Casing elevation not available for RW-1

TOC Elevations resurveyed by John West Survey Company on October 29, 2015

NA - Not Available, MW-1 Depth to product and water measurements not available due to casing obstruction

TABLE 2
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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)	TPH 8015M			Chloride (mg/L)
								GRO (mg/L)	DRO (mg/L)	Total (mg/L)	
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration											
			0.005 mg/L	1.0 mg/L	0.7 mg/L	0.62 mg/L					250.0 mg/L*
MW-1	09/22/06	-	<0.001	<0.001	0.031	0.0669	0.0979	-	-	-	138
	09/29/06	-	0.0012	<0.001	0.0143	0.0386	0.0541	-	-	-	111
	10/04/06	-	<0.001	<0.001	0.0175	0.097	0.1145	12.0	61.7	73.7	119
	11/14/07	2.68	Well contains measurable PSH and not sampled								
	10/23/08	3.03	Well contains measurable PSH and not sampled								
	12/12/08	2.99	Well contains measurable PSH and not sampled								
	03/12/09	3.04	Well contains measurable PSH and not sampled								
	06/22/09	3.06	Well contains measurable PSH and not sampled								
	09/16/09	3.10	Well contains measurable PSH and not sampled								
	12/10/09	3.06	Well contains measurable PSH and not sampled								
	03/10/10	3.06	Well contains measurable PSH and not sampled								
	06/08/10	3.22	Well contains measurable PSH and not sampled								
	09/13/10	2.95	Well contains measurable PSH and not sampled								
	12/14/10	3.06	Well contains measurable PSH and not sampled								
	03/10/11	2.94	Well contains measurable PSH and not sampled								
	06/13/11	2.95	Well contains measurable PSH and not sampled								
	09/20/11	2.65	Well contains measurable PSH and not sampled								
	12/12/11	1.60	Well contains measurable PSH and not sampled								
	04/06/12	2.38	Well contains measurable PSH and not sampled								
	06/20/12	2.36	Well contains measurable PSH and not sampled								
	09/25/12	2.74	Well contains measurable PSH and not sampled								
	12/14/12	1.39	Well contains measurable PSH and not sampled								
	03/27/13	0.38	Well contains measurable PSH and not sampled								
	06/07/13	2.04	Well contains measurable PSH and not sampled								
	09/19/13	NA	Well contains measurable PSH and not sampled								
	12/26/13	0.55	Well contains measurable PSH and not sampled								
	03/27/14	0.71	Well contains measurable PSH and not sampled								
	06/19/14	0.92	Well contains measurable PSH and not sampled								
	09/26/14	0.93	Well contains measurable PSH and not sampled								
	12/15/14	0.54	Well contains measurable PSH and not sampled								
	03/24/15	0.06	Well contains measurable PSH and not sampled								
	06/17/15	0.09	Well contains measurable PSH and not sampled								
09/08/15	0.09	Well contains measurable PSH and not sampled									
12/18/15	0.10	Well contains measurable PSH and not sampled									
03/16/16	0.04	Well contains measurable PSH and not sampled									
06/29/16		Casing damaged and not able to be sampled									
09/08/16		Casing damaged and not able to be sampled									
12/06/16		Casing damaged and not able to be sampled									
03/02/17		Casing damaged and not able to be sampled									
08/29/17		Casing damaged and not able to be sampled									
02/20/18		Casing damaged and not able to be sampled									
08/23/18		Casing damaged and not able to be sampled									

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212C-MD-00234
212C-MD-00763

TABLE 2
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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)	TPH 8015M			Chloride (mg/L)
								GRO (mg/L)	DRO (mg/L)	Total (mg/L)	
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration											
			0.005 mg/L	1.0 mg/L	0.7 mg/L	0.62 mg/L					250.0 mg/L*
MW-2	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	267
	12/12/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	270
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	315
	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	254
	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	232
	12/10/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	207
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	206
	06/08/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	162
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	230
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	206
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	217
	06/13/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	240
	09/20/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	260
	12/12/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	160
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	90.1
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	305
	09/25/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	299
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	222
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	339
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	126
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	319
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	236
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	245
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	270
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	317
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	317
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	364
	06/17/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	337
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	271
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	286
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	283
	06/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	270
Dup	06/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	252
	09/08/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	255
	12/06/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	283
Dup	03/02/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	282
	03/02/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	300
Dup	08/31/17	-	<0.005	0.64J	<0.005	<0.005	0.64J	-	-	-	241
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	246
	02/22/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	254
Dup	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	216
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	259

TABLE 2
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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)	TPH 8015M			Chloride (mg/L)	
								GRO (mg/L)	DRO (mg/L)	Total (mg/L)		
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration												
			0.005 mg/L	1.0 mg/L	0.7 mg/L	0.62 mg/L					250.0 mg/L*	
MW-3	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	119	
	12/12/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	120	
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	120	
	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	115	
	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	128	
	12/10/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	110	
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	114	
	06/08/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	108	
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	117	
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	119	
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	126	
	06/13/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	150	
	09/20/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	140	
	12/12/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	150	
	04/06/12	-	0.0016 J	<0.005	<0.005	<0.015	0.0016 J	-	-	-	613	
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	151	
	09/25/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	152	
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	135	
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	136	
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	69.5	
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	165	
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	157	
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	175	
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	207	
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	166	
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	169	
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	163	
	06/17/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	156	
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	152	
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	152	
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	156	
	Dup	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	155
		06/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	153
		09/08/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	143
	Dup	09/08/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	136
		12/06/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	178
	03/02/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	131	
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	132	
	02/22/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	158	
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	145	

TABLE 2
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
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)	TPH 8015M			Chloride (mg/L)
								GRO (mg/L)	DRO (mg/L)	Total (mg/L)	
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			0.005 mg/L	1.0 mg/L	0.7 mg/L	0.62 mg/L					250.0 mg/L*
MW-4	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	109
	12/12/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	108
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	111
	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	110
	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	102
	12/10/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	120
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	105
	06/08/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	118
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	109
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	107
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	109
	06/13/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	120
	09/20/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	110
	12/12/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	-	-	-	110
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	86.2
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	116
	09/25/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	121
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	105
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	115
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	121
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	132
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	115
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	113
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	140
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	122
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	118
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	119
	06/17/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	117
	09/08/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	108
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	111
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	118
	06/29/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	131
	09/08/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	114
	12/06/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	143
Dup	12/06/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	146
	03/02/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	115
Dup	08/31/17	-	<0.005	0.62J	<0.005	<0.005	0.62J	-	-	-	113
	02/22/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	120
	02/22/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	118
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	151

TABLE 2
Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

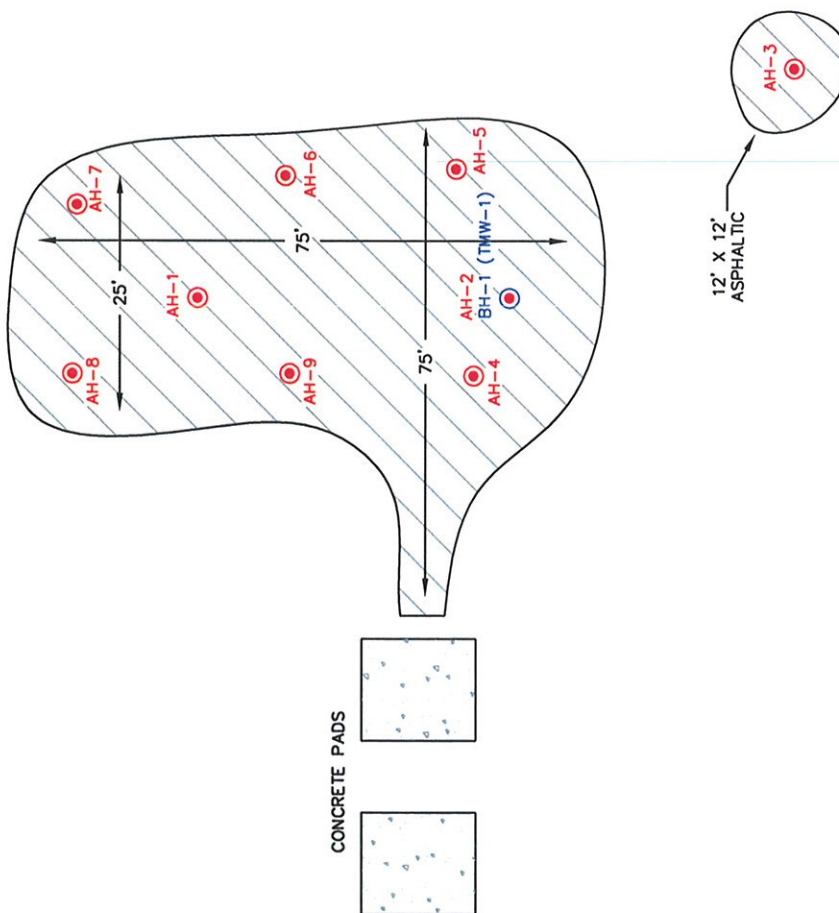
Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylene (mg/L)	Total BTEX (mg/L)	TPH 8015M			Chloride (mg/L)
								GRO (mg/L)	DRO (mg/L)	Total (mg/L)	
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration											
			0.005 mg/L	1.0 mg/L	0.7 mg/L	0.62 mg/L					250.0 mg/L*
RW-1	04/06/12	-	-	-	-	-	-	-	-	-	-
	06/20/12	-	-	-	-	-	-	-	-	-	-
	09/25/12	-	-	-	-	-	-	-	-	-	-
	12/14/12	-	-	-	-	-	-	-	-	-	-
	03/27/13	-	-	-	-	-	-	-	-	-	-
	06/07/13	-	-	-	-	-	-	-	-	-	-
	09/19/13	NA	-	-	-	-	-	-	-	-	-
	12/27/13	-	-	-	-	-	-	-	-	-	-
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	97.7
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	111
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	104
	12/15/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	98.6
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	102
	06/17/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	99.5
	09/08/15	0.04	-	-	-	-	-	-	-	-	-
	12/18/15	0.10	-	-	-	-	-	-	-	-	-
	03/16/16	0.01	-	-	-	-	-	-	-	-	-
	06/29/16	0.01	-	-	-	-	-	-	-	-	-
	09/08/16	0.14	-	-	-	-	-	-	-	-	-
	12/06/16	0.14	-	-	-	-	-	-	-	-	-
	03/01/17	0.25	-	-	-	-	-	-	-	-	-
	08/29/17	0.44	-	-	-	-	-	-	-	-	-
	02/20/18	0.57	-	-	-	-	-	-	-	-	-
	08/23/18	0.70	-	-	-	-	-	-	-	-	-

(-) not analyzed

(*) Other Standard for Domestic Water Supply

NA - Not Gauged, Instrument Malfunction

Appendix A



- BORE HOLES
- SPILL AREAS
- SAMPLE LOCATIONS

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

OXY USA, INC.

E.C. HILL "B" ATB AT WELL #24

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

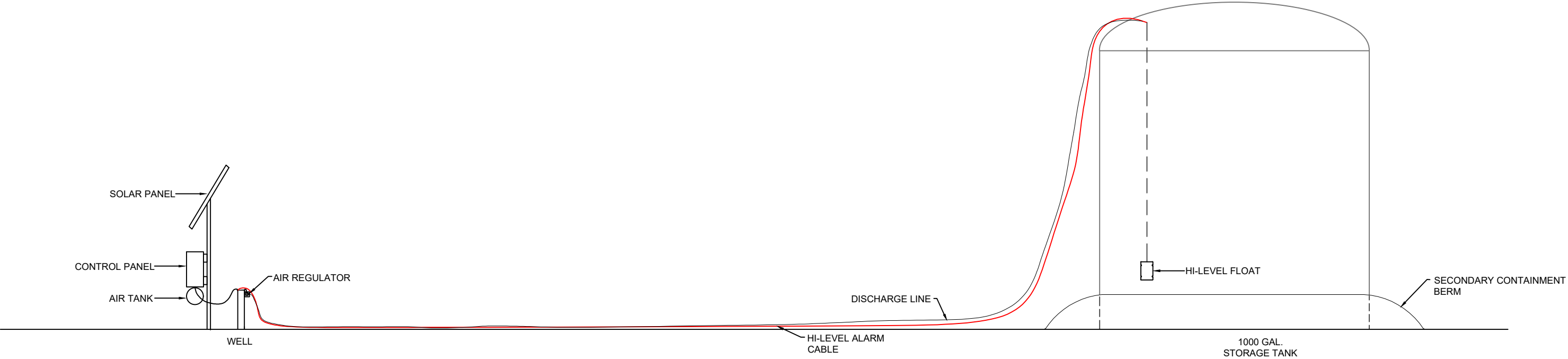
DATE: 11/30/06

DRAWN BY: JJ

FILE: C:\p000\0617\ E.C. HILL B ATB

NOT TO SCALE

Appendix B



NOT TO SCALE

LEGEND

NOTES:



TETRA TECH

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

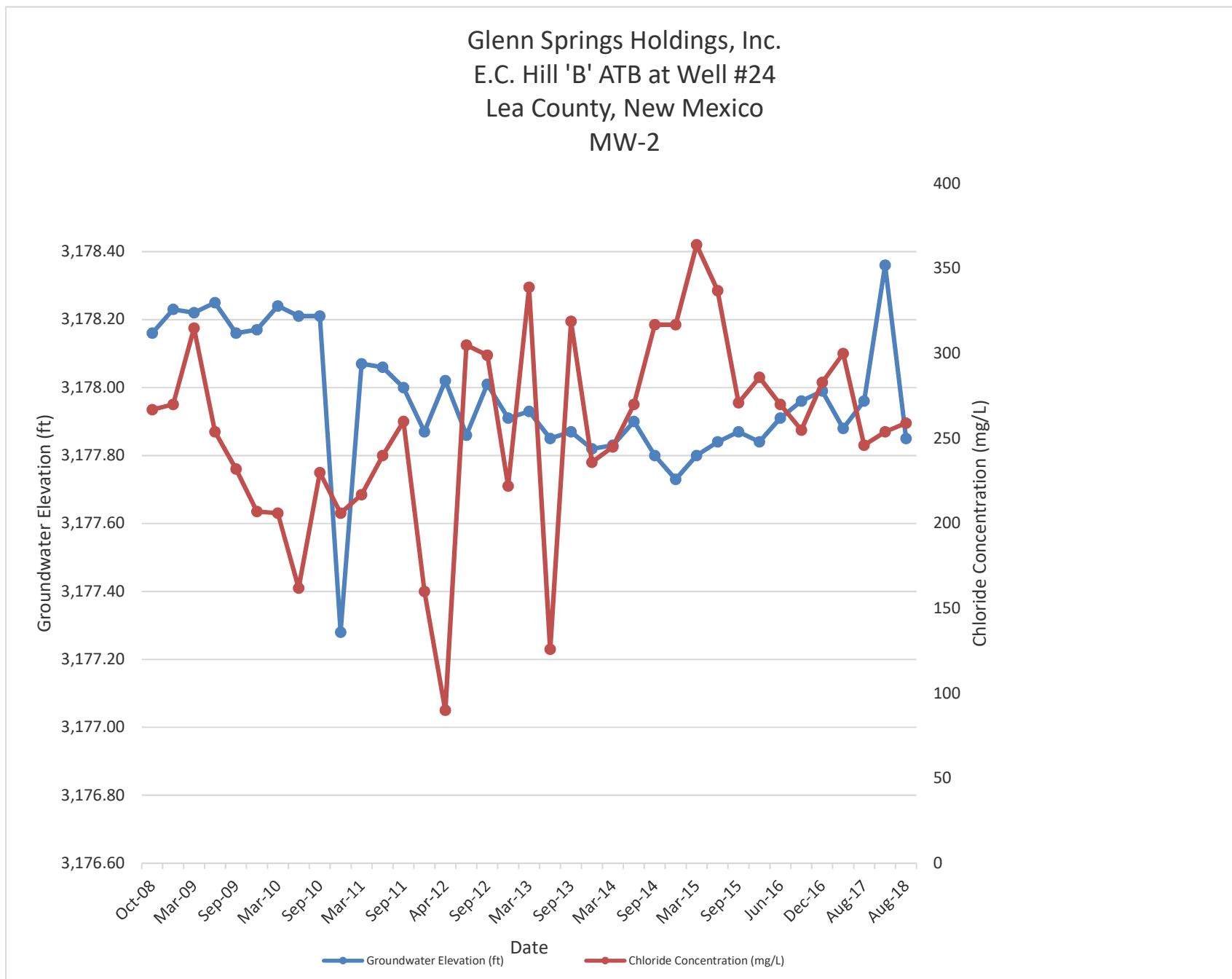
GLENN SPRINGS HOLDINGS

DETAIL SHEET

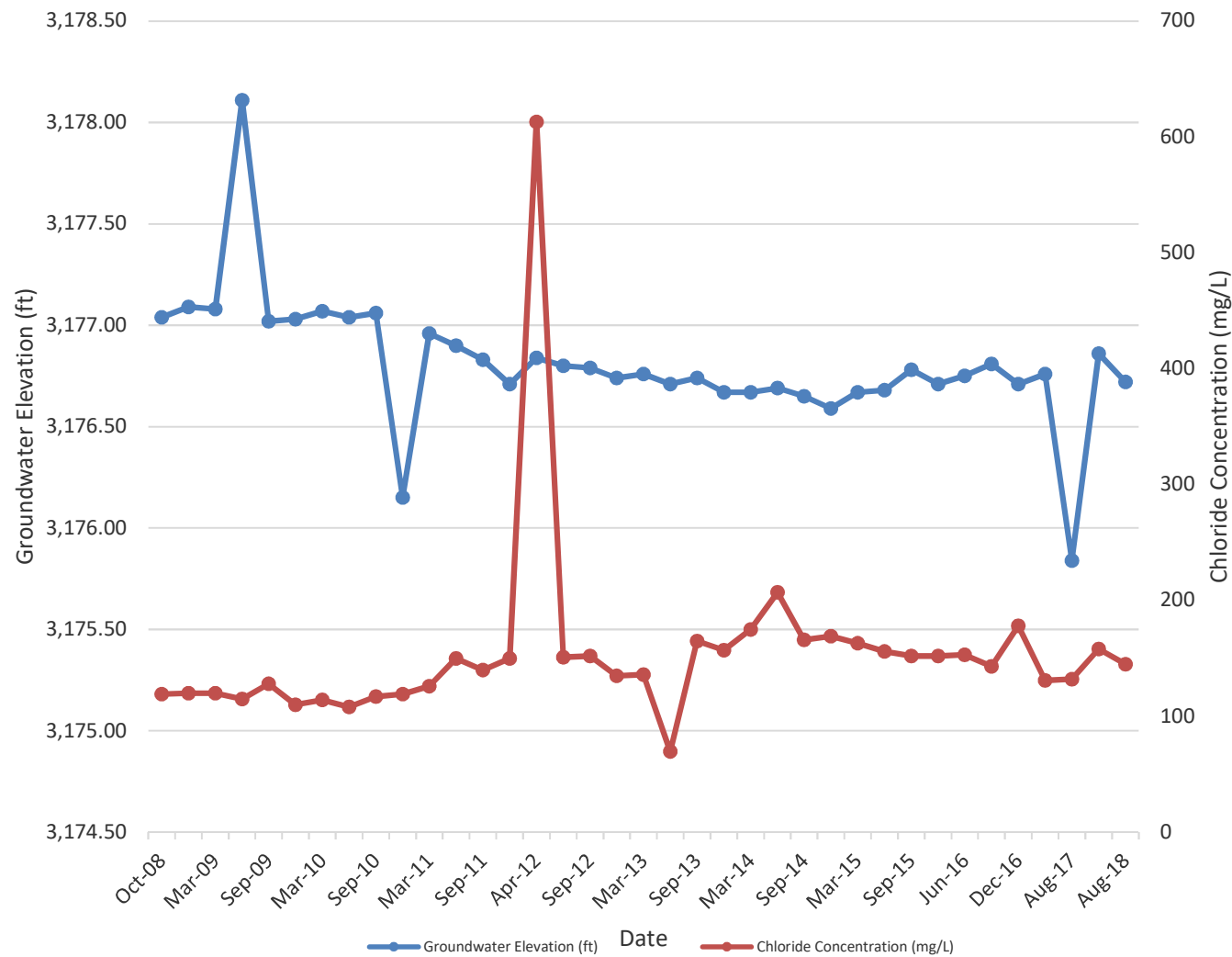
PSH RECOVERY SYSTEM
E.C. HILL ATB @ WELL #24
LEA COUNTY, NEW MEXICO

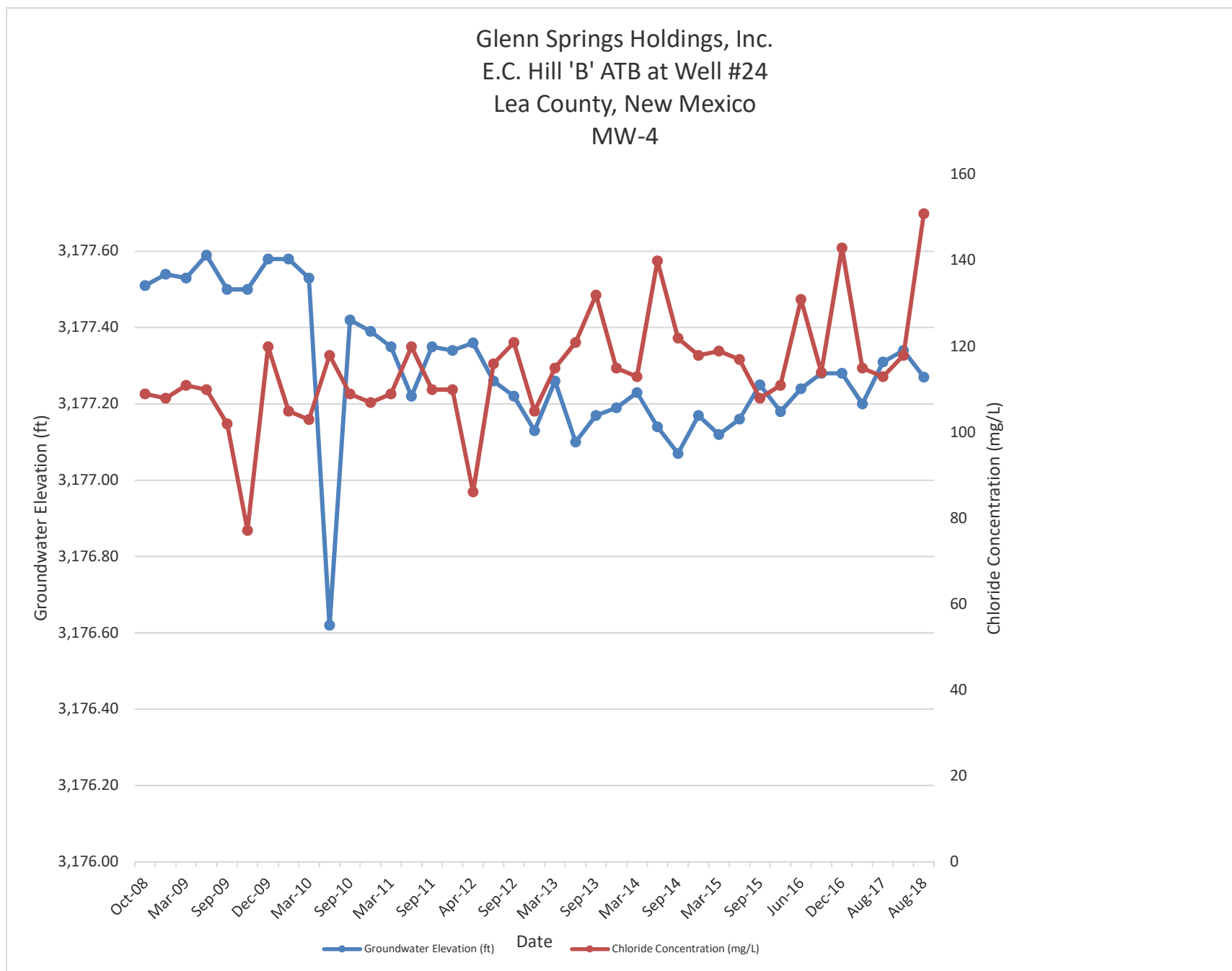
Project: 212C-MD-01687	REV.
Date: 10/8/2019	
File: H:\Acad Data\GLENN SPRINGS\2019\MISC. 2019 DETAILS\PSH RECOVERY SYSTEM	

Appendix C



Glenn Springs Holdings, Inc.
E.C. Hill 'B' ATB at Well #24
Lea County, New Mexico
MW-3





Appendix D



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

March 31, 2015

Angela Bown
Glenn Springs Holdings
C/O CRA
2055 Niagara Falls Blvd. Suite 3
Niagara Falls, NY 14304

Work Order: **HS15031009**

Laboratory Results for: **55625DM GSHI PXP Hill E.C. "B" ATB at Well #24**

Dear Angela,

ALS Environmental received 5 sample(s) on Mar 27, 2015 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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
Work Order: HS15031009

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15031009-01	MW-2	Water		24-Mar-2015 15:05	27-Mar-2015 09:10	☐
HS15031009-02	MW-3	Water		24-Mar-2015 15:10	27-Mar-2015 09:10	☐
HS15031009-03	MW-4	Water		24-Mar-2015 15:00	27-Mar-2015 09:10	☐
HS15031009-04	RW-1	Water		24-Mar-2015 15:00	27-Mar-2015 09:10	☐
HS15031009-05	Trip Blank 021715-94	Water		24-Mar-2015 00:00	27-Mar-2015 09:10	☐

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
Work Order: HS15031009

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R251921

Sample ID: **HS15031017-01**
• MS and MSD are for an unrelated sample

Batch ID: R251834

Sample ID: **HS15030965-07**
• MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: R251907

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 Sample ID: MW-2
 Collection Date: 24-Mar-2015 15:05

ANALYTICAL REPORT

WorkOrder:HS15031009
 Lab ID:HS15031009-01
 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	29-Mar-2015 16:56
Ethylbenzene	U		0.50	5.0	ug/L	1	29-Mar-2015 16:56
Toluene	U		0.50	5.0	ug/L	1	29-Mar-2015 16:56
Xylenes, Total	U		1.5	15	ug/L	1	29-Mar-2015 16:56
Surr: 1,2-Dichloroethane-d4	97.4			70-125	%REC	1	29-Mar-2015 16:56
Surr: 4-Bromofluorobenzene	105			72-125	%REC	1	29-Mar-2015 16:56
Surr: Dibromofluoromethane	92.7			71-125	%REC	1	29-Mar-2015 16:56
Surr: Toluene-d8	99.9			75-125	%REC	1	29-Mar-2015 16:56
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	364		2.00	5.00	mg/L	10	30-Mar-2015 17:48

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 Sample ID: MW-3
 Collection Date: 24-Mar-2015 15:10

ANALYTICAL REPORT

WorkOrder:HS15031009
 Lab ID:HS15031009-02
 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	29-Mar-2015 17:21
Ethylbenzene	U		0.50	5.0	ug/L	1	29-Mar-2015 17:21
Toluene	U		0.50	5.0	ug/L	1	29-Mar-2015 17:21
Xylenes, Total	U		1.5	15	ug/L	1	29-Mar-2015 17:21
Surr: 1,2-Dichloroethane-d4	96.8			70-125	%REC	1	29-Mar-2015 17:21
Surr: 4-Bromofluorobenzene	99.1			72-125	%REC	1	29-Mar-2015 17:21
Surr: Dibromofluoromethane	96.8			71-125	%REC	1	29-Mar-2015 17:21
Surr: Toluene-d8	98.6			75-125	%REC	1	29-Mar-2015 17:21
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	163		2.00	5.00	mg/L	10	30-Mar-2015 18:09

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 Sample ID: MW-4
 Collection Date: 24-Mar-2015 15:00

ANALYTICAL REPORT

WorkOrder:HS15031009
 Lab ID:HS15031009-03
 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	29-Mar-2015 17:45
Ethylbenzene	U		0.50	5.0	ug/L	1	29-Mar-2015 17:45
Toluene	U		0.50	5.0	ug/L	1	29-Mar-2015 17:45
Xylenes, Total	U		1.5	15	ug/L	1	29-Mar-2015 17:45
Surr: 1,2-Dichloroethane-d4	95.1			70-125	%REC	1	29-Mar-2015 17:45
Surr: 4-Bromofluorobenzene	99.2			72-125	%REC	1	29-Mar-2015 17:45
Surr: Dibromofluoromethane	96.1			71-125	%REC	1	29-Mar-2015 17:45
Surr: Toluene-d8	97.6			75-125	%REC	1	29-Mar-2015 17:45
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	119		2.00	5.00	mg/L	10	30-Mar-2015 18:31

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 Sample ID: RW-1
 Collection Date: 24-Mar-2015 15:00

ANALYTICAL REPORT

WorkOrder:HS15031009
 Lab ID:HS15031009-04
 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	29-Mar-2015 18:10
Ethylbenzene	U		0.50	5.0	ug/L	1	29-Mar-2015 18:10
Toluene	U		0.50	5.0	ug/L	1	29-Mar-2015 18:10
Xylenes, Total	U		1.5	15	ug/L	1	29-Mar-2015 18:10
Surr: 1,2-Dichloroethane-d4	92.3			70-125	%REC	1	29-Mar-2015 18:10
Surr: 4-Bromofluorobenzene	98.9			72-125	%REC	1	29-Mar-2015 18:10
Surr: Dibromofluoromethane	90.2			71-125	%REC	1	29-Mar-2015 18:10
Surr: Toluene-d8	96.1			75-125	%REC	1	29-Mar-2015 18:10
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	102		2.00	5.00	mg/L	10	30-Mar-2015 18:53

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 Sample ID: Trip Blank 021715-94
 Collection Date: 24-Mar-2015 00:00

ANALYTICAL REPORT

WorkOrder:HS15031009
 Lab ID:HS15031009-05
 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	30-Mar-2015 21:05
Ethylbenzene	U		0.50	5.0	ug/L	1	30-Mar-2015 21:05
Toluene	U		0.50	5.0	ug/L	1	30-Mar-2015 21:05
Xylenes, Total	U		1.5	15	ug/L	1	30-Mar-2015 21:05
Surr: 1,2-Dichloroethane-d4	91.9			70-125	%REC	1	30-Mar-2015 21:05
Surr: 4-Bromofluorobenzene	102			72-125	%REC	1	30-Mar-2015 21:05
Surr: Dibromofluoromethane	91.8			71-125	%REC	1	30-Mar-2015 21:05
Surr: Toluene-d8	102			75-125	%REC	1	30-Mar-2015 21:05

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R251834	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS15031009-01	MW-2	24 Mar 2015 15:05			29 Mar 2015 16:56	1
HS15031009-02	MW-3	24 Mar 2015 15:10			29 Mar 2015 17:21	1
HS15031009-03	MW-4	24 Mar 2015 15:00			29 Mar 2015 17:45	1
HS15031009-04	RW-1	24 Mar 2015 15:00			29 Mar 2015 18:10	1
Batch ID R251907	Test Name : ANIONS BY E300.0			Matrix: Water		
HS15031009-01	MW-2	24 Mar 2015 15:05			30 Mar 2015 17:48	10
HS15031009-02	MW-3	24 Mar 2015 15:10			30 Mar 2015 18:09	10
HS15031009-03	MW-4	24 Mar 2015 15:00			30 Mar 2015 18:31	10
HS15031009-04	RW-1	24 Mar 2015 15:00			30 Mar 2015 18:53	10
Batch ID R251921	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS15031009-05	Trip Blank 021715-94	24 Mar 2015 00:00			30 Mar 2015 21:05	1

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251834		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-150329	Units: ug/L		Analysis Date: 29-Mar-2015 13:39					
Client ID:	Run ID: VOA1_251834	SeqNo: 3226829		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	46.25	5.0	50	0	92.5	70 - 125			
Surr: 4-Bromofluorobenzene	50.32	5.0	50	0	101	72 - 125			
Surr: Dibromofluoromethane	46.33	5.0	50	0	92.7	71 - 125			
Surr: Toluene-d8	47.95	5.0	50	0	95.9	75 - 125			

LCS	Sample ID: VLCSW-150329	Units: ug/L		Analysis Date: 29-Mar-2015 12:49					
Client ID:	Run ID: VOA1_251834	SeqNo: 3226828		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	42.54	5.0	50	0	85.1	73 - 121			
Ethylbenzene	44.99	5.0	50	0	90.0	80 - 120			
Toluene	43.69	5.0	50	0	87.4	80 - 120			
Xylenes, Total	130.6	15	150	0	87.0	80 - 120			
Surr: 1,2-Dichloroethane-d4	51.93	5.0	50	0	104	70 - 125			
Surr: 4-Bromofluorobenzene	49.64	5.0	50	0	99.3	72 - 125			
Surr: Dibromofluoromethane	49.78	5.0	50	0	99.6	71 - 125			
Surr: Toluene-d8	49.04	5.0	50	0	98.1	75 - 125			

MS	Sample ID: HS15030965-07MS	Units: ug/L		Analysis Date: 29-Mar-2015 15:18					
Client ID:	Run ID: VOA1_251834	SeqNo: 3226833		PrepDate:		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	510.4	25	250	331.3	71.6	73 - 121			S
Ethylbenzene	245.7	25	250	2.477	97.3	80 - 120			
Toluene	309.7	25	250	99.73	84.0	80 - 120			
Xylenes, Total	700.4	75	750	14.29	91.5	80 - 120			
Surr: 1,2-Dichloroethane-d4	253.8	25	250	0	102	70 - 125			
Surr: 4-Bromofluorobenzene	250.7	25	250	0	100	72 - 125			
Surr: Dibromofluoromethane	245.9	25	250	0	98.3	71 - 125			
Surr: Toluene-d8	243.3	25	250	0	97.3	75 - 125			

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251834		Instrument: VOA1		Method: SW8260						
MSD	Sample ID: HS15030965-07MSD	Units: ug/L		Analysis Date: 29-Mar-2015 15:43						
Client ID:	Run ID: VOA1_251834	SeqNo: 3226834		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	506.3	25	250	331.3	70.0	73 - 121	510.4	0.811	20	S
Ethylbenzene	246.7	25	250	2.477	97.7	80 - 120	245.7	0.425	20	
Toluene	336.1	25	250	99.73	94.6	80 - 120	309.7	8.19	20	
Xylenes, Total	746.1	75	750	14.29	97.6	78 - 121	700.4	6.32	20	
Surr: 1,2-Dichloroethane-d4	250.7	25	250	0	100	70 - 125	253.8	1.22	20	
Surr: 4-Bromofluorobenzene	256.5	25	250	0	103	72 - 125	250.7	2.29	20	
Surr: Dibromofluoromethane	243.5	25	250	0	97.4	71 - 125	245.9	0.963	20	
Surr: Toluene-d8	252.8	25	250	0	101	75 - 125	243.3	3.84	20	
The following samples were analyzed in this batch:										
HS15031009-01		HS15031009-02		HS15031009-03		HS15031009-04				

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251921		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-150330	Units: ug/L		Analysis Date: 30-Mar-2015 11:12					
Client ID:	Run ID: VOA1_251921	SeqNo: 3228563		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	48.68	5.0	50	0	97.4	70 - 125			
Surr: 4-Bromofluorobenzene	51.96	5.0	50	0	104	72 - 125			
Surr: Dibromofluoromethane	45.49	5.0	50	0	91.0	71 - 125			
Surr: Toluene-d8	50.51	5.0	50	0	101	75 - 125			

LCS	Sample ID: VLCSW-150330	Units: ug/L		Analysis Date: 30-Mar-2015 10:23					
Client ID:	Run ID: VOA1_251921	SeqNo: 3228562		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	46.79	5.0	50	0	93.6	73 - 121			
Ethylbenzene	46.93	5.0	50	0	93.9	80 - 120			
Toluene	42.57	5.0	50	0	85.1	80 - 120			
Xylenes, Total	133.8	15	150	0	89.2	80 - 120			
Surr: 1,2-Dichloroethane-d4	49.2	5.0	50	0	98.4	70 - 125			
Surr: 4-Bromofluorobenzene	49.96	5.0	50	0	99.9	72 - 125			
Surr: Dibromofluoromethane	48.18	5.0	50	0	96.4	71 - 125			
Surr: Toluene-d8	50.96	5.0	50	0	102	75 - 125			

MS	Sample ID: HS15031017-01MS	Units: ug/L		Analysis Date: 30-Mar-2015 14:05					
Client ID:	Run ID: VOA1_251921	SeqNo: 3228567		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	41.15	5.0	50	0	82.3	73 - 121			
Ethylbenzene	41.15	5.0	50	0	82.3	80 - 120			
Toluene	40.75	5.0	50	0	81.5	80 - 120			
Xylenes, Total	124.6	15	150	0	83.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	53.71	5.0	50	0	107	70 - 125			
Surr: 4-Bromofluorobenzene	50.25	5.0	50	0	100	72 - 125			
Surr: Dibromofluoromethane	50.3	5.0	50	0	101	71 - 125			
Surr: Toluene-d8	47.73	5.0	50	0	95.5	75 - 125			

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
 WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251921		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS15031017-01MSD		Units: ug/L		Analysis Date: 30-Mar-2015 14:30				
Client ID:		Run ID: VOA1_251921		SeqNo: 3228568		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	41.09	5.0	50	0	82.2	73 - 121	41.15	0.143	20	
Ethylbenzene	40.31	5.0	50	0	80.6	80 - 120	41.15	2.06	20	
Toluene	39.81	5.0	50	0	79.6	80 - 120	40.75	2.33	20	S
Xylenes, Total	123.3	15	150	0	82.2	78 - 121	124.6	1.06	20	
Surr: 1,2-Dichloroethane-d4	51.85	5.0	50	0	104	70 - 125	53.71	3.54	20	
Surr: 4-Bromofluorobenzene	50.32	5.0	50	0	101	72 - 125	50.25	0.146	20	
Surr: Dibromofluoromethane	49	5.0	50	0	98.0	71 - 125	50.3	2.63	20	
Surr: Toluene-d8	49.09	5.0	50	0	98.2	75 - 125	47.73	2.81	20	

The following samples were analyzed in this batch: HS15031009-05

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251907		Instrument: ICS3K2		Method: E300					
MBLK	Sample ID: WBLKW1-033015	Units: mg/L		Analysis Date: 30-Mar-2015 09:40					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228272		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	U	0.500							
LCS	Sample ID: WLCSW1-033015	Units: mg/L		Analysis Date: 30-Mar-2015 10:02					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228273		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	20.15	0.500	20	0	101	90 - 110			
LCSD	Sample ID: WLCSDW1-033015	Units: mg/L		Analysis Date: 30-Mar-2015 10:24					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228274		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	19.91	0.500	20	0	99.5	90 - 110	20.15	1.22	20
MS	Sample ID: HS15031027-05MS	Units: mg/L		Analysis Date: 30-Mar-2015 12:38					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228280		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	37.12	0.500	10	27.46	96.6	80 - 120			
MS	Sample ID: HS15031017-03MS	Units: mg/L		Analysis Date: 30-Mar-2015 21:03					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228296		PrepDate:		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	189.6	5.00	100	92.3	97.3	80 - 120			
MSD	Sample ID: HS15031027-05MSD	Units: mg/L		Analysis Date: 30-Mar-2015 12:59					
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228281		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	37.08	0.500	10	27.46	96.1	80 - 120	37.12	0.116	20

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

QC BATCH REPORT

Batch ID: R251907		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS15031017-03MSD	Units: mg/L		Analysis Date: 30-Mar-2015 21:25	
Client ID:	Run ID: ICS3K2_251907	SeqNo: 3228297		PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	195.7	5.00	100	92.3 103	80 - 120 189.6 3.19 20
The following samples were analyzed in this batch:					
HS15031009-01		HS15031009-02		HS15031009-03	
				HS15031009-04	

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

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
WorkOrder: HS15031009

**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

ALS Group USA, Corp

Date: 31-Mar-15

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003403	09-May-2015
Kansas	E-10352 2014-2015	31-Jul-2015
Kentucky	KY 2014-2015	30-Apr-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2015	31-Dec-2015
North Dakota	R-193 2025	30-Apr-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-14-14	30-Apr-2015

ALS Group USA, Corp

Date: 31-Mar-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. "B" ATB at Well #24
Work Order: HS15031009

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15031009-01	MW-2	Login	3/27/2015 5:05:40 PM	RPG	19D
HS15031009-01	MW-2	Login	3/27/2015 5:05:40 PM	RPG	VW-3
HS15031009-02	MW-3	Login	3/27/2015 5:05:40 PM	RPG	19D
HS15031009-02	MW-3	Login	3/27/2015 5:05:40 PM	RPG	VW-3
HS15031009-03	MW-4	Login	3/27/2015 5:05:40 PM	RPG	19D
HS15031009-03	MW-4	Login	3/27/2015 5:05:40 PM	RPG	VW-3
HS15031009-04	RW-1	Login	3/27/2015 5:05:40 PM	RPG	19D
HS15031009-04	RW-1	Login	3/27/2015 5:05:40 PM	RPG	VW-3
HS15031009-05	Trip Blank 021715-94	Login	3/27/2015 5:05:40 PM	RPG	VW-3

ALS Group USA, Corp

Date: 31-Mar-15

Sample Receipt Checklist

Client Name: GLEN SPRINGS/CRA

Date/Time Received: **27-Mar-2015 09:10**

Work Order: HS15031009

Received by: **DES**

Checklist completed by:	<u>Raegen Giga</u>	27-Mar-2015	Reviewed by:	<u>Dane J. Wacasey</u>	30-Mar-2015
	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 ☐	
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):

0.8c/0.8c c/u

IR 1

Cooler(s)/Kit(s):

24032

Date/Time sample(s) sent to storage:

03/27/2015 17:10

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

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+1 425 356 2600Fort Collins, CO
+1 970 490 1511Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 118692

HS15031009

Glenn Springs Holdings

55625DM GSHI PXP Hill E C "B" ATB at Well 24



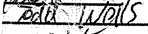
Customer Information		Project Information		ALS Project Manager:														
Purchase Order	4501709538	Project Name	GSHI PXP Hill, E.C. "B" ATB at Well #24	A	BTEX (8260)													
Work Order		Project Number	55625DM (ENV749A007)	B	Chloride (300)													
Company Name	Glenn Springs Holdings	Bill To Company	Glenn Springs Holdings	C														
Send Report To	Angela Bown	Invoice Attn	Jennifer Devonshire	D														
Address	C/O CRA	Address	C/O CRA	E														
	9033 Meridian Way		2055 Niagara Falls Blvd. Suite 3	F														
City/State/Zip	West Chester, Ohio, 45069	City/State/Zip	Niagara Falls	G														
Phone	(513) 942-4750	Phone		H														
Fax		Fax		I														
e-Mail Address	abown@craworld.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-1	3-24-15	11:11	Water		4	X	X									
2	MW-2	3-24-15	1505	Water	1/8	4	X	X									
3	MW-3	3-24-15	1510	Water	1/8	4	X	X									
4	MW-4	3-24-15	1500	Water	1/8	4	X	X									
5	RW-1	3-24-15	1500	Water	1/8	4	X	X									
6	Trip Blank			Water		2	X										
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Matthew McAnick</i>		Shipment Method <i>Fed ex</i>		Required Turnaround Time: (Check Box) ☒ Std 10 WK days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: <i>Gold Wells</i>	Date: <i>3/24/15</i>	Time: <i>1640</i>	Received by:	Notes:					
Relinquished by:	Date:	Time:	Received by (Laboratory): <i>J 3-27-15 09:10</i>	10 Day TAT					
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Cooler ID <i>24032</i>	Cooler Temp. <i>0-8°</i>	QC Package: (Check One Box Below)			
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 2 Std QC ☐ TRRP ChkList ☐ Level 3 Std QC/Row da ☐ TRRP Level 4 ☐ Level 4 SW846/CLP ☐ Other/EDD					

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 provided is for informational purposes only.

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	Name: 		
	Company: 		

ORIGIN ID:MAFA (432) 682-4559 TODD WELLS TETRA TECH 4000 N BIG SPRING ST MIDLAND, TX 79705 UNITED STATES US	SHIP L ACTWGT: CAD: 699. DIMS: 18x. BILL THIRD PARTY
TO ALS LABORATORY GROUP 10450 STANCLIFF RD STE 210 STE 210 HOUSTON TX 77099	
(000) 000-0000 INU: PO:	REF: DEPT:
	
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June 24, 2015

Angela Bown
Glenn Springs Holdings
C/O CRA
2055 Niagara Falls Blvd. Suite 3
Niagara Falls, NY 14304

Work Order: **HS15060876**

Laboratory Results for: **55625DM GSHI PXP Hill E.C. B ATB at Well 24**

Dear Angela,

ALS Environmental received 5 sample(s) on Jun 20, 2015 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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
Work Order: HS15060876

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15060876-01	MW-2	Water		17-Jun-2015 11:58	20-Jun-2015 11:00	☐
HS15060876-02	MW-3	Water		17-Jun-2015 11:50	20-Jun-2015 11:00	☐
HS15060876-03	MW-4	Water		17-Jun-2015 12:00	20-Jun-2015 11:00	☐
HS15060876-04	RW-1	Water		17-Jun-2015 10:40	20-Jun-2015 11:00	☐
HS15060876-05	Trip Blank	Water		17-Jun-2015 00:00	20-Jun-2015 11:00	☐

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
Work Order: HS15060876

CASE NARRATIVE

Work Order Comments

- Analyst Initials and Names:
PC Presenta Cabascango
JBA Johnnie B. Allen

GCMS Volatiles by Method SW8260

Batch ID: R256654

- Sample ID: **HS15060873-01**
- MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: R256662

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 17-Jun-2015 11:58

ANALYTICAL REPORT

WorkOrder:HS15060876
 Lab ID:HS15060876-01
 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	21-Jun-2015 17:30
Ethylbenzene	U		0.50	5.0	ug/L	1	21-Jun-2015 17:30
Toluene	U		0.50	5.0	ug/L	1	21-Jun-2015 17:30
Xylenes, Total	U		1.5	15	ug/L	1	21-Jun-2015 17:30
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	21-Jun-2015 17:30
Surr: 4-Bromofluorobenzene	94.9			72-125	%REC	1	21-Jun-2015 17:30
Surr: Dibromofluoromethane	110			71-125	%REC	1	21-Jun-2015 17:30
Surr: Toluene-d8	99.1			75-125	%REC	1	21-Jun-2015 17:30
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	337		2.00	5.00	mg/L	10	23-Jun-2015 00:15

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 17-Jun-2015 11:50

ANALYTICAL REPORT

WorkOrder:HS15060876
 Lab ID:HS15060876-02
 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	21-Jun-2015 17:53
Ethylbenzene	U		0.50	5.0	ug/L	1	21-Jun-2015 17:53
Toluene	U		0.50	5.0	ug/L	1	21-Jun-2015 17:53
Xylenes, Total	U		1.5	15	ug/L	1	21-Jun-2015 17:53
Surr: 1,2-Dichloroethane-d4	110			70-125	%REC	1	21-Jun-2015 17:53
Surr: 4-Bromofluorobenzene	94.8			72-125	%REC	1	21-Jun-2015 17:53
Surr: Dibromofluoromethane	111			71-125	%REC	1	21-Jun-2015 17:53
Surr: Toluene-d8	98.6			75-125	%REC	1	21-Jun-2015 17:53
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	156		2.00	5.00	mg/L	10	23-Jun-2015 00:37

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 17-Jun-2015 12:00

ANALYTICAL REPORT

WorkOrder:HS15060876
 Lab ID:HS15060876-03
 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	21-Jun-2015 18:17
Ethylbenzene	U		0.50	5.0	ug/L	1	21-Jun-2015 18:17
Toluene	U		0.50	5.0	ug/L	1	21-Jun-2015 18:17
Xylenes, Total	U		1.5	15	ug/L	1	21-Jun-2015 18:17
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	21-Jun-2015 18:17
Surr: 4-Bromofluorobenzene	94.9			72-125	%REC	1	21-Jun-2015 18:17
Surr: Dibromofluoromethane	109			71-125	%REC	1	21-Jun-2015 18:17
Surr: Toluene-d8	99.3			75-125	%REC	1	21-Jun-2015 18:17
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	117		2.00	5.00	mg/L	10	23-Jun-2015 00:58

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
 Sample ID: RW-1
 Collection Date: 17-Jun-2015 10:40

ANALYTICAL REPORT

WorkOrder:HS15060876
 Lab ID:HS15060876-04
 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	21-Jun-2015 18:41
Ethylbenzene	U		0.50	5.0	ug/L	1	21-Jun-2015 18:41
Toluene	U		0.50	5.0	ug/L	1	21-Jun-2015 18:41
Xylenes, Total	U		1.5	15	ug/L	1	21-Jun-2015 18:41
Surr: 1,2-Dichloroethane-d4	110			70-125	%REC	1	21-Jun-2015 18:41
Surr: 4-Bromofluorobenzene	95.8			72-125	%REC	1	21-Jun-2015 18:41
Surr: Dibromofluoromethane	110			71-125	%REC	1	21-Jun-2015 18:41
Surr: Toluene-d8	99.0			75-125	%REC	1	21-Jun-2015 18:41
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	99.5		2.00	5.00	mg/L	10	23-Jun-2015 01:20

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 17-Jun-2015 00:00

ANALYTICAL REPORT

WorkOrder:HS15060876
 Lab ID:HS15060876-05
 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	21-Jun-2015 19:04
Ethylbenzene	U		0.50	5.0	ug/L	1	21-Jun-2015 19:04
Toluene	U		0.50	5.0	ug/L	1	21-Jun-2015 19:04
Xylenes, Total	U		1.5	15	ug/L	1	21-Jun-2015 19:04
Surr: 1,2-Dichloroethane-d4	112			70-125	%REC	1	21-Jun-2015 19:04
Surr: 4-Bromofluorobenzene	95.1			72-125	%REC	1	21-Jun-2015 19:04
Surr: Dibromofluoromethane	110			71-125	%REC	1	21-Jun-2015 19:04
Surr: Toluene-d8	100			75-125	%REC	1	21-Jun-2015 19:04

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R256654	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS15060876-01	MW-2	17 Jun 2015 11:58			21 Jun 2015 17:30	1
HS15060876-02	MW-3	17 Jun 2015 11:50			21 Jun 2015 17:53	1
HS15060876-03	MW-4	17 Jun 2015 12:00			21 Jun 2015 18:17	1
HS15060876-04	RW-1	17 Jun 2015 10:40			21 Jun 2015 18:41	1
HS15060876-05	Trip Blank	17 Jun 2015 00:00			21 Jun 2015 19:04	1
Batch ID R256662	Test Name : ANIONS BY E300.0			Matrix: Water		
HS15060876-01	MW-2	17 Jun 2015 11:58			23 Jun 2015 00:15	10
HS15060876-02	MW-3	17 Jun 2015 11:50			23 Jun 2015 00:37	10
HS15060876-03	MW-4	17 Jun 2015 12:00			23 Jun 2015 00:58	10
HS15060876-04	RW-1	17 Jun 2015 10:40			23 Jun 2015 01:20	10

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

QC BATCH REPORT

Batch ID: R256654		Instrument: VOA7		Method: SW8260					
MBLK	Sample ID: VBLKW-150621	Units: ug/L		Analysis Date: 21-Jun-2015 12:46					
Client ID:	Run ID: VOA7_256654	SeqNo: 3329331		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	56.07	0	50	0	112	70 - 125			
Surr: 4-Bromofluorobenzene	47.51	0	50	0	95.0	72 - 125			
Surr: Dibromofluoromethane	54.88	0	50	0	110	71 - 125			
Surr: Toluene-d8	49.97	0	50	0	99.9	75 - 125			

LCS	Sample ID: VLCSW-150621	Units: ug/L		Analysis Date: 21-Jun-2015 11:12					
Client ID:	Run ID: VOA7_256654	SeqNo: 3329330		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.83	5.0	50	0	106	73 - 121			
Ethylbenzene	51.49	5.0	50	0	103	80 - 120			
Toluene	50.68	5.0	50	0	101	80 - 120			
Xylenes, Total	156.3	15	150	0	104	80 - 120			
Surr: 1,2-Dichloroethane-d4	56.83	0	50	0	114	70 - 125			
Surr: 4-Bromofluorobenzene	51.45	0	50	0	103	72 - 125			
Surr: Dibromofluoromethane	53.64	0	50	0	107	71 - 125			
Surr: Toluene-d8	49.16	0	50	0	98.3	75 - 125			

MS	Sample ID: HS15060873-01MS	Units: ug/L		Analysis Date: 21-Jun-2015 13:34					
Client ID:	Run ID: VOA7_256654	SeqNo: 3329333		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	97.79	5.0	50	0	196	73 - 121			S
Ethylbenzene	91.66	5.0	50	0	183	80 - 120			S
Toluene	92.55	5.0	50	0	185	80 - 120			S
Xylenes, Total	281.3	15	150	0	188	80 - 120			S
Surr: 1,2-Dichloroethane-d4	58.11	0	50	0	116	70 - 125			
Surr: 4-Bromofluorobenzene	51.13	0	50	0	102	72 - 125			
Surr: Dibromofluoromethane	56.75	0	50	0	113	71 - 125			
Surr: Toluene-d8	48.92	0	50	0	97.8	75 - 125			

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

QC BATCH REPORT

Batch ID: R256654		Instrument: VOA7		Method: SW8260						
MSD	Sample ID: HS15060873-01MSD	Units: ug/L			Analysis Date: 21-Jun-2015 13:57					
Client ID:	Run ID: VOA7_256654	SeqNo: 3329334		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD		
								%RPD	Limit	Qual
Benzene	107.4	5.0	50	0	215	73 - 121	97.79	9.36	20	S
Ethylbenzene	102.5	5.0	50	0	205	80 - 120	91.66	11.2	20	S
Toluene	101.8	5.0	50	0	204	80 - 120	92.55	9.57	20	S
Xylenes, Total	312.2	15	150	0	208	78 - 121	281.3	10.4	20	S
Surr: 1,2-Dichloroethane-d4	59.14	0	50	0	118	70 - 125	58.11	1.76	20	
Surr: 4-Bromofluorobenzene	51.62	0	50	0	103	72 - 125	51.13	0.959	20	
Surr: Dibromofluoromethane	56.68	0	50	0	113	71 - 125	56.75	0.121	20	
Surr: Toluene-d8	49.17	0	50	0	98.3	75 - 125	48.92	0.492	20	
The following samples were analyzed in this batch:										
HS15060876-01		HS15060876-02		HS15060876-03		HS15060876-04				
HS15060876-05										

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

QC BATCH REPORT

Batch ID: R256662		Instrument: ICS3K2		Method: E300						
MBLK	Sample ID: WBLKW2-062215	Units: mg/L		Analysis Date: 22-Jun-2015 13:47						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329599		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: WLCSW2-062215	Units: mg/L		Analysis Date: 22-Jun-2015 14:08						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329600		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.97	0.500	20	0	105	90 - 110				
LCSD	Sample ID: WLCSDW2-062215	Units: mg/L		Analysis Date: 22-Jun-2015 14:30						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329601		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.01	0.500	20	0	105	90 - 110	20.97	0.172	20	
MS	Sample ID: HS15060875-03MS	Units: mg/L		Analysis Date: 22-Jun-2015 22:48						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329620		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	61.9	0.500	10	52.38	95.1	80 - 120				O
MS	Sample ID: HS15060833-06MS	Units: mg/L		Analysis Date: 22-Jun-2015 17:44						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329606		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	569	10.0	200	351.8	109	80 - 120				
MSD	Sample ID: HS15060875-03MSD	Units: mg/L		Analysis Date: 22-Jun-2015 23:53						
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329623		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	62.39	0.500	10	52.38	100	80 - 120	61.9	0.789	20	O

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

QC BATCH REPORT

Batch ID: R256662		Instrument: ICS3K2		Method: E300	
MSD	Sample ID: HS15060833-06MSD	Units: mg/L		Analysis Date: 22-Jun-2015 18:06	
Client ID:	Run ID: ICS3K2_256662	SeqNo: 3329607		PrepDate:	DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	569	10.0	200	351.8 109	80 - 120 569 0.00211 20
The following samples were analyzed in this batch:					
HS15060876-01		HS15060876-02		HS15060876-03	
				HS15060876-04	

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

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
WorkOrder: HS15060876

**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

ALS Group USA, Corp

Date: 24-Jun-15

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jul-2015
Louisiana	03087 2014/2015	30-Jun-2015
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2014-128	31-Aug-2015
Texas	T104704231-15-15	30-Apr-2016

ALS Group USA, Corp

Date: 24-Jun-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill E.C. B ATB at Well 24
Work Order: HS15060876

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15060876-01	MW-2	Login	6/20/2015 1:24:05 PM	PMG	13B
HS15060876-01	MW-2	Login	6/20/2015 1:24:05 PM	PMG	VW-3
HS15060876-02	MW-3	Login	6/20/2015 1:24:05 PM	PMG	13B
HS15060876-02	MW-3	Login	6/20/2015 1:24:05 PM	PMG	VW-3
HS15060876-03	MW-4	Login	6/20/2015 1:24:05 PM	PMG	13B
HS15060876-03	MW-4	Login	6/20/2015 1:24:05 PM	PMG	VW-3
HS15060876-04	RW-1	Login	6/20/2015 1:24:05 PM	PMG	13B
HS15060876-04	RW-1	Login	6/20/2015 1:24:05 PM	PMG	VW-3
HS15060876-05	Trip Blank	Login	6/20/2015 1:24:05 PM	PMG	VW-3

ALS Group USA, Corp

Date: 24-Jun-15

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **20-Jun-2015 11:00**

Work Order: HS15060876

Received by: **PMG**Checklist completed by: Paresh M. Giga
eSignature20-Jun-2015
Date

Reviewed by:

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 ☐

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/1.6c U/C

IR4

Cooler(s)/Kit(s):

24261

Date/Time sample(s) sent to storage:

6/20/15 13:35

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:

Chain of Custody For

HS15060876



Environmental

Page ____ of ____

COC ID: 128240

Glenn Springs Holdings

55625DM (ENV749A007) GSHI PXP Hill E.C. "B" ATB a



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	4501709538	Project Name	GSHI PXP Hill, E.C. "B" ATB at Well #24
Work Order		Project Number	55625DM (ENV749A007)
Company Name	Glenn Springs Holdings	Bill To Company	Glenn Springs Holdings
Send Report To	Angela Bown	Invoice Attn	Jennifer Devonshire
Address	C/O CRA 9033 Meridian Way	Address	C/O CRA 2055 Niagara Falls Blvd. Suite 3
City/State/Zip	West Chester, Ohio, 45069	City/State/Zip	Niagara Falls
Phone	(513) 942-4750	Phone	
Fax		Fax	
e-Mail Address	abown@craworld.com	e-Mail Address	

BTEx (8260)

Chloride (300)

o.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1			Water			4	X	X								
2	MW-2	6-17-15	1158	Water	1/18		4	X	X								
3	MW-3	6-17-15	1150	Water	1/18		4	X	X								
4	MW-4	6-17-15	1200	Water	1/18		4	X	X								
5	RW-1	6-17-15	1040	Water	1/18		4	X	X								
6	Trip Blank	6-17-15	101A	Water	1/18		2	X									
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign

Matthew McDaniel

Shipment Method

FedEx

Required Turnaround Time: (Check Box)

☒ Std 10 WK days☐ Other

Results Due Date:

☐ 5 WK Days☐ 2 WK Days☐ 24 Hour

Relinquished by:

Relinquished by:

Relinquished by:

Date:

Date:

Date:

Time:

Time:

Time:

Received by:

Received by:

Received by:

Received by (Laboratory):

Checked by (Laboratory):

Notes:

10 Day TAT

Cooler ID

24261

Cooler Temp.

4.3

4

C/F 0.3

QC Package: (Check One Box Below)

☒ Level 2 Std QC☐ Level 3 Std QC/Row da☐ Level 4 SW846/CLP☐ Other/EDD☐ TRRP ChkList☐ TRRP Level 4Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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

Dr: _____
 Name: _____
 Company: _____

CUSTODY SEAL

Seal Broken: ☒ 7
 Date: 4-13-20
 Time: 1:30
 By: [Signature]

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

Dr: _____
 Name: _____
 Company: _____

CUSTODY SEAL

Seal Broken By: _____
 Date: 4-13-20
 Time: _____

3 of 4
 MPS# 7808 5066 0542
 Mstr# 8071 0710 5568
XO SGRA

SATURDAY 12:00P
PRIORITY OVERNIGHT
 77099
 TX-US IAH





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

September 21, 2015

Angela Bown
Glenn Springs Holdings
C/O GHD
2055 Niagara Falls Blvd. Suite 3
Niagara Falls, NY 14304

Work Order: **HS15090471**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 4 sample(s) on Sep 11, 2015 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 J. Wacasey".

Generated By: Jumoke.Lawal

Dane J. Wacasey

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15090471

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15090471-01	MW-2	Water		08-Sep-2015 14:30	11-Sep-2015 09:05	☐
HS15090471-02	MW-3	Water		08-Sep-2015 13:10	11-Sep-2015 09:05	☐
HS15090471-03	MW-4	Water		08-Sep-2015 12:50	11-Sep-2015 09:05	☐
HS15090471-04	TRIP BLANK 082815-06	Water		08-Sep-2015 00:00	11-Sep-2015 09:05	☐

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15090471

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R261167

Sample ID: **HS15090419-01**
• MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: R261289

Sample ID: **HS15090472-01**
Sample ID: **HS15090585-01**
• MS and MSD are for an unrelated sample

Analyst Names and Initials

KHT Kory H. Tate

PC Presenta Cabascango

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 08-Sep-2015 14:30

ANALYTICAL REPORT

WorkOrder:HS15090471
 Lab ID:HS15090471-01
 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	14-Sep-2015 17:37
Ethylbenzene	U		0.50	5.0	ug/L	1	14-Sep-2015 17:37
Toluene	U		0.50	5.0	ug/L	1	14-Sep-2015 17:37
Xylenes, Total	U		1.5	15	ug/L	1	14-Sep-2015 17:37
Surr: 1,2-Dichloroethane-d4	91.4			70-125	%REC	1	14-Sep-2015 17:37
Surr: 4-Bromofluorobenzene	96.2			72-125	%REC	1	14-Sep-2015 17:37
Surr: Dibromofluoromethane	97.1			71-125	%REC	1	14-Sep-2015 17:37
Surr: Toluene-d8	104			75-125	%REC	1	14-Sep-2015 17:37
ANIONS BY E300.0		Method:E300				Analyst: KHT	
Chloride	271		2.00	5.00	mg/L	10	16-Sep-2015 02:10

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 08-Sep-2015 13:10

ANALYTICAL REPORT

WorkOrder:HS15090471
 Lab ID:HS15090471-02
 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	14-Sep-2015 18:30
Ethylbenzene	U		0.50	5.0	ug/L	1	14-Sep-2015 18:30
Toluene	U		0.50	5.0	ug/L	1	14-Sep-2015 18:30
Xylenes, Total	U		1.5	15	ug/L	1	14-Sep-2015 18:30
Surr: 1,2-Dichloroethane-d4	94.3			70-125	%REC	1	14-Sep-2015 18:30
Surr: 4-Bromofluorobenzene	97.6			72-125	%REC	1	14-Sep-2015 18:30
Surr: Dibromofluoromethane	103			71-125	%REC	1	14-Sep-2015 18:30
Surr: Toluene-d8	109			75-125	%REC	1	14-Sep-2015 18:30
ANIONS BY E300.0		Method:E300				Analyst: KHT	
Chloride	152		2.00	5.00	mg/L	10	16-Sep-2015 02:39

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 08-Sep-2015 12:50

ANALYTICAL REPORT

WorkOrder:HS15090471
 Lab ID:HS15090471-03
 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	14-Sep-2015 19:24
Ethylbenzene	U		0.50	5.0	ug/L	1	14-Sep-2015 19:24
Toluene	U		0.50	5.0	ug/L	1	14-Sep-2015 19:24
Xylenes, Total	U		1.5	15	ug/L	1	14-Sep-2015 19:24
Surr: 1,2-Dichloroethane-d4	90.5			70-125	%REC	1	14-Sep-2015 19:24
Surr: 4-Bromofluorobenzene	95.1			72-125	%REC	1	14-Sep-2015 19:24
Surr: Dibromofluoromethane	101			71-125	%REC	1	14-Sep-2015 19:24
Surr: Toluene-d8	108			75-125	%REC	1	14-Sep-2015 19:24
ANIONS BY E300.0		Method:E300				Analyst: KHT	
Chloride	108		2.00	5.00	mg/L	10	16-Sep-2015 03:37

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: TRIP BLANK 082815-06
 Collection Date: 08-Sep-2015 00:00

ANALYTICAL REPORT

WorkOrder:HS15090471
 Lab ID:HS15090471-04
 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	14-Sep-2015 20:17
Ethylbenzene	U		0.50	5.0	ug/L	1	14-Sep-2015 20:17
Toluene	U		0.50	5.0	ug/L	1	14-Sep-2015 20:17
Xylenes, Total	U		1.5	15	ug/L	1	14-Sep-2015 20:17
Surr: 1,2-Dichloroethane-d4	90.8			70-125	%REC	1	14-Sep-2015 20:17
Surr: 4-Bromofluorobenzene	95.3			72-125	%REC	1	14-Sep-2015 20:17
Surr: Dibromofluoromethane	98.0			71-125	%REC	1	14-Sep-2015 20:17
Surr: Toluene-d8	104			75-125	%REC	1	14-Sep-2015 20:17

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R261167	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS15090471-01	MW-2	08 Sep 2015 14:30			14 Sep 2015 17:37	1
HS15090471-02	MW-3	08 Sep 2015 13:10			14 Sep 2015 18:30	1
HS15090471-03	MW-4	08 Sep 2015 12:50			14 Sep 2015 19:24	1
HS15090471-04	TRIP BLANK 082815-06	08 Sep 2015 00:00			14 Sep 2015 20:17	1
Batch ID R261289	Test Name : ANIONS BY E300.0			Matrix: Water		
HS15090471-01	MW-2	08 Sep 2015 14:30			16 Sep 2015 02:10	10
HS15090471-02	MW-3	08 Sep 2015 13:10			16 Sep 2015 02:39	10
HS15090471-03	MW-4	08 Sep 2015 12:50			16 Sep 2015 03:37	10

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

QC BATCH REPORT

Batch ID: R261167		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-150914	Units: ug/L		Analysis Date: 14-Sep-2015 13:12					
Client ID:	Run ID: VOA1_261167	SeqNo: 3421979		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	42.76	0	50	0	85.5	70 - 125			
Surr: 4-Bromofluorobenzene	47.38	0	50	0	94.8	72 - 125			
Surr: Dibromofluoromethane	49.28	0	50	0	98.6	71 - 125			
Surr: Toluene-d8	48.32	0	50	0	96.6	75 - 125			

LCS	Sample ID: VLCSW-150914	Units: ug/L		Analysis Date: 14-Sep-2015 12:19					
Client ID:	Run ID: VOA1_261167	SeqNo: 3421978		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	73 - 121			
Ethylbenzene	43.31	5.0	50	0	86.6	80 - 120			
Toluene	41.82	5.0	50	0	83.6	80 - 120			
Xylenes, Total	126.5	15	150	0	84.4	80 - 120			
Surr: 1,2-Dichloroethane-d4	44.64	0	50	0	89.3	70 - 125			
Surr: 4-Bromofluorobenzene	48.11	0	50	0	96.2	72 - 125			
Surr: Dibromofluoromethane	46.49	0	50	0	93.0	71 - 125			
Surr: Toluene-d8	48.56	0	50	0	97.1	75 - 125			

MS	Sample ID: HS15090419-01MS	Units: ug/L		Analysis Date: 14-Sep-2015 15:24					
Client ID:	Run ID: VOA1_261167	SeqNo: 3421981		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	5280	250	2500	2054	129	73 - 121			S
Ethylbenzene	2726	250	2500	369.3	94.3	80 - 120			
Toluene	2819	250	2500	374.4	97.8	80 - 120			
Xylenes, Total	8386	750	7500	1316	94.3	80 - 120			
Surr: 1,2-Dichloroethane-d4	2322	0	2500	0	92.9	70 - 125			
Surr: 4-Bromofluorobenzene	2257	0	2500	0	90.3	72 - 125			
Surr: Dibromofluoromethane	2460	0	2500	0	98.4	71 - 125			
Surr: Toluene-d8	2662	0	2500	0	106	75 - 125			

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

QC BATCH REPORT

Batch ID: R261167		Instrument: VOA1		Method: SW8260							
MSD		Sample ID: HS15090419-01MSD		Units: ug/L		Analysis Date: 14-Sep-2015 15:51					
Client ID:		Run ID: VOA1_261167		SeqNo: 3421982		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual	
Benzene	5290	250	2500	2054	129	73 - 121	5280	0.178	20	S	
Ethylbenzene	2710	250	2500	369.3	93.6	80 - 120	2726	0.595	20		
Toluene	2750	250	2500	374.4	95.0	80 - 120	2819	2.48	20		
Xylenes, Total	8204	750	7500	1316	91.8	78 - 121	8386	2.2	20		
Surr: 1,2-Dichloroethane-d4	2399	0	2500	0	96.0	70 - 125	2322	3.29	20		
Surr: 4-Bromofluorobenzene	2252	0	2500	0	90.1	72 - 125	2257	0.191	20		
Surr: Dibromofluoromethane	2506	0	2500	0	100	71 - 125	2460	1.84	20		
Surr: Toluene-d8	2517	0	2500	0	101	75 - 125	2662	5.61	20		
The following samples were anayzed in this batch:											
HS15090471-01		HS15090471-02		HS15090471-03		HS15090471-04					

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

QC BATCH REPORT

Batch ID: R261289		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-091515	Units: mg/L		Analysis Date: 15-Sep-2015 11:53						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424383		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: WLCSW1-091515	Units: mg/L		Analysis Date: 15-Sep-2015 12:07						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424384		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.89	0.500	20	0	99.4	90 - 110				
LCSD	Sample ID: WLCSDW1-091515	Units: mg/L		Analysis Date: 15-Sep-2015 12:22						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424385		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.48	0.500	20	0	97.4	90 - 110	19.89	2.09	20	
MS	Sample ID: HS15090585-01MS	Units: mg/L		Analysis Date: 15-Sep-2015 15:52						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424395		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	102.6	0.500	10	94.66	79.4	80 - 120				SEO
MS	Sample ID: HS15090525-01MS	Units: mg/L		Analysis Date: 15-Sep-2015 20:35						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424403		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	11.77	0.500	10	1.48	103	80 - 120				
MS	Sample ID: HS15090472-01MS	Units: mg/L		Analysis Date: 16-Sep-2015 04:06						
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424434		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	93.31	0.500	10	86.21	71.0	80 - 120				SO

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

QC BATCH REPORT

Batch ID: R261289		Instrument: ICS2100		Method: E300							
MSD	Sample ID: HS15090585-01MSD	Units: mg/L		Analysis Date: 15-Sep-2015 16:07							
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424396		PrepDate:		DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	103.8	0.500	10	94.66	91.2	80 - 120	102.6	1.14	20	EO	
MSD	Sample ID: HS15090525-01MSD	Units: mg/L		Analysis Date: 15-Sep-2015 20:50							
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424404		PrepDate:		DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	11.99	0.500	10	1.48	105	80 - 120	11.77	1.87	20		
MSD	Sample ID: HS15090472-01MSD	Units: mg/L		Analysis Date: 16-Sep-2015 04:21							
Client ID:	Run ID: ICS2100_261289	SeqNo: 3424435		PrepDate:		DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	94.57	0.500	10	86.21	83.6	80 - 120	93.31	1.34	20	O	
The following samples were analyzed in this batch:											
HS15090471-01			HS15090471-02			HS15090471-03					

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

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15090471

**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

ALS Group USA, Corp

Date: 21-Sep-15

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Dept of Defense	L2231 Rev 3-20-2014	22-Dec-2015
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	30-Sep-2015
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

ALS Group USA, Corp

Date: 21-Sep-15

Client: Glenn Springs Holdings
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15090471

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15090471-01	MW-2	Login	9/11/2015 1:08:25 PM	RPG	1C
HS15090471-01	MW-2	Login	9/11/2015 1:08:25 PM	RPG	VW-3
HS15090471-02	MW-3	Login	9/11/2015 1:08:25 PM	RPG	1C
HS15090471-02	MW-3	Login	9/11/2015 1:08:25 PM	RPG	VW-3
HS15090471-03	MW-4	Login	9/11/2015 1:08:25 PM	RPG	1C
HS15090471-03	MW-4	Login	9/11/2015 1:08:25 PM	RPG	VW-3
HS15090471-04	TRIP BLANK 082815-06	Login	9/11/2015 1:08:25 PM	RPG	VW-3

ALS Group USA, Corp

Date: 21-Sep-15

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **11-Sep-2015 09:05**

Work Order: HS15090471

Received by: **BHH**

Checklist completed by:	<u>Raegen Giga</u>	11-Sep-2015	Reviewed by:	<u>Dane J. Wacasey</u>	15-Sep-2015
	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):	0.8c/0.7c uc/c	IR 1
--------------------------------	----------------	------

Cooler(s)/Kit(s):	24184
-------------------	-------

Date/Time sample(s) sent to storage:	09/11/2015 13:12
--------------------------------------	------------------

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 5336Everett, WA
+1 425 356 2600Fort Collins, CO
+1 970 490 1511Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 131260

HS15090471

Glenn Springs Holdings

55625DM GSHI PXP Hill E.C. "B" ATB at Well #24



Customer Information				Project Information				ALS Project Manager:												
Purchase Order	4501709538			Project Name	GSHI PXP Hill, E.C. "B" ATB at Well #24			A	BTEX (8260)											
Work Order				Project Number	55625DM (ENV749A007)			B	Chloride (300)											
Company Name	Glenn Springs Holdings			Bill To Company	Glenn Springs Holdings			C												
Send Report To	Angela Bown			Invoice Attn	Jennifer Devonshire			D												
Address	C/O CRA			Address	C/O CRA			E												
	9033 Meridian Way				2055 Niagara Falls Blvd. Suite 3			F												
City/State/Zip	West Chester, Ohio 45069			City/State/Zip	Niagara Falls			G												
Phone	(513) 942-4750			Phone				H												
Fax				Fax				I												
e-Mail Address	abown@croworld.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-1	—	—	Water			4	X	X								
2	MW-2	9-8-15	1430	Water	1+8	4	4	X	X								
3	MW-3	9-8-15	1310	Water	1+8	4	4	X	X								
4	MW-4	9-8-15	1250	Water	1+8	4	4	X	X								
5	RW-1	—	—	Water			4	X	X								
6	Trip Blank			Water			4	X	X								
7				Water			2	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
<i>Matthew McDaniel</i>		FedEx		☒ Std 10 Wk Days ☐ Other			
Relinquished by:	Date: 9-10-15	Time: 1415	Received by:	☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour			
Relinquished by:			Received by (Laboratory):	09/11/15 09:05			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	24184			
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				Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
				24184	0-8	☒ Level 2 Std QC ☐ TRRP ChkList	
					3A#1	☐ Level 3 Std QC/Row da ☐ TRRP Level 4	
					CF-0-1	☐ Level 4 SW846/CLP ☐ Other/EDD	

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 Environmental 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Br
	Date: 5-10-21	Time: 1:50	
	Name: [Signature]		
	Company: Texas Tech		

ORIGIN ID:MAFA (281) 530-5656 ALS ENVIRONMENTAL HOUSTON LAB 10450 STANCLIFF RD STE 210 HOUSTON, TX 770994338 UNITED STATES US		SHIP DATE: 10SEP15 ACTWGT: 26.2 LB CAD: POS1601 DIMS: 18x10x10 IN BILL SENDER
TO CLIENT SERVICES ALS LABORATORY GROUP 10450 STANCLIFF RD STE 210 HOUSTON TX 77099		
(281) 530-5656 IDU: PO:	REF:	DEPT:
		FedEx Express 
1 of 4 TRK# 8079 4509 4835 0215 ## MASTER ## AB SGRA		FRI - 11 SEP AA STANDARD OVERNIGHT 77099 TX-US IAH
		



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December 29, 2015

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 485
Addison, TX 75001

Work Order: **HS15120855**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 4 sample(s) on Dec 19, 2015 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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15120855

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS15120855-01	MW-2	Water		18-Dec-2015 10:15	19-Dec-2015 10:00	☐
HS15120855-02	MW-3	Water		18-Dec-2015 10:00	19-Dec-2015 10:00	☐
HS15120855-03	MW-4	Water		18-Dec-2015 10:00	19-Dec-2015 10:00	☐
HS15120855-04	Trip Blank-112015-42	Water		18-Dec-2015 00:00	19-Dec-2015 10:00	☐

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15120855

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R266847

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

WetChemistry by Method E300

Batch ID: R266950

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

Analyst Names and Initials:

JBA Johnnie B. Allen
PC Presenta Cabascango

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 18-Dec-2015 10:15

ANALYTICAL REPORT

WorkOrder:HS15120855
 Lab ID:HS15120855-01
 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-Dec-2015 05:50
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Dec-2015 05:50
Toluene	U		0.50	5.0	ug/L	1	24-Dec-2015 05:50
Xylenes, Total	U		1.5	15	ug/L	1	24-Dec-2015 05:50
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	24-Dec-2015 05:50
Surr: 4-Bromofluorobenzene	87.9			72-125	%REC	1	24-Dec-2015 05:50
Surr: Dibromofluoromethane	107			71-125	%REC	1	24-Dec-2015 05:50
Surr: Toluene-d8	92.9			75-125	%REC	1	24-Dec-2015 05:50
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	286		2.00	5.00	mg/L	10	28-Dec-2015 13:22

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 18-Dec-2015 10:00

ANALYTICAL REPORT

WorkOrder:HS15120855
 Lab ID:HS15120855-02
 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-Dec-2015 06:14
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Dec-2015 06:14
Toluene	U		0.50	5.0	ug/L	1	24-Dec-2015 06:14
Xylenes, Total	U		1.5	15	ug/L	1	24-Dec-2015 06:14
Surr: 1,2-Dichloroethane-d4	101			70-125	%REC	1	24-Dec-2015 06:14
Surr: 4-Bromofluorobenzene	86.0			72-125	%REC	1	24-Dec-2015 06:14
Surr: Dibromofluoromethane	103			71-125	%REC	1	24-Dec-2015 06:14
Surr: Toluene-d8	91.6			75-125	%REC	1	24-Dec-2015 06:14
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	152		2.00	5.00	mg/L	10	28-Dec-2015 14:05

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 18-Dec-2015 10:00

ANALYTICAL REPORT

WorkOrder:HS15120855
 Lab ID:HS15120855-03
 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-Dec-2015 06:39
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Dec-2015 06:39
Toluene	U		0.50	5.0	ug/L	1	24-Dec-2015 06:39
Xylenes, Total	U		1.5	15	ug/L	1	24-Dec-2015 06:39
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	24-Dec-2015 06:39
Surr: 4-Bromofluorobenzene	88.0			72-125	%REC	1	24-Dec-2015 06:39
Surr: Dibromofluoromethane	109			71-125	%REC	1	24-Dec-2015 06:39
Surr: Toluene-d8	93.3			75-125	%REC	1	24-Dec-2015 06:39
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	111		1.00	2.50	mg/L	5	28-Dec-2015 14:20

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank-112015-42
 Collection Date: 18-Dec-2015 00:00

ANALYTICAL REPORT

WorkOrder:HS15120855
 Lab ID:HS15120855-04
 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-Dec-2015 05:26
Ethylbenzene	U		0.50	5.0	ug/L	1	24-Dec-2015 05:26
Toluene	U		0.50	5.0	ug/L	1	24-Dec-2015 05:26
Xylenes, Total	U		1.5	15	ug/L	1	24-Dec-2015 05:26
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	24-Dec-2015 05:26
Surr: 4-Bromofluorobenzene	89.1			72-125	%REC	1	24-Dec-2015 05:26
Surr: Dibromofluoromethane	107			71-125	%REC	1	24-Dec-2015 05:26
Surr: Toluene-d8	92.7			75-125	%REC	1	24-Dec-2015 05:26

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R266847	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS15120855-01	MW-2	18 Dec 2015 10:15			24 Dec 2015 05:50	1
HS15120855-02	MW-3	18 Dec 2015 10:00			24 Dec 2015 06:14	1
HS15120855-03	MW-4	18 Dec 2015 10:00			24 Dec 2015 06:39	1
HS15120855-04	Trip Blank-112015-42	18 Dec 2015 00:00			24 Dec 2015 05:26	1
Batch ID R266950	Test Name : ANIONS BY E300.0			Matrix: Water		
HS15120855-01	MW-2	18 Dec 2015 10:15			28 Dec 2015 13:22	10
HS15120855-02	MW-3	18 Dec 2015 10:00			28 Dec 2015 14:05	10
HS15120855-03	MW-4	18 Dec 2015 10:00			28 Dec 2015 14:20	5

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

QC BATCH REPORT

Batch ID: R266847		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-151223	Units: ug/L		Analysis Date: 24-Dec-2015 00:37					
Client ID:	Run ID: VOA6_266847	SeqNo: 3535512		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	51.72	0	50	0	103	70 - 125			
Surr: 4-Bromofluorobenzene	43.85	0	50	0	87.7	72 - 125			
Surr: Dibromofluoromethane	54.17	0	50	0	108	71 - 125			
Surr: Toluene-d8	46.67	0	50	0	93.3	75 - 125			

LCS	Sample ID: VLCSW-151223	Units: ug/L		Analysis Date: 23-Dec-2015 23:49					
Client ID:	Run ID: VOA6_266847	SeqNo: 3535511		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	49.95	5.0	50	0	99.9	73 - 121			
Ethylbenzene	41.97	5.0	50	0	83.9	80 - 120			
Toluene	41.93	5.0	50	0	83.9	80 - 120			
Xylenes, Total	127.7	15	150	0	85.2	80 - 120			
Surr: 1,2-Dichloroethane-d4	55.06	0	50	0	110	70 - 125			
Surr: 4-Bromofluorobenzene	49.59	0	50	0	99.2	72 - 125			
Surr: Dibromofluoromethane	54.3	0	50	0	109	71 - 125			
Surr: Toluene-d8	44.49	0	50	0	89.0	75 - 125			

MS	Sample ID: HS15120765-15MS	Units: ug/L		Analysis Date: 24-Dec-2015 02:38					
Client ID:	Run ID: VOA6_266847	SeqNo: 3535517		PrepDate:		DF: 25			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	1436	120	1250	192.2	99.5	73 - 121			
Ethylbenzene	1070	120	1250	0	85.6	80 - 120			
Toluene	1070	120	1250	0	85.6	80 - 120			
Xylenes, Total	3189	380	3750	0	85.0	80 - 120			
Surr: 1,2-Dichloroethane-d4	1365	0	1250	0	109	70 - 125			
Surr: 4-Bromofluorobenzene	1264	0	1250	0	101	72 - 125			
Surr: Dibromofluoromethane	1355	0	1250	0	108	71 - 125			
Surr: Toluene-d8	1129	0	1250	0	90.3	75 - 125			

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

QC BATCH REPORT

Batch ID: R266847		Instrument: VOA6		Method: SW8260					
MSD	Sample ID:	HS15120765-15MSD		Units: ug/L		Analysis Date: 24-Dec-2015 03:02			
	Client ID:	Run ID: VOA6_266847		SeqNo: 3535518		PrepDate:		DF: 25	
	Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD Limit Qual
	Benzene	1364	120	1250	192.2	93.7	73 - 121	1436	5.19 20
	Ethylbenzene	1010	120	1250	0	80.8	80 - 120	1070	5.81 20
Toluene	1002	120	1250	0	80.2	80 - 120	1070	6.49 20	
Xylenes, Total	3049	380	3750	0	81.3	78 - 121	3189	4.48 20	
Surr: 1,2-Dichloroethane-d4	1383	0	1250	0	111	70 - 125	1365	1.34 20	
Surr: 4-Bromofluorobenzene	1258	0	1250	0	101	72 - 125	1264	0.5 20	
Surr: Dibromofluoromethane	1358	0	1250	0	109	71 - 125	1355	0.245 20	
Surr: Toluene-d8	1122	0	1250	0	89.7	75 - 125	1129	0.632 20	
The following samples were anayzed in this batch:									
HS15120855-01		HS15120855-02		HS15120855-03		HS15120855-04			

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

QC BATCH REPORT

Batch ID: R266950		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-122815	Units: mg/L		Analysis Date: 28-Dec-2015 11:52						
Client ID:	Run ID: ICS2100_266950	SeqNo: 3537691		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: WLCSW1-122815	Units: mg/L		Analysis Date: 28-Dec-2015 12:07						
Client ID:	Run ID: ICS2100_266950	SeqNo: 3537692		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.02	0.500	20	0	100	90 - 110				
LCSD	Sample ID: WLCSDW1-122815	Units: mg/L		Analysis Date: 28-Dec-2015 12:21						
Client ID:	Run ID: ICS2100_266950	SeqNo: 3537693		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.04	0.500	20	0	100	90 - 110	20.02	0.0849	20	
MS	Sample ID: HS15120865-02MS	Units: mg/L		Analysis Date: 28-Dec-2015 16:45						
Client ID:	Run ID: ICS2100_266950	SeqNo: 3537708		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	265.7	5.00	100	162.3	103	80 - 120				
MS	Sample ID: HS15120855-01MS	Units: mg/L		Analysis Date: 28-Dec-2015 13:36						
Client ID: MW-2	Run ID: ICS2100_266950	SeqNo: 3537695		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	381.9	5.00	100	285.9	96.0	80 - 120				
MSD	Sample ID: HS15120865-02MSD	Units: mg/L		Analysis Date: 28-Dec-2015 17:00						
Client ID:	Run ID: ICS2100_266950	SeqNo: 3537709		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	262.5	5.00	100	162.3	100	80 - 120	265.7	1.23	20	

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

QC BATCH REPORT

Batch ID: R266950		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS15120855-01MSD	Units: mg/L		Analysis Date: 28-Dec-2015 13:51	
Client ID: MW-2	Run ID: ICS2100_266950		SeqNo: 3537696	PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	389.5	5.00	100	285.9 104	80 - 120 381.9 1.97 20
The following samples were analyzed in this batch:					
HS15120855-01		HS15120855-02		HS15120855-03	

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

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS15120855

**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

ALS Group USA, Corp

Date: 29-Dec-15

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	15-024-0	27-Mar-2016
California	2919	31-Jul-2016
Illinois	003622	09-May-2016
Kansas	E-10352 2014-2015	31-Jan-2016
Kentucky	KY 2015-2016	30-Apr-2016
Louisiana	03087 2015/2016	30-Jun-2016
North Carolina	624 - 2015	31-Dec-2015
North Dakota	R-193 2015-2016	30-Apr-2016
Oklahoma	2015-047	31-Aug-2016
Texas	T104704231-15-15	30-Apr-2016

ALS Group USA, Corp

Date: 29-Dec-15

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS15120855

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS15120855-01	MW-2	Login	12/21/2015 10:59:13 AM	BHH	19C
HS15120855-01	MW-2	Login	12/21/2015 10:59:13 AM	BHH	VW-3
HS15120855-02	MW-3	Login	12/21/2015 10:59:13 AM	BHH	19C
HS15120855-02	MW-3	Login	12/21/2015 10:59:13 AM	BHH	VW-3
HS15120855-03	MW-4	Login	12/21/2015 10:59:13 AM	BHH	19C
HS15120855-03	MW-4	Login	12/21/2015 10:59:13 AM	BHH	VW-3
HS15120855-04	Trip Blank-112015-42	Login	12/21/2015 10:59:13 AM	BHH	VW-3

ALS Group USA, Corp

Date: 29-Dec-15

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **19-Dec-2015 10:00**

Work Order: HS15120855

Received by: **BHH**

Checklist completed by:	<u>Baudelio Hernandez</u>	<u>21-Dec-2015</u>	Reviewed by:	<u>Dane Wacasey</u>	<u>22-Dec-2015</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):	1.8c / 2.0c u/c	IR#4
--------------------------------	-----------------	------

Cooler(s)/Kit(s):	5432
-------------------	------

Date/Time sample(s) sent to storage:	12/21/2015 11:05
--------------------------------------	------------------

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 5336Everett, WA
+1 425 356 2600Fort Collins, CO
+1 970 490 1511Holland, MI
+1 616 399 6070

Chain of Custody Fo

Page ____ of ____

COC ID: 136556

HS15120855

Glenn Springs Holdings, Inc.

55625DM GSHI PXP Hill E.C. "B" ATB at Well #24

ton, WV
68

:80

ALS Project Manager:

Customer Information		Project Information		
Purchase Order	4501709538	Project Name	55625DM GSHI PXP Hill E.C. "B" ATB	A 8260_W (BTEX)
Work Order		Project Number		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 485	Address	PO Box 485	E
				F
City/State/Zip	Addison, TX 75001	City/State/Zip	Addison, TX 75001	G
Phone		Phone		H
Fax		Fax		I
e-Mail Address		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-1			Water		4	X	X									
2	MW-2	12-18-15	10:15	Water		4	X	X									
3	MW-3	12-18-15	10:00	Water		4	X	X									
4	MW-4	12-18-15	10:10	Water		4	X	X									
5	RW-1			Water		4	X	X									
6	Trip Blank			Water		2			X								
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Mathias McLeod</i>		Shipment Method <i>Fed Ex</i>		Required Turnaround Time: (Check Box) TAT <u>10 days</u> Other: _____		Results Due Date: _____	
Relinquished by: <i>Mo McLeod</i>	Date: 12-18-15	Time: 1400	Received by: <i>[Signature]</i>	Date: 12/19/15	Time: 1000	Notes: [GSHI PXP Hill EC B ATB at 24]	
Relinquished by:	Date:	Time:	Received by (Laboratory):			Cooler ID 5432	Cooler Temp. 1.8°
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			QC Package: (Check One Box Below) QC Level <u>STD</u> 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 <u>7-Other</u> 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.

C/F 0.2

Copyright 2011 by ALS Environmental.

 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: 12-18-15	Time: 7:00	CM
	Name: Mike M. M. M.	Company: TTA TTN	Date: 12/19/15

5432

DEC 19 2015

FedEx	SATURDAY 12:00P
TRK# 6355 5185 5346	PRIORITY OVERNIGHT
AO SGRA	5432 77099
	TX-US IAH
	



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March 23, 2016

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 485
Addison, TX 75001

Work Order: **HS16030902**

Laboratory Results for: **55625DM GSHI PXP Hill EB ATB at Well 24**

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
Work Order: HS16030902

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16030902-01	MW-2	Water		16-Mar-2016 11:15	19-Mar-2016 09:25	☐
HS16030902-02	MW-3	Water		16-Mar-2016 10:45	19-Mar-2016 09:25	☐
HS16030902-03	MW-4	Water		16-Mar-2016 10:35	19-Mar-2016 09:25	☐
HS16030902-04	Trip Blank-021116-20	Water		16-Mar-2016 00:00	19-Mar-2016 09:25	☐
HS16030902-05	Dup 1	Water		16-Mar-2016 00:00	19-Mar-2016 09:25	☐

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
Work Order: HS16030902

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R271147

Sample ID: **HS16030839-01MS**
• MS and MSD are for an unrelated sample

Batch ID: R271210

Sample ID: **HS16030903-01MS**
• MS and MSD are for an unrelated sample

WetChemistry by Method E300

Batch ID: R271182

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EB ATB at Well 24
 Sample ID: MW-2
 Collection Date: 16-Mar-2016 11:15

ANALYTICAL REPORT

WorkOrder:HS16030902
 Lab ID:HS16030902-01
 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	23-Mar-2016 09:32
Ethylbenzene	U		0.50	5.0	ug/L	1	23-Mar-2016 09:32
Toluene	U		0.50	5.0	ug/L	1	23-Mar-2016 09:32
Xylenes, Total	U		1.5	15	ug/L	1	23-Mar-2016 09:32
Surr: 1,2-Dichloroethane-d4	101			70-125	%REC	1	23-Mar-2016 09:32
Surr: 4-Bromofluorobenzene	104			72-125	%REC	1	23-Mar-2016 09:32
Surr: Dibromofluoromethane	92.5			71-125	%REC	1	23-Mar-2016 09:32
Surr: Toluene-d8	94.7			75-125	%REC	1	23-Mar-2016 09:32
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	283		2.00	5.00	mg/L	10	21-Mar-2016 22:23

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EB ATB at Well 24
 Sample ID: MW-3
 Collection Date: 16-Mar-2016 10:45

ANALYTICAL REPORT

WorkOrder:HS16030902
 Lab ID:HS16030902-02
 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	22-Mar-2016 20:28
Ethylbenzene	U		0.50	5.0	ug/L	1	22-Mar-2016 20:28
Toluene	U		0.50	5.0	ug/L	1	22-Mar-2016 20:28
Xylenes, Total	U		1.5	15	ug/L	1	22-Mar-2016 20:28
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	22-Mar-2016 20:28
Surr: 4-Bromofluorobenzene	111			72-125	%REC	1	22-Mar-2016 20:28
Surr: Dibromofluoromethane	93.5			71-125	%REC	1	22-Mar-2016 20:28
Surr: Toluene-d8	98.2			75-125	%REC	1	22-Mar-2016 20:28
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	156		2.00	5.00	mg/L	10	21-Mar-2016 23:27

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EB ATB at Well 24
 Sample ID: MW-4
 Collection Date: 16-Mar-2016 10:35

ANALYTICAL REPORT

WorkOrder:HS16030902
 Lab ID:HS16030902-03
 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	22-Mar-2016 20:54
Ethylbenzene	U		0.50	5.0	ug/L	1	22-Mar-2016 20:54
Toluene	U		0.50	5.0	ug/L	1	22-Mar-2016 20:54
Xylenes, Total	U		1.5	15	ug/L	1	22-Mar-2016 20:54
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	22-Mar-2016 20:54
Surr: 4-Bromofluorobenzene	102			72-125	%REC	1	22-Mar-2016 20:54
Surr: Dibromofluoromethane	96.0			71-125	%REC	1	22-Mar-2016 20:54
Surr: Toluene-d8	94.9			75-125	%REC	1	22-Mar-2016 20:54
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	118		1.00	2.50	mg/L	5	21-Mar-2016 23:48

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EB ATB at Well 24
 Sample ID: Trip Blank-021116-20
 Collection Date: 16-Mar-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16030902
 Lab ID:HS16030902-04
 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	23-Mar-2016 00:49
Ethylbenzene	U		0.50	5.0	ug/L	1	23-Mar-2016 00:49
Toluene	U		0.50	5.0	ug/L	1	23-Mar-2016 00:49
Xylenes, Total	U		1.5	15	ug/L	1	23-Mar-2016 00:49
Surr: 1,2-Dichloroethane-d4	97.6			70-125	%REC	1	23-Mar-2016 00:49
Surr: 4-Bromofluorobenzene	109			72-125	%REC	1	23-Mar-2016 00:49
Surr: Dibromofluoromethane	92.9			71-125	%REC	1	23-Mar-2016 00:49
Surr: Toluene-d8	108			75-125	%REC	1	23-Mar-2016 00:49

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EB ATB at Well 24
 Sample ID: Dup 1
 Collection Date: 16-Mar-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16030902
 Lab ID:HS16030902-05
 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	22-Mar-2016 21:20
Ethylbenzene	U		0.50	5.0	ug/L	1	22-Mar-2016 21:20
Toluene	U		0.50	5.0	ug/L	1	22-Mar-2016 21:20
Xylenes, Total	U		1.5	15	ug/L	1	22-Mar-2016 21:20
Surr: 1,2-Dichloroethane-d4	102			70-125	%REC	1	22-Mar-2016 21:20
Surr: 4-Bromofluorobenzene	105			72-125	%REC	1	22-Mar-2016 21:20
Surr: Dibromofluoromethane	95.0			71-125	%REC	1	22-Mar-2016 21:20
Surr: Toluene-d8	99.9			75-125	%REC	1	22-Mar-2016 21:20
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	155		1.00	2.50	mg/L	5	22-Mar-2016 00:09

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R271147	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS16030902-02	MW-3	16 Mar 2016 10:45			22 Mar 2016 20:28	1
HS16030902-03	MW-4	16 Mar 2016 10:35			22 Mar 2016 20:54	1
HS16030902-05	Dup 1	16 Mar 2016 00:00			22 Mar 2016 21:20	1
Batch ID R271182	Test Name : ANIONS BY E300.0		Matrix: Water			
HS16030902-01	MW-2	16 Mar 2016 11:15			21 Mar 2016 22:23	10
HS16030902-02	MW-3	16 Mar 2016 10:45			21 Mar 2016 23:27	10
HS16030902-03	MW-4	16 Mar 2016 10:35			21 Mar 2016 23:48	5
HS16030902-05	Dup 1	16 Mar 2016 00:00			22 Mar 2016 00:09	5
Batch ID R271210	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS16030902-01	MW-2	16 Mar 2016 11:15			23 Mar 2016 09:32	1
HS16030902-04	Trip Blank-021116-20	16 Mar 2016 00:00			23 Mar 2016 00:49	1

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271147		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-160322	Units: ug/L		Analysis Date: 22-Mar-2016 11:44					
Client ID:	Run ID: VOA1_271147	SeqNo: 3619655		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	49.86	0	50	0	99.7	70 - 125			
Surr: 4-Bromofluorobenzene	55.26	0	50	0	111	72 - 125			
Surr: Dibromofluoromethane	52.83	0	50	0	106	71 - 125			
Surr: Toluene-d8	45.24	0	50	0	90.5	75 - 125			

LCS	Sample ID: VLCSW-160322	Units: ug/L		Analysis Date: 22-Mar-2016 10:52					
Client ID:	Run ID: VOA1_271147	SeqNo: 3619654		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.99	5.0	50	0	106	73 - 121			
Ethylbenzene	47.28	5.0	50	0	94.6	80 - 120			
Toluene	45.94	5.0	50	0	91.9	80 - 120			
Xylenes, Total	140.4	15	150	0	93.6	80 - 120			
Surr: 1,2-Dichloroethane-d4	53.35	0	50	0	107	70 - 125			
Surr: 4-Bromofluorobenzene	58.08	0	50	0	116	72 - 125			
Surr: Dibromofluoromethane	55.07	0	50	0	110	71 - 125			
Surr: Toluene-d8	46.46	0	50	0	92.9	75 - 125			

MS	Sample ID: HS16030839-01MS	Units: ug/L		Analysis Date: 22-Mar-2016 14:47					
Client ID:	Run ID: VOA1_271147	SeqNo: 3619911		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	10680	250	2500	8326	94.3	73 - 121			E
Ethylbenzene	2652	250	2500	486.4	86.6	80 - 120			
Toluene	2237	250	2500	156.1	83.2	80 - 120			
Xylenes, Total	7835	750	7500	1522	84.2	80 - 120			
Surr: 1,2-Dichloroethane-d4	2331	0	2500	0	93.2	70 - 125			
Surr: 4-Bromofluorobenzene	2922	0	2500	0	117	72 - 125			
Surr: Dibromofluoromethane	2479	0	2500	0	99.2	71 - 125			
Surr: Toluene-d8	2139	0	2500	0	85.5	75 - 125			

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271147		Instrument: VOA1		Method: SW8260						
MSD	Sample ID: HS16030839-01MSD	Units: ug/L		Analysis Date: 22-Mar-2016 15:13						
Client ID:	Run ID: VOA1_271147		SeqNo: 3619912		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	9973	250	2500	8326	65.9	73 - 121	10680	6.88	20	S
Ethylbenzene	2353	250	2500	486.4	74.6	80 - 120	2652	12	20	S
Toluene	2164	250	2500	156.1	80.3	80 - 120	2237	3.33	20	
Xylenes, Total	7317	750	7500	1522	77.3	78 - 121	7835	6.84	20	S
Surr: 1,2-Dichloroethane-d4	2205	0	2500	0	88.2	70 - 125	2331	5.56	20	
Surr: 4-Bromofluorobenzene	2816	0	2500	0	113	72 - 125	2922	3.71	20	
Surr: Dibromofluoromethane	2386	0	2500	0	95.4	71 - 125	2479	3.81	20	
Surr: Toluene-d8	2049	0	2500	0	82.0	75 - 125	2139	4.28	20	
The following samples were analyzed in this batch:										
HS16030902-02			HS16030902-03			HS16030902-05				

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271210		Instrument: VOA1		Method: SW8260						
MBLK	Sample ID: VBLKW-160322	Units: ug/L			Analysis Date: 23-Mar-2016 00:23					
Client ID:	Run ID: VOA1_271210	SeqNo: 3620931			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	47.16	0	50	0	94.3	70 - 125				
Surr: 4-Bromofluorobenzene	53.36	0	50	0	107	72 - 125				
Surr: Dibromofluoromethane	45.22	0	50	0	90.4	71 - 125				
Surr: Toluene-d8	51.68	0	50	0	103	75 - 125				

LCS	Sample ID: VLCSW-160322	Units: ug/L			Analysis Date: 22-Mar-2016 23:31					
Client ID:		Run ID: VOA1_271210	SeqNo: 3620930		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Benzene	45.65	5.0	50	0	91.3	73 - 121				
Ethylbenzene	44.75	5.0	50	0	89.5	80 - 120				
Toluene	44.97	5.0	50	0	89.9	80 - 120				
Xylenes, Total	138.2	15	150	0	92.1	80 - 120				
Surr: 1,2-Dichloroethane-d4	48.63	0	50	0	97.3	70 - 125				
Surr: 4-Bromofluorobenzene	50.45	0	50	0	101	72 - 125				
Surr: Dibromofluoromethane	47.07	0	50	0	94.1	71 - 125				
Surr: Toluene-d8	49.27	0	50	0	98.5	75 - 125				

MS	Sample ID: HS16030903-01MS		Units: ug/L		Analysis Date: 23-Mar-2016 02:07					
Client ID:	Run ID: VOA1_271210		SeqNo: 3620935		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Benzene	41.93	5.0	50	0	83.9	73 - 121				
Ethylbenzene	39.61	5.0	50	0	79.2	80 - 120				S
Toluene	39.76	5.0	50	0	79.5	80 - 120				S
Xylenes, Total	119.6	15	150	0	79.7	80 - 120				S
Surr: 1,2-Dichloroethane-d4	50.12	0	50	0	100	70 - 125				
Surr: 4-Bromofluorobenzene	47.75	0	50	0	95.5	72 - 125				
Surr: Dibromofluoromethane	47.5	0	50	0	95.0	71 - 125				
Surr: Toluene-d8	49.42	0	50	0	98.8	75 - 125				

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271210		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS16030903-01MSD	Units: ug/L		Analysis Date: 23-Mar-2016 02:33					
Client ID:		Run ID: VOA1_271210		SeqNo: 3620936		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Benzene	44.74	5.0	50	0	89.5	73 - 121	41.93	6.48	20	
Ethylbenzene	43.98	5.0	50	0	88.0	80 - 120	39.61	10.5	20	
Toluene	46.67	5.0	50	0	93.3	80 - 120	39.76	16	20	
Xylenes, Total	140.9	15	150	0	94.0	78 - 121	119.6	16.4	20	
Surr: 1,2-Dichloroethane-d4	50.05	0	50	0	100	70 - 125	50.12	0.152	20	
Surr: 4-Bromofluorobenzene	51.89	0	50	0	104	72 - 125	47.75	8.33	20	
Surr: Dibromofluoromethane	45.9	0	50	0	91.8	71 - 125	47.5	3.42	20	
Surr: Toluene-d8	51.47	0	50	0	103	75 - 125	49.42	4.06	20	
The following samples were anayzed in this batch:		HS16030902-01		HS16030902-04						

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271182		Instrument: ICS3000		Method: E300						
MBLK	Sample ID: WBLKW1-032116	Units: mg/L		Analysis Date: 21-Mar-2016 14:16						
Client ID:	Run ID: ICS3000_271182	SeqNo: 3620158		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: WLCSW1-032116	Units: mg/L		Analysis Date: 21-Mar-2016 14:37						
Client ID:	Run ID: ICS3000_271182	SeqNo: 3620159		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: WLCSDW1-032116	Units: mg/L		Analysis Date: 21-Mar-2016 14:58						
Client ID:	Run ID: ICS3000_271182	SeqNo: 3620160		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.7	0.500	20	0	98.5	90 - 110	19.87	0.849	20	
MS	Sample ID: HS16030902-01MS	Units: mg/L		Analysis Date: 21-Mar-2016 22:45						
Client ID: MW-2	Run ID: ICS3000_271182	SeqNo: 3620179		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	377.7	5.00	100	283.1	94.6	80 - 120				
MS	Sample ID: HS16030742-01MS	Units: mg/L		Analysis Date: 21-Mar-2016 15:41						
Client ID:	Run ID: ICS3000_271182	SeqNo: 3620162		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	17.41	0.500	10	8.064	93.5	80 - 120				
MSD	Sample ID: HS16030902-01MSD	Units: mg/L		Analysis Date: 21-Mar-2016 23:06						
Client ID: MW-2	Run ID: ICS3000_271182	SeqNo: 3620180		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	380.2	5.00	100	283.1	97.2	80 - 120	377.7	0.675	20	

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

QC BATCH REPORT

Batch ID: R271182		Instrument: ICS3000		Method: E300						
MSD	Sample ID: HS16030742-01MSD	Units: mg/L		Analysis Date: 21-Mar-2016 16:02						
Client ID:	Run ID: ICS3000_271182		SeqNo: 3620163		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	17.36	0.500	10	8.064	93.0	80 - 120	17.41	0.293	20	
The following samples were analyzed in this batch:										
HS16030902-01		HS16030902-02		HS16030902-03		HS16030902-05				

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
WorkOrder: HS16030902

**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

ALS Group USA, Corp

Date: 23-Mar-16

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

ALS Group USA, Corp

Date: 23-Mar-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EB ATB at Well 24
Work Order: HS16030902

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16030902-01	MW-2	Login	3/19/2016 12:42:43 PM	BHH	10A
HS16030902-01	MW-2	Login	3/19/2016 12:42:43 PM	BHH	VW-3
HS16030902-02	MW-3	Login	3/19/2016 12:42:43 PM	BHH	10A
HS16030902-02	MW-3	Login	3/19/2016 12:42:43 PM	BHH	VW-3
HS16030902-03	MW-4	Login	3/19/2016 12:42:43 PM	BHH	10A
HS16030902-03	MW-4	Login	3/19/2016 12:42:43 PM	BHH	VW-3
HS16030902-04	Trip Blank-021116-20	Login	3/19/2016 12:42:43 PM	BHH	VW-3
HS16030902-05	Dup 1	Login	3/19/2016 12:42:43 PM	BHH	10A
HS16030902-05	Dup 1	Login	3/19/2016 12:42:43 PM	BHH	VW-3

ALS Group USA, Corp

Date: 23-Mar-16

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS16030902

Received by: **BHH**

Checklist completed by:	<u>Baudelio Hernandez</u>	19-Mar-2016	Reviewed by:	<u>Dane Wacasey</u>	23-Mar-2016
	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):	1.6c / 2.2c u/c	IR#4
--------------------------------	-----------------	------

Cooler(s)/Kit(s):	3099
-------------------	------

Date/Time sample(s) sent to storage:	03/19/2016 12:50
--------------------------------------	------------------

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:	
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Corrective Action:	
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Environmental

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+1 970 490 1511Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 138246

Houston, TX
+1 281 530 5656Middletown, PA
+1 717 944 5541Spring City, PA
+1 610 948 4903Salt Lake City, UT
+1 801 266 7700South Charleston, WV
+1 304 356 3168York, PA
+1 717 505 5280

Customer Information				Project Information				Parameter/Method Request for Analysis												
Purchase Order	4502201559			Project Name	GSHI PXP Hill, E.C. "B" ATB at Well #24			A	BTEX (8260)											
Work Order				Project Number	55625DM (ENV749A007)			B	Chloride (300)											
Company Name	Glenn Springs Holdings			Bill To Company	Glenn Springs Holdings			C												
Send Report To	Angela Bown			Invoice Attn	Jennifer Devonshire			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			F												
Phone	(513) 942-4750			Phone				G												
Fax				Fax				H												
e-Mail Address	abown@craworld.com			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			Water		4	X	X									
2	MW-2	3/16/16	1115	Water	1	4	X	X									
3	MW-3	3/16/16	1045	Water	1	4	X	X									
4	MW-4	3/16/16	1035	Water	1	4	X	X									
5	RW-1			Water		4	X	X									
6	Trip Blank			Water		2	X										
7	Dup 1	3/16/16			1		X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Client Merritt</i>				Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour				Results Due Date:		
Relinquished by: <i>Client Merritt</i>		Date: 3.18.16	Time: 14:00	Received by: <i>BH Hma 03/19/16 09:25</i>		Notes: 10 Day TAT						
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler ID 3099	Cooler Temp. 4.6	QC Package: (Check One Box Below)				
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):				☒ Level 2 Std QC ☐ TRRP ChkList ☐ Level 3 Std QC/Row dz ☐ TRRP 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.

IR 44
CIFO 6 Copyright 2011 by ALS Environmental.

 ALS Environmental 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 3099	CUSTODY SEAL		Seal Broken By: <i>GM</i>
	Date: <i>3/18/16</i>	Time: <i>16:35 16:00</i>	Date: <i>03/19/16</i>
	Name: <i>Chad Martin</i>		
	Company: <i>Extra Tech</i>		

3099

MAR 19 2016

FedEx	SATURDAY 12 - SAT
PK# 6355 5187 2430	PRIORITY OVERNIGHT
XO SGRA	TX-US IAH
3099	170509
	
*2025927 03/18 540J1/CF34/727F	



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July 13, 2016

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 2148
Houston, TX 77252-2148

Work Order: **HS16070051**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16070051

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16070051-01	MW-2	Water		29-Jun-2016 15:00	01-Jul-2016 08:50	☐
HS16070051-02	MW-3	Water		29-Jun-2016 15:10	01-Jul-2016 08:50	☐
HS16070051-03	MW-4	Water		29-Jun-2016 14:50	01-Jul-2016 08:50	☐
HS16070051-04	DUP	Water		29-Jun-2016 00:00	01-Jul-2016 08:50	☐
HS16070051-05	Trip Blank	Water	051716-13	29-Jun-2016 00:00	01-Jul-2016 08:50	☐

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16070051

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R277480

Sample ID: **HS16070111-01**

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

WetChemistry by Method E300

Batch ID: R277916

- MS/MSD is for an unrelated sample
-

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 29-Jun-2016 15:00

ANALYTICAL REPORT

WorkOrder:HS16070051
 Lab ID:HS16070051-01
 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	05-Jul-2016 15:40
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Jul-2016 15:40
Toluene	U		0.50	5.0	ug/L	1	05-Jul-2016 15:40
Xylenes, Total	U		1.5	15	ug/L	1	05-Jul-2016 15:40
Surr: 1,2-Dichloroethane-d4	95.7			70-125	%REC	1	05-Jul-2016 15:40
Surr: 4-Bromofluorobenzene	94.6			72-125	%REC	1	05-Jul-2016 15:40
Surr: Dibromofluoromethane	99.9			71-125	%REC	1	05-Jul-2016 15:40
Surr: Toluene-d8	102			75-125	%REC	1	05-Jul-2016 15:40
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	270		2.00	5.00	mg/L	10	12-Jul-2016 10:40

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 29-Jun-2016 15:10

ANALYTICAL REPORT

WorkOrder:HS16070051
 Lab ID:HS16070051-02
 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	05-Jul-2016 17:00
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:00
Toluene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:00
Xylenes, Total	U		1.5	15	ug/L	1	05-Jul-2016 17:00
Surr: 1,2-Dichloroethane-d4	94.9			70-125	%REC	1	05-Jul-2016 17:00
Surr: 4-Bromofluorobenzene	102			72-125	%REC	1	05-Jul-2016 17:00
Surr: Dibromofluoromethane	98.1			71-125	%REC	1	05-Jul-2016 17:00
Surr: Toluene-d8	105			75-125	%REC	1	05-Jul-2016 17:00
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	153		2.00	5.00	mg/L	10	12-Jul-2016 10:55

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 29-Jun-2016 14:50

ANALYTICAL REPORT

WorkOrder:HS16070051
 Lab ID:HS16070051-03
 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	05-Jul-2016 17:26
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:26
Toluene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:26
Xylenes, Total	U		1.5	15	ug/L	1	05-Jul-2016 17:26
Surr: 1,2-Dichloroethane-d4	99.7			70-125	%REC	1	05-Jul-2016 17:26
Surr: 4-Bromofluorobenzene	99.4			72-125	%REC	1	05-Jul-2016 17:26
Surr: Dibromofluoromethane	98.9			71-125	%REC	1	05-Jul-2016 17:26
Surr: Toluene-d8	101			75-125	%REC	1	05-Jul-2016 17:26
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	131		1.00	2.50	mg/L	5	12-Jul-2016 11:09

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 29-Jun-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16070051
 Lab ID:HS16070051-04
 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	05-Jul-2016 17:53
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:53
Toluene	U		0.50	5.0	ug/L	1	05-Jul-2016 17:53
Xylenes, Total	U		1.5	15	ug/L	1	05-Jul-2016 17:53
Surr: 1,2-Dichloroethane-d4	97.9			70-125	%REC	1	05-Jul-2016 17:53
Surr: 4-Bromofluorobenzene	97.5			72-125	%REC	1	05-Jul-2016 17:53
Surr: Dibromofluoromethane	98.2			71-125	%REC	1	05-Jul-2016 17:53
Surr: Toluene-d8	104			75-125	%REC	1	05-Jul-2016 17:53
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	252		2.00	5.00	mg/L	10	12-Jul-2016 11:24

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 29-Jun-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16070051
 Lab ID:HS16070051-05
 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	05-Jul-2016 16:33
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Jul-2016 16:33
Toluene	U		0.50	5.0	ug/L	1	05-Jul-2016 16:33
Xylenes, Total	U		1.5	15	ug/L	1	05-Jul-2016 16:33
Surr: 1,2-Dichloroethane-d4	98.3			70-125	%REC	1	05-Jul-2016 16:33
Surr: 4-Bromofluorobenzene	95.4			72-125	%REC	1	05-Jul-2016 16:33
Surr: Dibromofluoromethane	102			71-125	%REC	1	05-Jul-2016 16:33
Surr: Toluene-d8	99.0			75-125	%REC	1	05-Jul-2016 16:33

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R277480	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16070051-01	MW-2	29 Jun 2016 15:00			05 Jul 2016 15:40	1
HS16070051-02	MW-3	29 Jun 2016 15:10			05 Jul 2016 17:00	1
HS16070051-03	MW-4	29 Jun 2016 14:50			05 Jul 2016 17:26	1
HS16070051-04	DUP	29 Jun 2016 00:00			05 Jul 2016 17:53	1
HS16070051-05	Trip Blank	29 Jun 2016 00:00			05 Jul 2016 16:33	1
Batch ID R277916	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16070051-01	MW-2	29 Jun 2016 15:00			12 Jul 2016 10:40	10
HS16070051-02	MW-3	29 Jun 2016 15:10			12 Jul 2016 10:55	10
HS16070051-03	MW-4	29 Jun 2016 14:50			12 Jul 2016 11:09	5
HS16070051-04	DUP	29 Jun 2016 00:00			12 Jul 2016 11:24	10

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

QC BATCH REPORT

Batch ID: R277480		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-160703	Units: ug/L		Analysis Date: 05-Jul-2016 12:09					
Client ID:	Run ID: VOA1_277480		SeqNo: 3748370		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	52.5	0	50	0	105	70 - 125			
Surr: 4-Bromofluorobenzene	50.78	0	50	0	102	72 - 125			
Surr: Dibromofluoromethane	53.71	0	50	0	107	71 - 125			
Surr: Toluene-d8	48.96	0	50	0	97.9	75 - 125			

LCS	Sample ID: VLCSW-160705	Units: ug/L		Analysis Date: 05-Jul-2016 10:49					
Client ID:	Run ID: VOA1_277480		SeqNo: 3748369		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	48.83	5.0	50	0	97.7	73 - 121			
Ethylbenzene	47.86	5.0	50	0	95.7	80 - 120			
Toluene	49.24	5.0	50	0	98.5	80 - 120			
Xylenes, Total	151.6	15	150	0	101	80 - 120			
Surr: 1,2-Dichloroethane-d4	50.41	0	50	0	101	70 - 125			
Surr: 4-Bromofluorobenzene	52.16	0	50	0	104	72 - 125			
Surr: Dibromofluoromethane	47.23	0	50	0	94.5	71 - 125			
Surr: Toluene-d8	50.1	0	50	0	100	75 - 125			

MS	Sample ID: HS16070111-01MS	Units: ug/L		Analysis Date: 05-Jul-2016 14:21					
Client ID:	Run ID: VOA1_277480		SeqNo: 3748555		PrepDate:		DF: 25		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	1092	120	1250	0	87.3	73 - 121			
Ethylbenzene	946.1	120	1250	0	75.7	80 - 120			S
Toluene	1106	120	1250	0	88.4	80 - 120			
Xylenes, Total	3237	380	3750	0	86.3	80 - 120			
Surr: 1,2-Dichloroethane-d4	1361	0	1250	0	109	70 - 125			
Surr: 4-Bromofluorobenzene	1240	0	1250	0	99.2	72 - 125			
Surr: Dibromofluoromethane	1352	0	1250	0	108	71 - 125			
Surr: Toluene-d8	1208	0	1250	0	96.6	75 - 125			

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

QC BATCH REPORT

Batch ID: R277480		Instrument: VOA1		Method: SW8260						
MSD	Sample ID: HS16070111-01MSD	Units: ug/L			Analysis Date: 05-Jul-2016 14:47					
Client ID:	Run ID: VOA1_277480	SeqNo: 3748556		PrepDate:		DF: 25				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1063	120	1250	0	85.0	73 - 121	1092	2.68	20	
Ethylbenzene	1025	120	1250	0	82.0	80 - 120	946.1	8.04	20	
Toluene	1067	120	1250	0	85.4	80 - 120	1106	3.54	20	
Xylenes, Total	3232	380	3750	0	86.2	78 - 121	3237	0.158	20	
Surr: 1,2-Dichloroethane-d4	1287	0	1250	0	103	70 - 125	1361	5.57	20	
Surr: 4-Bromofluorobenzene	1222	0	1250	0	97.8	72 - 125	1240	1.49	20	
Surr: Dibromofluoromethane	1335	0	1250	0	107	71 - 125	1352	1.28	20	
Surr: Toluene-d8	1205	0	1250	0	96.4	75 - 125	1208	0.197	20	
The following samples were analyzed in this batch:										
HS16070051-01		HS16070051-02		HS16070051-03		HS16070051-04				
HS16070051-05										

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

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: WLC SW1-071213	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:	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.

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

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:	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:					
HS16070051-01 HS16070051-02 HS16070051-03 HS16070051-04					

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16070051

**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

ALS Group USA, Corp

Date: 13-Jul-16

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

ALS Group USA, Corp

Date: 13-Jul-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16070051

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16070051-01	MW-2	Login	7/1/2016 3:56:53 PM	CGG	14A
HS16070051-01	MW-2	Login	7/1/2016 3:56:53 PM	CGG	VW-3
HS16070051-02	MW-3	Login	7/1/2016 3:56:53 PM	CGG	14A
HS16070051-02	MW-3	Login	7/1/2016 3:56:53 PM	CGG	VW-3
HS16070051-03	MW-4	Login	7/1/2016 3:56:53 PM	CGG	14A
HS16070051-03	MW-4	Login	7/1/2016 3:56:53 PM	CGG	VW-3
HS16070051-04	DUP	Login	7/1/2016 3:56:53 PM	CGG	14A
HS16070051-04	DUP	Login	7/1/2016 3:56:53 PM	CGG	VW-3
HS16070051-05	Trip Blank	Login	7/1/2016 3:56:53 PM	CGG	VW-3

ALS Group USA, Corp

Date: 13-Jul-16

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS16070051

Received by: **JRM**

Checklist completed by:	<u>Corey Grandits</u>	<u>1-Jul-2016</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>5-Jul-2016</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):	4.9c/5.5c uc/c	IR#5
--------------------------------	----------------	------

Cooler(s)/Kit(s):	5477
-------------------	------

Date/Time sample(s) sent to storage:	07/01/2016 16:00
--------------------------------------	------------------

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:



Environmental

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+1 970 490 1511Everett, WA
+1 425 356 2600Holland, MI
+1 616 399 6070

Chain of Custody For

Page 1 of 1

COC ID: 142022

HS16070051

Glenn Springs Holdings, Inc.

55625DM GSHI PXP Hill EC B ATB at Well 24

on, WV
58

80

Customer Information		Project Information		ALS Project Manager:	
Purchase Order	4502201559 ENV 749-4	Project Name	55625DM GSHI PXP Hill EC B ATB at	A	8260_W (BTEX)
Work Order		Project Number		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		Address		E	
City/State/Zip	PO Box 2148	City/State/Zip	PO Box 2148	F	
Phone	Houston, TX 77252-2148	Phone	Houston, TX 77252-2148	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	5.29.16	—	Water	—	4	X	X									
2	MW-2	6.29.16	15:00	Water	1.8	4	X	X									
3	MW-3	6.29.16	15:10	Water	1	4	X	X									
4	MW-4	6.29.16	14:50	Water	—	4	X	X									
5	RW-1	—	—	Water	—	4	X	X									
6	Trip Blank			Water		2			X								
7	Dup	6.29.16	—		1.8	4	X	X									
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
<i>Clat Meritt</i>		FedEx		TAT 10 days			
Relinquished by:	Date: 6.30.16	Time: 17:04	Received by:	Notes:			
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID: 5477		Cooler Temp: 41.4	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	QC Package: (Check One Box Below)			
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 Level: STD		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.

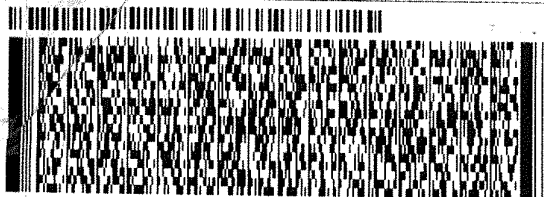
3. The Chain of Custody is a legal document. All information must be completed accurately.

Page 18 of 19

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 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: <u>6-30-16</u> Time: <u>1600</u> Name: <u>Matthew McDaniel</u> Company: <u>Delta Tech</u>	Date:

TO SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: GSHI PXP HILL EC FED #7 TB

 **FedEx**
Express

FedEx
TRK# 6355 5189 5280
0221

AB SGRA

FRI - 01 JUL 10:30A
PRIORITY OVERNIGHT

77099
TX-US IAH



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www.alsglobal.com

September 19, 2016

Angela Bown
Glenn Springs Holdings, Inc.

PO Box 2148
Houston, TX 77252-2148

Work Order: **HS16090534**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 5 sample(s) on Sep 13, 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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16090534

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16090534-01	MW-2	Water		08-Sep-2016 10:00	13-Sep-2016 08:45	☐
HS16090534-02	MW-3	Water		08-Sep-2016 09:40	13-Sep-2016 08:45	☐
HS16090534-03	MW-4	Water		08-Sep-2016 09:25	13-Sep-2016 08:45	☐
HS16090534-04	Trip Blank	Water	082416-91	08-Sep-2016 00:00	13-Sep-2016 08:45	☐
HS16090534-05	Dup	Water		08-Sep-2016 00:00	13-Sep-2016 08:45	☐

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16090534

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R281303,R281305

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

WetChemistry by Method E300

Batch ID: R281527

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 08-Sep-2016 10:00

ANALYTICAL REPORT

WorkOrder:HS16090534
 Lab ID:HS16090534-01
 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-Sep-2016 19:46
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Sep-2016 19:46
Toluene	U		0.50	5.0	ug/L	1	13-Sep-2016 19:46
Xylenes, Total	U		1.5	15	ug/L	1	13-Sep-2016 19:46
Surr: 1,2-Dichloroethane-d4	102			70-125	%REC	1	13-Sep-2016 19:46
Surr: 4-Bromofluorobenzene	96.2			72-125	%REC	1	13-Sep-2016 19:46
Surr: Dibromofluoromethane	102			71-125	%REC	1	13-Sep-2016 19:46
Surr: Toluene-d8	103			75-125	%REC	1	13-Sep-2016 19:46
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	255		2.00	5.00	mg/L	10	16-Sep-2016 16:14

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 08-Sep-2016 09:40

ANALYTICAL REPORT

WorkOrder:HS16090534
 Lab ID:HS16090534-02
 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-Sep-2016 20:10
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:10
Toluene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:10
Xylenes, Total	U		1.5	15	ug/L	1	13-Sep-2016 20:10
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	13-Sep-2016 20:10
Surr: 4-Bromofluorobenzene	96.1			72-125	%REC	1	13-Sep-2016 20:10
Surr: Dibromofluoromethane	103			71-125	%REC	1	13-Sep-2016 20:10
Surr: Toluene-d8	103			75-125	%REC	1	13-Sep-2016 20:10
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	143		2.00	5.00	mg/L	10	16-Sep-2016 16:29

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 08-Sep-2016 09:25

ANALYTICAL REPORT

WorkOrder:HS16090534
 Lab ID:HS16090534-03
 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-Sep-2016 20:34
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:34
Toluene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:34
Xylenes, Total	U		1.5	15	ug/L	1	13-Sep-2016 20:34
Surr: 1,2-Dichloroethane-d4	102			70-125	%REC	1	13-Sep-2016 20:34
Surr: 4-Bromofluorobenzene	96.9			72-125	%REC	1	13-Sep-2016 20:34
Surr: Dibromofluoromethane	103			71-125	%REC	1	13-Sep-2016 20:34
Surr: Toluene-d8	104			75-125	%REC	1	13-Sep-2016 20:34
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	114		2.00	5.00	mg/L	10	16-Sep-2016 16:43

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 08-Sep-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16090534
 Lab ID:HS16090534-04
 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	14-Sep-2016 00:57
Ethylbenzene	U		0.50	5.0	ug/L	1	14-Sep-2016 00:57
Toluene	U		0.50	5.0	ug/L	1	14-Sep-2016 00:57
Xylenes, Total	U		1.5	15	ug/L	1	14-Sep-2016 00:57
Surr: 1,2-Dichloroethane-d4	98.2			70-125	%REC	1	14-Sep-2016 00:57
Surr: 4-Bromofluorobenzene	101			72-125	%REC	1	14-Sep-2016 00:57
Surr: Dibromofluoromethane	104			71-125	%REC	1	14-Sep-2016 00:57
Surr: Toluene-d8	98.9			75-125	%REC	1	14-Sep-2016 00:57

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Dup
 Collection Date: 08-Sep-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16090534
 Lab ID:HS16090534-05
 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-Sep-2016 20:57
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:57
Toluene	U		0.50	5.0	ug/L	1	13-Sep-2016 20:57
Xylenes, Total	U		1.5	15	ug/L	1	13-Sep-2016 20:57
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	13-Sep-2016 20:57
Surr: 4-Bromofluorobenzene	102			72-125	%REC	1	13-Sep-2016 20:57
Surr: Dibromofluoromethane	107			71-125	%REC	1	13-Sep-2016 20:57
Surr: Toluene-d8	109			75-125	%REC	1	13-Sep-2016 20:57
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	136		2.00	5.00	mg/L	10	16-Sep-2016 16:58

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R281303	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS16090534-01	MW-2	08 Sep 2016 10:00			13 Sep 2016 19:46	1
HS16090534-02	MW-3	08 Sep 2016 09:40			13 Sep 2016 20:10	1
HS16090534-03	MW-4	08 Sep 2016 09:25			13 Sep 2016 20:34	1
HS16090534-05	Dup	08 Sep 2016 00:00			13 Sep 2016 20:57	1
Batch ID R281305	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS16090534-04	Trip Blank	08 Sep 2016 00:00			14 Sep 2016 00:57	1
Batch ID R281527	Test Name : ANIONS BY E300.0		Matrix: Water			
HS16090534-01	MW-2	08 Sep 2016 10:00			16 Sep 2016 16:14	10
HS16090534-02	MW-3	08 Sep 2016 09:40			16 Sep 2016 16:29	10
HS16090534-03	MW-4	08 Sep 2016 09:25			16 Sep 2016 16:43	10
HS16090534-05	Dup	08 Sep 2016 00:00			16 Sep 2016 16:58	10

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281303		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-160913	Units: ug/L		Analysis Date: 13-Sep-2016 11:37					
Client ID:	Run ID: VOA6_281303	SeqNo: 3824573		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	51.66	0	50	0	103	70 - 125			
Surr: 4-Bromofluorobenzene	48.84	0	50	0	97.7	72 - 125			
Surr: Dibromofluoromethane	51.47	0	50	0	103	71 - 125			
Surr: Toluene-d8	51.92	0	50	0	104	75 - 125			

LCS	Sample ID: VLCSW-160913	Units: ug/L		Analysis Date: 13-Sep-2016 10:25					
Client ID:	Run ID: VOA6_281303	SeqNo: 3824572		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.72	5.0	50	0	93.4	73 - 121			
Ethylbenzene	46.77	5.0	50	0	93.5	80 - 120			
Toluene	45.48	5.0	50	0	91.0	80 - 120			
Xylenes, Total	140.1	15	150	0	93.4	80 - 120			
Surr: 1,2-Dichloroethane-d4	49.26	0	50	0	98.5	70 - 125			
Surr: 4-Bromofluorobenzene	50.2	0	50	0	100	72 - 125			
Surr: Dibromofluoromethane	49.87	0	50	0	99.7	71 - 125			
Surr: Toluene-d8	51.05	0	50	0	102	75 - 125			

MS	Sample ID: HS16090407-04MS	Units: ug/L		Analysis Date: 13-Sep-2016 14:35					
Client ID:	Run ID: VOA6_281303	SeqNo: 3824576		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	47.34	5.0	50	0	94.7	73 - 121			
Ethylbenzene	44.69	5.0	50	0	89.4	80 - 120			
Toluene	43.09	5.0	50	0	86.2	80 - 120			
Xylenes, Total	134.4	15	150	0	89.6	80 - 120			
Surr: 1,2-Dichloroethane-d4	50.28	0	50	0	101	70 - 125			
Surr: 4-Bromofluorobenzene	49.17	0	50	0	98.3	72 - 125			
Surr: Dibromofluoromethane	49.65	0	50	0	99.3	71 - 125			
Surr: Toluene-d8	50.14	0	50	0	100	75 - 125			

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281303		Instrument: VOA6		Method: SW8260						
MSD	Sample ID:	HS16090407-04MSD			Units:	ug/L				
	Analysis Date:	13-Sep-2016 14:59								
	Client ID:	Run ID:	VOA6_281303		SeqNo:	3824577		PrepDate:	DF: 1	
	Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	46.1	5.0	50	0	92.2	73 - 121	47.34	2.65	20	
Ethylbenzene	45.52	5.0	50	0	91.0	80 - 120	44.69	1.84	20	
Toluene	44.35	5.0	50	0	88.7	80 - 120	43.09	2.87	20	
Xylenes, Total	137	15	150	0	91.3	78 - 121	134.4	1.93	20	
Surr: 1,2-Dichloroethane-d4	48.24	0	50	0	96.5	70 - 125	50.28	4.14	20	
Surr: 4-Bromofluorobenzene	49.68	0	50	0	99.4	72 - 125	49.17	1.02	20	
Surr: Dibromofluoromethane	49.84	0	50	0	99.7	71 - 125	49.65	0.379	20	
Surr: Toluene-d8	51.01	0	50	0	102	75 - 125	50.14	1.73	20	
The following samples were analyzed in this batch:		HS16090534-01		HS16090534-02		HS16090534-03		HS16090534-05		

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281305		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-160913	Units: ug/L		Analysis Date: 14-Sep-2016 00:31					
Client ID:	Run ID: VOA1_281305		SeqNo: 3824682		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	51.32	0	50	0	103	70 - 125			
Surr: 4-Bromofluorobenzene	49.5	0	50	0	99.0	72 - 125			
Surr: Dibromofluoromethane	50.41	0	50	0	101	71 - 125			
Surr: Toluene-d8	49.24	0	50	0	98.5	75 - 125			

LCS	Sample ID: VLCSW-160913	Units: ug/L		Analysis Date: 13-Sep-2016 23:38					
Client ID:	Run ID: VOA1_281305		SeqNo: 3824681		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	54.34	5.0	50	0	109	73 - 121			
Ethylbenzene	48.99	5.0	50	0	98.0	80 - 120			
Toluene	51.38	5.0	50	0	103	80 - 120			
Xylenes, Total	155.7	15	150	0	104	80 - 120			
Surr: 1,2-Dichloroethane-d4	48.63	0	50	0	97.3	70 - 125			
Surr: 4-Bromofluorobenzene	53.2	0	50	0	106	72 - 125			
Surr: Dibromofluoromethane	50.13	0	50	0	100	71 - 125			
Surr: Toluene-d8	49.82	0	50	0	99.6	75 - 125			

MS	Sample ID: HS16090544-01MS	Units: ug/L		Analysis Date: 14-Sep-2016 01:49					
Client ID:	Run ID: VOA1_281305		SeqNo: 3824685		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	54.52	5.0	50	0	109	73 - 121			
Ethylbenzene	46.31	5.0	50	0	92.6	80 - 120			
Toluene	51.37	5.0	50	0	103	80 - 120			
Xylenes, Total	145.7	15	150	0	97.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	48.04	0	50	0	96.1	70 - 125			
Surr: 4-Bromofluorobenzene	52.76	0	50	0	106	72 - 125			
Surr: Dibromofluoromethane	50.12	0	50	0	100	71 - 125			
Surr: Toluene-d8	49.41	0	50	0	98.8	75 - 125			

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281305		Instrument: VOA1		Method: SW8260						
MSD	Sample ID: HS16090544-01MSD	Units: ug/L			Analysis Date: 14-Sep-2016 02:16					
Client ID:	Run ID: VOA1_281305	SeqNo: 3824686		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Benzene	48.63	5.0	50	0	97.3	73 - 121	54.52	11.4	20	
Ethylbenzene	44.3	5.0	50	0	88.6	80 - 120	46.31	4.44	20	
Toluene	47.66	5.0	50	0	95.3	80 - 120	51.37	7.49	20	
Xylenes, Total	139	15	150	0	92.7	78 - 121	145.7	4.68	20	
Surr: 1,2-Dichloroethane-d4	49.66	0	50	0	99.3	70 - 125	48.04	3.32	20	
Surr: 4-Bromofluorobenzene	48.77	0	50	0	97.5	72 - 125	52.76	7.85	20	
Surr: Dibromofluoromethane	49.89	0	50	0	99.8	71 - 125	50.12	0.468	20	
Surr: Toluene-d8	48.76	0	50	0	97.5	75 - 125	49.41	1.32	20	

The following samples were analyzed in this batch: HS16090534-04

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281527		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-091616	Units: mg/L		Analysis Date: 16-Sep-2016 08:30						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829101		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: WLCSW1-091616	Units: mg/L		Analysis Date: 16-Sep-2016 09:27						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829102		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				
LCSD	Sample ID: WLCSDW1-091616	Units: mg/L		Analysis Date: 16-Sep-2016 09:42						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829103		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.11	0.500	20	0	101	90 - 110	19.96	0.784	20	
MS	Sample ID: HS16090544-03MS	Units: mg/L		Analysis Date: 16-Sep-2016 17:56						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829120		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	302.5	5.00	100	215.7	86.8	80 - 120				
MS	Sample ID: HS16090527-01MS	Units: mg/L		Analysis Date: 16-Sep-2016 14:18						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829105		PrepDate:		DF: 5				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	134.5	2.50	50	86.27	96.5	80 - 120				
MSD	Sample ID: HS16090544-03MSD	Units: mg/L		Analysis Date: 16-Sep-2016 18:11						
Client ID:	Run ID: ICS2100_281527	SeqNo: 3829121		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	307.5	5.00	100	215.7	91.8	80 - 120	302.5	1.63	20	

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

QC BATCH REPORT

Batch ID: R281527		Instrument: ICS2100		Method: E300						
MSD	Sample ID: HS16090527-01MSD	Units: mg/L		Analysis Date: 16-Sep-2016 14:32						
Client ID:	Run ID: ICS2100_281527		SeqNo: 3829106		PrepDate:		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	133.2	2.50	50	86.27	93.9	80 - 120	134.5	0.973	20	
The following samples were analyzed in this batch:										
HS16090534-01		HS16090534-02		HS16090534-03		HS16090534-05				

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

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16090534

**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

ALS Group USA, Corp

Date: 19-Sep-16

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	16-022-1	27-Mar-2017
Illinois	003872	09-May-2017
Kansas	E-10352 2015-2016	30-Sep-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	2016-122	31-Aug-2017
Texas	TX104704231-16-17	30-Apr-2017

ALS Group USA, Corp

Date: 19-Sep-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16090534

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16090534-01	MW-2	Login	9/13/2016 11:38:27 AM	CGG	1B
HS16090534-01	MW-2	Login	9/13/2016 11:38:27 AM	CGG	VW-3
HS16090534-02	MW-3	Login	9/13/2016 11:38:27 AM	CGG	1B
HS16090534-02	MW-3	Login	9/13/2016 11:38:27 AM	CGG	VW-3
HS16090534-03	MW-4	Login	9/13/2016 11:38:27 AM	CGG	1B
HS16090534-03	MW-4	Login	9/13/2016 11:38:27 AM	CGG	VW-3
HS16090534-04	Trip Blank	Login	9/13/2016 11:38:27 AM	CGG	VW-3
HS16090534-05	Dup	Login	9/13/2016 11:38:27 AM	CGG	1B
HS16090534-05	Dup	Login	9/13/2016 11:38:27 AM	CGG	VW-3

ALS Group USA, Corp

Date: 19-Sep-16

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **13-Sep-2016 08:45**

Work Order: HS16090534

Received by: **RPG**

Checklist completed by:	<u>Corey Grandits</u>	<u>13-Sep-2016</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>15-Sep-2016</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):	1.4c/2.1c uc/c	IR#11
Cooler(s)/Kit(s):	09/13/2016 11:45	
Date/Time sample(s) sent to storage:	25720	

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

Cincinnati, OH
+1 513 733 5336Fort Collins, CO
+1 970 490 1511Everett, WA
+1 425 356 2600Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: 151439

Houston, TX
+1 281 530 5656Spring City, PA
+1 610 948 4903South Charleston, WV
+1 304 356 3168Middletown, PA
+1 717 944 5541Salt Lake City, UT
+1 801 266 7700York, PA
+1 717 505 5280

Customer Information		Project Information		Parameter/Method Request for Analysis																
Purchase Order	4502201559 ENV 749-4	Project Name	55625DM GSHI PXP Hill EC B ATB at	A	8260_W (BTEX)															
Work Order		Project Number		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	HS16090534 Glenn Springs Holdings, Inc. 55625DM GSHI PXP Hill EC B ATB at Well 24 															
Address	PO Box 2148	Address	PO Box 2148	E																
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston, TX 77252-2148	F																
Phone		Phone		G																
Fax		Fax		H																
e-Mail Address		e-Mail Address		I																
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold			
1	MW-1			Water	158	4	X	X												
2	MW-2	9-8-16	1000	Water		4	X	X												
3	MW-3	9-8-16	0940	Water		4	X	X												
4	MW-4	9-8-16	0925	Water		4	X	X												
5	RW-1			Water		4	X	X												
6	Trip Blank			Water		2			X											
7	Dup	9-8-16		W	✓	4	X	X												
8																				
9																				
10																				
Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)										Results Due Date:						
Cole Pore Cole Pore		FedEx		TAT 10 days Other:																
Relinquished by:	Date: 9-12-16	Time: 1700	Received by:				Notes: [GSHI PXP Hill EC B ATB at 24]													
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):				25720	1.4	QC Level STD											
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							12 11		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.

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Page 20 of 21

 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>09/13/16</i> Time: <i>1700</i> Name: <i>Colt P</i> Company: <i>Tektronix</i>	Date: <i>09/13/16</i>	

25720

SEP 13 2016

 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>09/13/16</i> Time: <i>1700</i> Name: <i>Colt P</i> Company: <i>Tek</i>	Date: <i>09/13/16</i>	

FedEx TRK# 6786 7200 0000 0221	TUE - 13 SEP 10:30A PRIORITY OVERNIGHT
AB SGRA	25723 TX-US 77099 IAH
	



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

December 19, 2016

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS16120475**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 5 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: Jumoke.Lawal
Dane J. Wacasey

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16120475

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS16120475-01	MW-2	Water		06-Dec-2016 12:35	08-Dec-2016 09:00	☐
HS16120475-02	MW-3	Water		06-Dec-2016 12:35	08-Dec-2016 09:00	☐
HS16120475-03	MW-4	Water		06-Dec-2016 12:45	08-Dec-2016 09:00	☐
HS16120475-04	DUP	Water		06-Dec-2016 00:00	08-Dec-2016 09:00	☐
HS16120475-05	Trip Blank	Water		06-Dec-2016 00:00	08-Dec-2016 09:00	☐

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16120475

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R286342

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

WetChemistry by Method E300

Batch ID: R286680

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 06-Dec-2016 12:35

ANALYTICAL REPORT

WorkOrder:HS16120475
 Lab ID:HS16120475-01
 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	10-Dec-2016 05:45
Ethylbenzene	U		0.50	5.0	ug/L	1	10-Dec-2016 05:45
Toluene	U		0.50	5.0	ug/L	1	10-Dec-2016 05:45
Xylenes, Total	U		0.50	5.0	ug/L	1	10-Dec-2016 05:45
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	10-Dec-2016 05:45
Surr: 4-Bromofluorobenzene	89.9			72-125	%REC	1	10-Dec-2016 05:45
Surr: Dibromofluoromethane	112			71-125	%REC	1	10-Dec-2016 05:45
Surr: Toluene-d8	97.8			75-125	%REC	1	10-Dec-2016 05:45
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	283		2.00	5.00	mg/L	10	15-Dec-2016 21:36

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 06-Dec-2016 12:35

ANALYTICAL REPORT

WorkOrder:HS16120475
 Lab ID:HS16120475-02
 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	10-Dec-2016 06:09
Ethylbenzene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:09
Toluene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:09
Xylenes, Total	U		0.50	5.0	ug/L	1	10-Dec-2016 06:09
Surr: 1,2-Dichloroethane-d4	105			70-125	%REC	1	10-Dec-2016 06:09
Surr: 4-Bromofluorobenzene	88.9			72-125	%REC	1	10-Dec-2016 06:09
Surr: Dibromofluoromethane	110			71-125	%REC	1	10-Dec-2016 06:09
Surr: Toluene-d8	97.1			75-125	%REC	1	10-Dec-2016 06:09
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	178		2.00	5.00	mg/L	10	15-Dec-2016 22:40

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 06-Dec-2016 12:45

ANALYTICAL REPORT

WorkOrder:HS16120475
 Lab ID:HS16120475-03
 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	10-Dec-2016 06:32
Ethylbenzene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:32
Toluene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:32
Xylenes, Total	U		0.50	5.0	ug/L	1	10-Dec-2016 06:32
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	10-Dec-2016 06:32
Surr: 4-Bromofluorobenzene	91.1			72-125	%REC	1	10-Dec-2016 06:32
Surr: Dibromofluoromethane	114			71-125	%REC	1	10-Dec-2016 06:32
Surr: Toluene-d8	98.1			75-125	%REC	1	10-Dec-2016 06:32
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	143		2.00	5.00	mg/L	10	15-Dec-2016 23:01

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 06-Dec-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16120475
 Lab ID:HS16120475-04
 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	10-Dec-2016 06:56
Ethylbenzene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:56
Toluene	U		0.50	5.0	ug/L	1	10-Dec-2016 06:56
Xylenes, Total	U		0.50	5.0	ug/L	1	10-Dec-2016 06:56
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	10-Dec-2016 06:56
Surr: 4-Bromofluorobenzene	91.1			72-125	%REC	1	10-Dec-2016 06:56
Surr: Dibromofluoromethane	112			71-125	%REC	1	10-Dec-2016 06:56
Surr: Toluene-d8	98.1			75-125	%REC	1	10-Dec-2016 06:56
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	146		2.00	5.00	mg/L	10	16-Dec-2016 00:05

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 06-Dec-2016 00:00

ANALYTICAL REPORT

WorkOrder:HS16120475
 Lab ID:HS16120475-05
 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	10-Dec-2016 00:13
Ethylbenzene	U		0.50	5.0	ug/L	1	10-Dec-2016 00:13
Toluene	U		0.50	5.0	ug/L	1	10-Dec-2016 00:13
Xylenes, Total	U		0.50	5.0	ug/L	1	10-Dec-2016 00:13
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	10-Dec-2016 00:13
Surr: 4-Bromofluorobenzene	90.8			72-125	%REC	1	10-Dec-2016 00:13
Surr: Dibromofluoromethane	113			71-125	%REC	1	10-Dec-2016 00:13
Surr: Toluene-d8	98.8			75-125	%REC	1	10-Dec-2016 00:13

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R286342	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS16120475-01	MW-2	06 Dec 2016 12:35			10 Dec 2016 05:45	1
HS16120475-02	MW-3	06 Dec 2016 12:35			10 Dec 2016 06:09	1
HS16120475-03	MW-4	06 Dec 2016 12:45			10 Dec 2016 06:32	1
HS16120475-04	DUP	06 Dec 2016 00:00			10 Dec 2016 06:56	1
HS16120475-05	Trip Blank	06 Dec 2016 00:00			10 Dec 2016 00:13	1
Batch ID R286680	Test Name : ANIONS BY E300.0			Matrix: Water		
HS16120475-01	MW-2	06 Dec 2016 12:35			15 Dec 2016 21:36	10
HS16120475-02	MW-3	06 Dec 2016 12:35			15 Dec 2016 22:40	10
HS16120475-03	MW-4	06 Dec 2016 12:45			15 Dec 2016 23:01	10
HS16120475-04	DUP	06 Dec 2016 00:00			16 Dec 2016 00:05	10

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

QC BATCH REPORT

Batch ID: R286342		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-161209	Units: ug/L		Analysis Date: 09-Dec-2016 23:25					
Client ID:	Run ID: VOA6_286342	SeqNo: 3924603		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	52.47	0	50	0	105	70 - 125			
Surr: 4-Bromofluorobenzene	45.06	0	50	0	90.1	72 - 125			
Surr: Dibromofluoromethane	55.48	0	50	0	111	71 - 125			
Surr: Toluene-d8	48.52	0	50	0	97.0	75 - 125			

LCS	Sample ID: VLCSW-161209	Units: ug/L		Analysis Date: 09-Dec-2016 22:37					
Client ID:	Run ID: VOA6_286342	SeqNo: 3924602		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	52.08	5.0	50	0	104	73 - 121			
Ethylbenzene	46.19	5.0	50	0	92.4	80 - 120			
Toluene	44.85	5.0	50	0	89.7	80 - 120			
Xylenes, Total	138	5.0	150	0	92.0	80 - 120			
Surr: 1,2-Dichloroethane-d4	52.79	0	50	0	106	70 - 125			
Surr: 4-Bromofluorobenzene	46.81	0	50	0	93.6	72 - 125			
Surr: Dibromofluoromethane	56.42	0	50	0	113	71 - 125			
Surr: Toluene-d8	49.38	0	50	0	98.8	75 - 125			

MS	Sample ID: HS16120474-01MS	Units: ug/L		Analysis Date: 10-Dec-2016 01:00					
Client ID:	Run ID: VOA6_286342	SeqNo: 3924607		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.43	5.0	50	0	103	73 - 121			
Ethylbenzene	44.56	5.0	50	0	89.1	80 - 120			
Toluene	43.18	5.0	50	0	86.4	80 - 120			
Xylenes, Total	133.7	5.0	150	0	89.1	80 - 120			
Surr: 1,2-Dichloroethane-d4	52.66	0	50	0	105	70 - 125			
Surr: 4-Bromofluorobenzene	46.52	0	50	0	93.0	72 - 125			
Surr: Dibromofluoromethane	56.63	0	50	0	113	71 - 125			
Surr: Toluene-d8	49.21	0	50	0	98.4	75 - 125			

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

QC BATCH REPORT

Batch ID: R286342		Instrument: VOA6		Method: SW8260						
MSD	Sample ID:	HS16120474-01MSD		Units:	ug/L					
	Analysis Date:	10-Dec-2016 01:24								
	Client ID:	Run ID:	VOA6_286342		SeqNo:	3924608		PrepDate:	DF: 1	
	Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	51.46	5.0	50	0	103	73 - 121	51.43	0.0583	20	
Ethylbenzene	46.54	5.0	50	0	93.1	80 - 120	44.56	4.34	20	
Toluene	45.47	5.0	50	0	90.9	80 - 120	43.18	5.16	20	
Xylenes, Total	139.3	5.0	150	0	92.9	78 - 121	133.7	4.11	20	
Surr: 1,2-Dichloroethane-d4	53.42	0	50	0	107	70 - 125	52.66	1.44	20	
Surr: 4-Bromofluorobenzene	46.88	0	50	0	93.8	72 - 125	46.52	0.759	20	
Surr: Dibromofluoromethane	57.06	0	50	0	114	71 - 125	56.63	0.741	20	
Surr: Toluene-d8	48.88	0	50	0	97.8	75 - 125	49.21	0.663	20	
The following samples were analyzed in this batch:										
		HS16120475-01		HS16120475-02		HS16120475-03		HS16120475-04		
		HS16120475-05								

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

QC BATCH REPORT

Batch ID: R286680		Instrument: ICS3000		Method: E300						
MBLK	Sample ID: WBLKW1-121516	Units: mg/L		Analysis Date: 15-Dec-2016 11:10						
Client ID:	Run ID: ICS3000_286680	SeqNo: 3932285		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: WLCSW1-121516	Units: mg/L		Analysis Date: 15-Dec-2016 11:31						
Client ID:	Run ID: ICS3000_286680	SeqNo: 3932286		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.35	0.500	20	0	102	90 - 110				
LCSD	Sample ID: WLCSDW1-121516	Units: mg/L		Analysis Date: 15-Dec-2016 11:52						
Client ID:	Run ID: ICS3000_286680	SeqNo: 3932287		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.43	0.500	20	0	102	90 - 110	20.35	0.397	20	
MS	Sample ID: HS16120475-01MS	Units: mg/L		Analysis Date: 15-Dec-2016 21:57						
Client ID: MW-2	Run ID: ICS3000_286680	SeqNo: 3932303		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	378.5	5.00	100	283.1	95.3	80 - 120				
MS	Sample ID: HS16120474-01MS	Units: mg/L		Analysis Date: 15-Dec-2016 16:59						
Client ID:	Run ID: ICS3000_286680	SeqNo: 3932289		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	351.4	5.00	100	255.9	95.5	80 - 120				
MSD	Sample ID: HS16120475-01MSD	Units: mg/L		Analysis Date: 15-Dec-2016 22:18						
Client ID: MW-2	Run ID: ICS3000_286680	SeqNo: 3932304		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	380.3	5.00	100	283.1	97.2	80 - 120	378.5	0.485	20	

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

QC BATCH REPORT

Batch ID: R286680		Instrument: ICS3000		Method: E300	
MSD	Sample ID: HS16120474-01MSD	Units: mg/L		Analysis Date: 15-Dec-2016 17:21	
Client ID:	Run ID: ICS3000_286680	SeqNo: 3932290		PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	348.9	5.00	100	255.9 93.0	80 - 120 351.4 0.713 20
The following samples were analyzed in this batch:					
HS16120475-01 HS16120475-02 HS16120475-03 HS16120475-04					

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS16120475

**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

ALS Group USA, Corp

Date: 19-Dec-16

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

ALS Group USA, Corp

Date: 19-Dec-16

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS16120475

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS16120475-01	MW-2	Login	12/9/2016 12:18:09 PM	CL	14A
HS16120475-01	MW-2	Login	12/9/2016 12:18:09 PM	CL	VW-3
HS16120475-02	MW-3	Login	12/9/2016 12:18:09 PM	CL	14A
HS16120475-02	MW-3	Login	12/9/2016 12:18:09 PM	CL	VW-3
HS16120475-03	MW-4	Login	12/9/2016 12:18:09 PM	CL	14A
HS16120475-03	MW-4	Login	12/9/2016 12:18:09 PM	CL	VW-3
HS16120475-04	DUP	Login	12/9/2016 12:18:09 PM	CL	14A
HS16120475-04	DUP	Login	12/9/2016 12:18:09 PM	CL	VW-3
HS16120475-05	Trip Blank	Login	12/9/2016 12:18:09 PM	CL	VW-3

ALS Group USA, Corp

Date: 19-Dec-16

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS16120475

Received by: **RPG**

Checklist completed by:	<u>Cesar A. Lira</u>	9-Dec-2016	Reviewed by:	<u>Dane J. Wacasey</u>	12-Dec-2016
	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):	1.1c/1.4c uc/c	11
--------------------------------	----------------	----

Cooler(s)/Kit(s):	25117
-------------------	-------

Date/Time sample(s) sent to storage:	12/09/2016 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 5336Fort Collins, CO
+1 970 490 1511Everett, WA
+1 425 356 2600Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 152533

Houston, TX
+1 281 530 5656Spring City, PA
+1 610 948 4903South Charleston, WV
+1 304 356 3168Middletown, PA
+1 717 944 5541Salt Lake City, UT
+1 801 266 7700York, PA
+1 717 505 5280

Customer Information		Project Information		ALS Project Manager:																ALS Work Order #:	
Purchase Order		Project Name		Parameter/Method Request for Analysis																	
4502201559 ENV 749-4		55625DM GSHI PXP Hill EC B ATB at #24		A 8260_W (BTEX)																	
Work Order		Project Number		B 300_W (Chloride)																	
Company Name		Bill To Company		C 8260_W (BTEX-Trip Blank)																	
Send Report To		Invoice Attn		D																	
Address		Address		E																	
City/State/Zip		City/State/Zip		F																	
Phone		Phone		G																	
Fax		Fax		H																	
e-Mail Address		e-Mail Address		I																	
				J																	
				HS16120475 Glenn Springs Holdings, Inc. 55625DM GSHI PXP Hill EC B ATB at Well 24 																	
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold				
1	MW-1			Water		4	X	X													
2	MW-2	12-6-16	1235	Water	148	4	X	X													
3	MW-3	12-6-16	1235	Water	148	4	X	X													
4	MW-4	12-6-16	1245	Water	148	4	X	X													
5	RW-1			Water		4	X	X													
6	DUP	12-6-16		Water	148	4	X	X													
7	Trip Blank			Water		2			X												
8																					
9																					
10																					
Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)										Results Due Date:							
Relinquished by:		Date:		Time:		Received by:		Notes:										QC Package: (Check One Box Below)			
Relinquished by:		Date:		Time:		Received by (Laboratory):		Cooler ID										Cooler Temp.			
Logged by (Laboratory):		Date:		Time:		Checked by (Laboratory):		2517										11			
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.

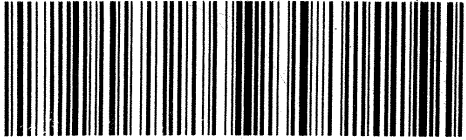
Page 18 of 19

Copyright 2011 by ALS Environmental.

 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>1200</i>	Date: <i>12/08/16</i>
	Name: <i>Matthew M...</i>	Company: <i>LEGA Tech</i>	

25117

DEC 08 2016

FedEx TRK# 0221	6786 7202 1729	THU - 08 DEC 10:30A PRIORITY OVERNIGHT
AB SGRA	<i>25117</i>	77099 IAH
		TX-US



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

September 11, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17090043**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 5 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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS17090043

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17090043-01	MW-2	Groundwater		31-Aug-2017 10:40	01-Sep-2017 15:20	☐
HS17090043-02	MW-3	Groundwater		31-Aug-2017 11:10	01-Sep-2017 15:20	☐
HS17090043-03	MW-4	Groundwater		31-Aug-2017 11:55	01-Sep-2017 15:20	☐
HS17090043-04	DUP	Groundwater		31-Aug-2017 00:00	01-Sep-2017 15:20	☐
HS17090043-05	Trip Blank	Water		31-Aug-2017 00:00	01-Sep-2017 15:20	☐

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS17090043

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R301001,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.
-

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 31-Aug-2017 10:40

ANALYTICAL REPORT

WorkOrder:HS17090043
 Lab ID:HS17090043-01
 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	03-Sep-2017 22:25
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Sep-2017 22:25
Toluene	0.64	J	0.50	5.0	ug/L	1	03-Sep-2017 22:25
Xylenes, Total	U		0.50	5.0	ug/L	1	03-Sep-2017 22:25
Surr: 1,2-Dichloroethane-d4	97.6			70-126	%REC	1	03-Sep-2017 22:25
Surr: 4-Bromofluorobenzene	97.5			81-113	%REC	1	03-Sep-2017 22:25
Surr: Dibromofluoromethane	97.6			77-123	%REC	1	03-Sep-2017 22:25
Surr: Toluene-d8	105			82-127	%REC	1	03-Sep-2017 22:25
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	241		2.00	5.00	mg/L	10	05-Sep-2017 20:50

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 31-Aug-2017 11:10

ANALYTICAL REPORT

WorkOrder:HS17090043
 Lab ID:HS17090043-02
 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	03-Sep-2017 22:52
Ethylbenzene	U		0.50	5.0	ug/L	1	03-Sep-2017 22:52
Toluene	U		0.50	5.0	ug/L	1	03-Sep-2017 22:52
Xylenes, Total	U		0.50	5.0	ug/L	1	03-Sep-2017 22:52
Surr: 1,2-Dichloroethane-d4	93.4			70-126	%REC	1	03-Sep-2017 22:52
Surr: 4-Bromofluorobenzene	99.9			81-113	%REC	1	03-Sep-2017 22:52
Surr: Dibromofluoromethane	97.6			77-123	%REC	1	03-Sep-2017 22:52
Surr: Toluene-d8	107			82-127	%REC	1	03-Sep-2017 22:52
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	132		2.00	5.00	mg/L	10	05-Sep-2017 19:23

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 31-Aug-2017 11:55

ANALYTICAL REPORT

WorkOrder:HS17090043
 Lab ID:HS17090043-03
 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	05-Sep-2017 04:12
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Sep-2017 04:12
Toluene	0.62	J	0.50	5.0	ug/L	1	05-Sep-2017 04:12
Xylenes, Total	U		0.50	5.0	ug/L	1	05-Sep-2017 04:12
Surr: 1,2-Dichloroethane-d4	95.7			70-126	%REC	1	05-Sep-2017 04:12
Surr: 4-Bromofluorobenzene	104			81-113	%REC	1	05-Sep-2017 04:12
Surr: Dibromofluoromethane	97.3			77-123	%REC	1	05-Sep-2017 04:12
Surr: Toluene-d8	97.7			82-127	%REC	1	05-Sep-2017 04:12
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	113		2.00	5.00	mg/L	10	05-Sep-2017 19:45

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 31-Aug-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17090043
 Lab ID:HS17090043-04
 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	05-Sep-2017 02:52
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Sep-2017 02:52
Toluene	U		0.50	5.0	ug/L	1	05-Sep-2017 02:52
Xylenes, Total	U		0.50	5.0	ug/L	1	05-Sep-2017 02:52
Surr: 1,2-Dichloroethane-d4	94.5			70-126	%REC	1	05-Sep-2017 02:52
Surr: 4-Bromofluorobenzene	98.8			81-113	%REC	1	05-Sep-2017 02:52
Surr: Dibromofluoromethane	97.1			77-123	%REC	1	05-Sep-2017 02:52
Surr: Toluene-d8	99.0			82-127	%REC	1	05-Sep-2017 02:52
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	246		2.00	5.00	mg/L	10	05-Sep-2017 21:55

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 31-Aug-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17090043
 Lab ID:HS17090043-05
 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	05-Sep-2017 04:39
Ethylbenzene	U		0.50	5.0	ug/L	1	05-Sep-2017 04:39
Toluene	U		0.50	5.0	ug/L	1	05-Sep-2017 04:39
Xylenes, Total	U		0.50	5.0	ug/L	1	05-Sep-2017 04:39
Surr: 1,2-Dichloroethane-d4	98.3			70-126	%REC	1	05-Sep-2017 04:39
Surr: 4-Bromofluorobenzene	103			81-113	%REC	1	05-Sep-2017 04:39
Surr: Dibromofluoromethane	98.9			77-123	%REC	1	05-Sep-2017 04:39
Surr: Toluene-d8	103			82-127	%REC	1	05-Sep-2017 04:39

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R301001	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS17090043-01	MW-2	31 Aug 2017 10:40			03 Sep 2017 22:25	1
HS17090043-02	MW-3	31 Aug 2017 11:10			03 Sep 2017 22:52	1
Batch ID R301018	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17090043-05	Trip Blank	31 Aug 2017 00:00			05 Sep 2017 04:39	1
Batch ID R301018	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS17090043-03	MW-4	31 Aug 2017 11:55			05 Sep 2017 04:12	1
HS17090043-04	DUP	31 Aug 2017 00:00			05 Sep 2017 02:52	1
Batch ID R301187	Test Name : ANIONS BY E300.0			Matrix: Groundwater		
HS17090043-01	MW-2	31 Aug 2017 10:40			05 Sep 2017 20:50	10
HS17090043-02	MW-3	31 Aug 2017 11:10			05 Sep 2017 19:23	10
HS17090043-03	MW-4	31 Aug 2017 11:55			05 Sep 2017 19:45	10
HS17090043-04	DUP	31 Aug 2017 00:00			05 Sep 2017 21:55	10

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

QC BATCH REPORT

Batch ID: R301001		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170903	Units: ug/L		Analysis Date: 03-Sep-2017 19:44					
Client ID:	Run ID: VOA1_301001	SeqNo: 4216998		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	49.71	0	50	0	99.4	70 - 123			
Surr: 4-Bromofluorobenzene	49.46	0	50	0	98.9	82 - 115			
Surr: Dibromofluoromethane	50.47	0	50	0	101	73 - 126			
Surr: Toluene-d8	50.85	0	50	0	102	81 - 119			

LCS	Sample ID: VLCSW-170903	Units: ug/L		Analysis Date: 03-Sep-2017 18:24					
Client ID:	Run ID: VOA1_301001	SeqNo: 4216997		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	47.32	5.0	50	0	94.6	74 - 120			
Ethylbenzene	45.24	5.0	50	0	90.5	77 - 117			
Toluene	47.8	5.0	50	0	95.6	77 - 118			
Xylenes, Total	144	5.0	150	0	96.0	75 - 122			
Surr: 1,2-Dichloroethane-d4	51.16	0	50	0	102	70 - 130			
Surr: 4-Bromofluorobenzene	48.82	0	50	0	97.6	82 - 115			
Surr: Dibromofluoromethane	50.79	0	50	0	102	73 - 126			
Surr: Toluene-d8	47.9	0	50	0	95.8	81 - 119			

MS	Sample ID: HS17081468-01MS	Units: ug/L		Analysis Date: 03-Sep-2017 21:31					
Client ID:	Run ID: VOA1_301001	SeqNo: 4217000		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	42.63	5.0	50	0	85.3	70 - 127			
Ethylbenzene	44.81	5.0	50	0	89.6	70 - 124			
Toluene	47.61	5.0	50	0	95.2	70 - 123			
Xylenes, Total	137.3	5.0	150	0	91.5	70 - 130			
Surr: 1,2-Dichloroethane-d4	48.47	0	50	0	96.9	70 - 126			
Surr: 4-Bromofluorobenzene	50.94	0	50	0	102	81 - 113			
Surr: Dibromofluoromethane	49.65	0	50	0	99.3	77 - 123			
Surr: Toluene-d8	47.42	0	50	0	94.8	82 - 127			

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

QC BATCH REPORT

Batch ID: R301001		Instrument: VOA1		Method: SW8260						
MSD	Sample ID:	HS17081468-01MSD		Units:	ug/L					
	Analysis Date:	03-Sep-2017 21:58								
	Client ID:	Run ID:	VOA1_301001		SeqNo:	4217001		PrepDate:	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.33	5.0	50	0	86.7	70 - 127	42.63	1.64	20	
Ethylbenzene	45.87	5.0	50	0	91.7	70 - 124	44.81	2.35	20	
Toluene	48.64	5.0	50	0	97.3	70 - 123	47.61	2.15	20	
Xylenes, Total	141	5.0	150	0	94.0	70 - 130	137.3	2.66	20	
Surr: 1,2-Dichloroethane-d4	50.57	0	50	0	101	70 - 126	48.47	4.25	20	
Surr: 4-Bromofluorobenzene	52.28	0	50	0	105	81 - 113	50.94	2.58	20	
Surr: Dibromofluoromethane	49.3	0	50	0	98.6	77 - 123	49.65	0.702	20	
Surr: Toluene-d8	51.62	0	50	0	103	82 - 127	47.42	8.46	20	
The following samples were analyzed in this batch: HS17090043-01 HS17090043-02										

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

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: DUP	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.

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

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: DUP	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 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:		HS17090043-03		HS17090043-04		HS17090043-05				

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

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: MW-2	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: MW-2	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.

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

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:					
HS17090043-01 HS17090043-02 HS17090043-03 HS17090043-04					

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

ALS Group USA, Corp

Date: 11-Sep-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17090043

**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

ALS Group USA, Corp

Date: 11-Sep-17

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

ALS Group USA, Corp

Date: 11-Sep-17

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS17090043

Received by: **JRM**
 Checklist completed by: Nilesh D. Ranchod
 eSignature Date

 Reviewed by: Dane J. Wacasey
 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): 0.6C/1.1C UC/C IR #15
Cooler(s)/Kit(s): 25715Date/Time sample(s) sent to storage: 09/01/2017 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: Sample times do not match. MW-3 COC=11:10 Labels=11:40. Logged in per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments: Corrective Action:



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Fort Collins, CO
+1 970 490 1511

Everett, WA
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Holland, MI
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Chain of Custody Form

HS17090043

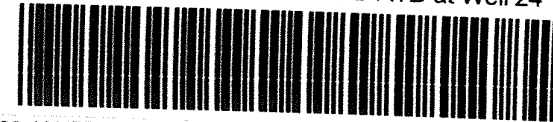
, WV

Page ____ of ____

COC ID: 166113

Glenn Springs Holdings, Inc.

55625DM GSHI PXP Hill EC B ATB at Well 24



Customer Information		Project Information		ALS Project Manager:	
Purchase Order	4502201559 ENV 749-4	Project Name	55625DM GSHI PXP Hill EC B ATB at 24	A	8260 W (BTEX)
Work Order		Project Number	55625	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	
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148	F	
Phone		Phone		G	
Fax		Fax		H	
e-Mail Address	Angela.Bown@ghd.com	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			Groundwa	1,8	4	X	X									
2	MW-2	8/31	10:40	Groundwa	1,8	4	X	X									
3	MW-3	8/31	11:10	Groundwa	1,8	4	X	X									
4	MW-4	8/31	11:55	Groundwa	1,8	4	X	X									
5	RW-1			Groundwa	1,8	4	X	X									
6	DUP	8/31		Groundwa	1,8	4	X	X									
7	Trip Blank			Water	1	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign		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:	Date:	Time:	Received by:	Notes: [GSHI PXP Hill EC B ATB at 24]			
Relinquished by:	Date:	Time:	Received by (Laboratory): JM 9.1.17 1520	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	25715	0.6	☒ Level II Std QC ☐ Level III Std QC/Raw Data ☐ 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				☐ TRRP Checklist ☐ TRRP Level IV			

ote: 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 not to be used for any other purpose.

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Page 19 of 20

ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: NP Date: 09/01/17
	Date: 8/31	Time: 16:20	
	Name: Kyle Lueders		
	Company: PetMA Tech		

HOUSTON TX 77099 (281) 530-5656 REF: 55625 GSHI-DW 25715 09/01/17 RMA:		FedEx Express
FedEx TRK# 7376 9748 0276	FRI - 01 SEP 10:00 PRIORITY OVERNIGHT	

SEP 01 2017



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March 15, 2017

Angela Bown
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS17030396**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear Angela,

ALS Environmental received 5 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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS17030396

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17030396-01	MW-2	Water		02-Mar-2017 12:15	07-Mar-2017 09:10	☐
HS17030396-02	MW-3	Water		02-Mar-2017 12:55	07-Mar-2017 09:10	☐
HS17030396-03	MW-4	Water		02-Mar-2017 11:45	07-Mar-2017 09:10	☐
HS17030396-04	DUP	Water		02-Mar-2017 12:15	07-Mar-2017 09:10	☐
HS17030396-05	Trip Blank	Water	021417-57	02-Mar-2017 00:00	07-Mar-2017 09:10	☐

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS17030396

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R290775,R290835

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

WetChemistry by Method E300

Batch ID: R291114

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 02-Mar-2017 12:15

ANALYTICAL REPORT

WorkOrder:HS17030396
 Lab ID:HS17030396-01
 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	09-Mar-2017 16:49
Ethylbenzene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:49
Toluene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:49
Xylenes, Total	U		0.50	5.0	ug/L	1	09-Mar-2017 16:49
Surr: 1,2-Dichloroethane-d4	95.7			70-125	%REC	1	09-Mar-2017 16:49
Surr: 4-Bromofluorobenzene	107			72-125	%REC	1	09-Mar-2017 16:49
Surr: Dibromofluoromethane	91.1			71-125	%REC	1	09-Mar-2017 16:49
Surr: Toluene-d8	99.3			75-125	%REC	1	09-Mar-2017 16:49
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	282		2.00	5.00	mg/L	10	14-Mar-2017 21:51

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 02-Mar-2017 12:55

ANALYTICAL REPORT

WorkOrder:HS17030396
 Lab ID:HS17030396-02
 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	09-Mar-2017 16:29
Ethylbenzene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:29
Toluene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:29
Xylenes, Total	U		0.50	5.0	ug/L	1	09-Mar-2017 16:29
Surr: 1,2-Dichloroethane-d4	87.6			70-125	%REC	1	09-Mar-2017 16:29
Surr: 4-Bromofluorobenzene	90.8			72-125	%REC	1	09-Mar-2017 16:29
Surr: Dibromofluoromethane	93.1			71-125	%REC	1	09-Mar-2017 16:29
Surr: Toluene-d8	89.6			75-125	%REC	1	09-Mar-2017 16:29
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	131		2.00	5.00	mg/L	10	14-Mar-2017 22:35

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 02-Mar-2017 11:45

ANALYTICAL REPORT

WorkOrder:HS17030396
 Lab ID:HS17030396-03
 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	09-Mar-2017 16:54
Ethylbenzene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:54
Toluene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:54
Xylenes, Total	U		0.50	5.0	ug/L	1	09-Mar-2017 16:54
Surr: 1,2-Dichloroethane-d4	86.9			70-125	%REC	1	09-Mar-2017 16:54
Surr: 4-Bromofluorobenzene	92.1			72-125	%REC	1	09-Mar-2017 16:54
Surr: Dibromofluoromethane	92.4			71-125	%REC	1	09-Mar-2017 16:54
Surr: Toluene-d8	93.9			75-125	%REC	1	09-Mar-2017 16:54
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	115		2.00	5.00	mg/L	10	14-Mar-2017 22:50

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 02-Mar-2017 12:15

ANALYTICAL REPORT

WorkOrder:HS17030396
 Lab ID:HS17030396-04
 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	09-Mar-2017 17:19
Ethylbenzene	U		0.50	5.0	ug/L	1	09-Mar-2017 17:19
Toluene	U		0.50	5.0	ug/L	1	09-Mar-2017 17:19
Xylenes, Total	U		0.50	5.0	ug/L	1	09-Mar-2017 17:19
Surr: 1,2-Dichloroethane-d4	87.3			70-125	%REC	1	09-Mar-2017 17:19
Surr: 4-Bromofluorobenzene	90.5			72-125	%REC	1	09-Mar-2017 17:19
Surr: Dibromofluoromethane	92.7			71-125	%REC	1	09-Mar-2017 17:19
Surr: Toluene-d8	92.3			75-125	%REC	1	09-Mar-2017 17:19
ANIONS BY E300.0		Method:E300				Analyst: JBA	
Chloride	300		2.00	5.00	mg/L	10	14-Mar-2017 23:04

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Sample ID: Trip Blank
Collection Date: 02-Mar-2017 00:00

ANALYTICAL REPORT

WorkOrder:HS17030396
Lab ID:HS17030396-05
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	09-Mar-2017 16:23
Ethylbenzene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:23
Toluene	U		0.50	5.0	ug/L	1	09-Mar-2017 16:23
Xylenes, Total	U		0.50	5.0	ug/L	1	09-Mar-2017 16:23
Surr: 1,2-Dichloroethane-d4	93.2			70-125	%REC	1	09-Mar-2017 16:23
Surr: 4-Bromofluorobenzene	104			72-125	%REC	1	09-Mar-2017 16:23
Surr: Dibromofluoromethane	89.8			71-125	%REC	1	09-Mar-2017 16:23
Surr: Toluene-d8	101			75-125	%REC	1	09-Mar-2017 16:23

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R290775	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17030396-02	MW-3	02 Mar 2017 12:55			09 Mar 2017 16:29	1
HS17030396-03	MW-4	02 Mar 2017 11:45			09 Mar 2017 16:54	1
HS17030396-04	DUP	02 Mar 2017 12:15			09 Mar 2017 17:19	1
Batch ID R290835	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS17030396-01	MW-2	02 Mar 2017 12:15			09 Mar 2017 16:49	1
HS17030396-05	Trip Blank	02 Mar 2017 00:00			09 Mar 2017 16:23	1
Batch ID R291114	Test Name : ANIONS BY E300.0			Matrix: Water		
HS17030396-01	MW-2	02 Mar 2017 12:15			14 Mar 2017 21:51	10
HS17030396-02	MW-3	02 Mar 2017 12:55			14 Mar 2017 22:35	10
HS17030396-03	MW-4	02 Mar 2017 11:45			14 Mar 2017 22:50	10
HS17030396-04	DUP	02 Mar 2017 12:15			14 Mar 2017 23:04	10

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

QC BATCH REPORT

Batch ID: R290775		Instrument: VOA6		Method: SW8260					
MBLK	Sample ID: VBLKW-170309	Units: ug/L		Analysis Date: 09-Mar-2017 11:31					
Client ID:	Run ID: VOA6_290775	SeqNo: 4011330		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	43.28	0	50	0	86.6	70 - 125			
Surr: 4-Bromofluorobenzene	46.64	0	50	0	93.3	72 - 125			
Surr: Dibromofluoromethane	46.54	0	50	0	93.1	71 - 125			
Surr: Toluene-d8	44.94	0	50	0	89.9	75 - 125			

LCS	Sample ID: VLCSW-170309	Units: ug/L		Analysis Date: 09-Mar-2017 10:41					
Client ID:	Run ID: VOA6_290775	SeqNo: 4011329		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	51.53	5.0	50	0	103	73 - 121			
Ethylbenzene	48.5	5.0	50	0	97.0	80 - 120			
Toluene	48.23	5.0	50	0	96.5	80 - 120			
Xylenes, Total	146.4	5.0	150	0	97.6	80 - 120			
Surr: 1,2-Dichloroethane-d4	43.94	0	50	0	87.9	70 - 125			
Surr: 4-Bromofluorobenzene	47.68	0	50	0	95.4	72 - 125			
Surr: Dibromofluoromethane	46.86	0	50	0	93.7	71 - 125			
Surr: Toluene-d8	46.43	0	50	0	92.9	75 - 125			

MS	Sample ID: HS17030342-01MS	Units: ug/L		Analysis Date: 09-Mar-2017 12:45					
Client ID:	Run ID: VOA6_290775	SeqNo: 4011332		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	51.55	5.0	50	0	103	73 - 121			
Ethylbenzene	47.87	5.0	50	0	95.7	80 - 120			
Toluene	47.9	5.0	50	0	95.8	80 - 120			
Xylenes, Total	144.8	5.0	150	0	96.5	80 - 120			
Surr: 1,2-Dichloroethane-d4	42.78	0	50	0	85.6	70 - 125			
Surr: 4-Bromofluorobenzene	47.33	0	50	0	94.7	72 - 125			
Surr: Dibromofluoromethane	46.85	0	50	0	93.7	71 - 125			
Surr: Toluene-d8	46.01	0	50	0	92.0	75 - 125			

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

QC BATCH REPORT

Batch ID: R290775		Instrument: VOA6		Method: SW8260						
MSD		Sample ID: HS17030342-01MSD	Units: ug/L		Analysis Date: 09-Mar-2017 13:10					
Client ID:		Run ID: VOA6_290775		SeqNo: 4011333		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Benzene	50.92	5.0	50	0	102	73 - 121	51.55	1.23	20	
Ethylbenzene	48.11	5.0	50	0	96.2	80 - 120	47.87	0.511	20	
Toluene	48.29	5.0	50	0	96.6	80 - 120	47.9	0.811	20	
Xylenes, Total	146.4	5.0	150	0	97.6	78 - 121	144.8	1.12	20	
Surr: 1,2-Dichloroethane-d4	42.9	0	50	0	85.8	70 - 125	42.78	0.294	20	
Surr: 4-Bromofluorobenzene	47.65	0	50	0	95.3	72 - 125	47.33	0.682	20	
Surr: Dibromofluoromethane	47.18	0	50	0	94.4	71 - 125	46.85	0.712	20	
Surr: Toluene-d8	46.28	0	50	0	92.6	75 - 125	46.01	0.58	20	
The following samples were analyzed in this batch:		HS17030396-02		HS17030396-03		HS17030396-04				

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

QC BATCH REPORT

Batch ID: R290835		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-170309	Units: ug/L		Analysis Date: 09-Mar-2017 13:20					
Client ID:	Run ID: VOA1_290835	SeqNo: 4012639		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	47.92	0	50	0	95.8	70 - 125			
Surr: 4-Bromofluorobenzene	53.11	0	50	0	106	72 - 125			
Surr: Dibromofluoromethane	48.04	0	50	0	96.1	71 - 125			
Surr: Toluene-d8	49.96	0	50	0	99.9	75 - 125			

LCS	Sample ID: VLCSW-170309	Units: ug/L		Analysis Date: 09-Mar-2017 12:01					
Client ID:	Run ID: VOA1_290835	SeqNo: 4012638		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	47.92	5.0	50	0	95.8	73 - 121			
Ethylbenzene	45.64	5.0	50	0	91.3	80 - 120			
Toluene	48.39	5.0	50	0	96.8	80 - 120			
Xylenes, Total	144.7	5.0	150	0	96.5	80 - 120			
Surr: 1,2-Dichloroethane-d4	48.6	0	50	0	97.2	70 - 125			
Surr: 4-Bromofluorobenzene	54.13	0	50	0	108	72 - 125			
Surr: Dibromofluoromethane	42.9	0	50	0	85.8	71 - 125			
Surr: Toluene-d8	50.04	0	50	0	100	75 - 125			

MS	Sample ID: HS17030393-01MS	Units: ug/L		Analysis Date: 09-Mar-2017 15:30					
Client ID:	Run ID: VOA1_290835	SeqNo: 4012641		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	48.3	5.0	50	0	96.6	73 - 121			
Ethylbenzene	44.54	5.0	50	0	89.1	80 - 120			
Toluene	47.46	5.0	50	0	94.9	80 - 120			
Xylenes, Total	143.6	5.0	150	0	95.7	80 - 120			
Surr: 1,2-Dichloroethane-d4	49.65	0	50	0	99.3	70 - 125			
Surr: 4-Bromofluorobenzene	56.21	0	50	0	112	72 - 125			
Surr: Dibromofluoromethane	47.34	0	50	0	94.7	71 - 125			
Surr: Toluene-d8	49.32	0	50	0	98.6	75 - 125			

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

QC BATCH REPORT

Batch ID: R290835		Instrument: VOA1		Method: SW8260						
MSD		Sample ID: HS17030393-01MSD		Units: ug/L		Analysis Date: 09-Mar-2017 15:57				
Client ID:		Run ID: VOA1_290835		SeqNo: 4012642		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.48	5.0	50	0	91.0	73 - 121	48.3	6.02	20	
Ethylbenzene	46.75	5.0	50	0	93.5	80 - 120	44.54	4.83	20	
Toluene	42.95	5.0	50	0	85.9	80 - 120	47.46	9.99	20	
Xylenes, Total	141.2	5.0	150	0	94.2	78 - 121	143.6	1.64	20	
Surr: 1,2-Dichloroethane-d4	47.13	0	50	0	94.3	70 - 125	49.65	5.2	20	
Surr: 4-Bromofluorobenzene	54.76	0	50	0	110	72 - 125	56.21	2.61	20	
Surr: Dibromofluoromethane	48.7	0	50	0	97.4	71 - 125	47.34	2.84	20	
Surr: Toluene-d8	47.63	0	50	0	95.3	75 - 125	49.32	3.48	20	
The following samples were analyzed in this batch: HS17030396-01 HS17030396-05										

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

QC BATCH REPORT

Batch ID: R291114		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW3-031417	Units: mg/L		Analysis Date: 14-Mar-2017 20:10						
Client ID:	Run ID: ICS2100_291114	SeqNo: 4018556		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: WLCSW3-031417	Units: mg/L		Analysis Date: 14-Mar-2017 20:24						
Client ID:	Run ID: ICS2100_291114	SeqNo: 4018557		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.76	0.500	20	0	98.8	90 - 110				
LCSD	Sample ID: WLCSDW3-031417	Units: mg/L		Analysis Date: 14-Mar-2017 20:39						
Client ID:	Run ID: ICS2100_291114	SeqNo: 4018558		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.2	0.500	20	0	101	90 - 110	19.76	2.23	20	
MS	Sample ID: HS17030396-01MS	Units: mg/L		Analysis Date: 14-Mar-2017 22:06						
Client ID: MW-2	Run ID: ICS2100_291114	SeqNo: 4018564		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	381.8	5.00	100	281.5	100	80 - 120				
MSD	Sample ID: HS17030396-01MSD	Units: mg/L		Analysis Date: 14-Mar-2017 22:21						
Client ID: MW-2	Run ID: ICS2100_291114	SeqNo: 4018565		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	383.5	5.00	100	281.5	102	80 - 120	381.8	0.447	20	
The following samples were analyzed in this batch:										
HS17030396-01		HS17030396-02		HS17030396-03		HS17030396-04				

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS17030396

**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

ALS Group USA, Corp

Date: 15-Mar-17

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

ALS Group USA, Corp

Date: 15-Mar-17

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS17030396

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS17030396-01	MW-2	Login	3/8/2017 5:45:08 PM	PMG	GCU030
HS17030396-01	MW-2	Login	3/8/2017 5:45:08 PM	PMG	VOA005
HS17030396-02	MW-3	Login	3/8/2017 5:45:08 PM	PMG	GCU030
HS17030396-02	MW-3	Login	3/8/2017 5:45:08 PM	PMG	VOA005
HS17030396-03	MW-4	Login	3/8/2017 5:45:08 PM	PMG	GCU030
HS17030396-03	MW-4	Login	3/8/2017 5:45:08 PM	PMG	VOA005
HS17030396-04	DUP	Login	3/8/2017 5:45:08 PM	PMG	GCU030
HS17030396-04	DUP	Login	3/8/2017 5:45:08 PM	PMG	VOA005
HS17030396-05	Trip Blank	Login	3/8/2017 5:45:08 PM	PMG	VOA005

ALS Group USA, Corp

Date: 15-Mar-17

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS17030396

Received by: **JRM**Checklist completed by: Paresh M. Giga
eSignature8-Mar-2017
DateReviewed by: Dane J. Wacasey
eSignature9-Mar-2017
DateMatrices: **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):

0.4c/0.9c U/C

IR11

Cooler(s)/Kit(s):

25643

Date/Time sample(s) sent to storage:

3/8/17 18:05

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 5336Fort Collins, CO
+1 970 490 1511Everett, WA
+1 425 356 2600Holland, MI
+1 616 399 6070

Chain of Custody Form

Page ____ of ____

COC ID: 161436

HS17030396

Glenn Springs Holdings, Inc.

55625DM GSHI PXP Hill EC B ATB at Well 24



n, WV

B

D

Customer Information		Project Information		ALS Project Manager:	
Purchase Order	4502201559 ENV 749-4	Project Name	55625DM GSHI PXP Hill EC "B" ATB	A	8260_W (BTEX)
Work Order		Project Number	at Well #24	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		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-1			Water		4	X	X									
2	MW-2	3.2.17	12:15	Water		4	X	X									
3	MW-3	3.2.17	12:55	Water		4	X	X									
4	MW-4	3.2.17	11:45	Water		4	X	X									
5	RW-1			Water		4	X	X									
6	DUP	3.2.17	12:15	Water		4	X	X									
7	Trip Blank			Water		2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box) TAT <u>10 days</u> Other: _____		Results Due Date: _____	
Relinquished by: <u>[Signature]</u>	Date: <u>3.6.17</u>	Time: _____	Received by: <u>[Signature]</u>	Notes: [GSHI PXP Hill EC B ATB at 24]			
Relinquished by: _____	Date: _____	Time: _____	Received by (Laboratory): <u>[Signature]</u>	Cooler ID: <u>25643</u>	Cooler Temp.: <u>0.4</u>	QC Package: (Check One Box Below)	
Logged by (Laboratory): _____	Date: _____	Time: _____	Checked by (Laboratory): _____	<u>12.4</u>	<u>11</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				<u>cc</u>	<u>to 5</u>	Other: _____	

ote: 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 this form.

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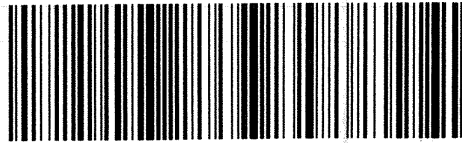
 ALS Environmental 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: <i>SM</i>
	Date: <i>3-6-17</i>	Time: <i>10:17:50</i>	Date:
	Name: <i>[Signature]</i>	Company: <i>Tetra Tech</i>	<i>03/07/17</i>

25643 MAR 07 2017

FedEx
TRK# 6786 7203 7327
0221

TUE - 07 MAR 10:30A
PRIORITY OVERNIGHT

AB SGRA 25643 77099
TX-US IAH





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

March 09, 2018

James Abston
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18021254**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear James,

ALS Environmental received 5 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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS18021254

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18021254-01	MW-2	Groundwater		22-Feb-2018 14:05	24-Feb-2018 09:15	☐
HS18021254-02	MW-3	Groundwater		22-Feb-2018 14:40	24-Feb-2018 09:15	☐
HS18021254-03	MW-4	Groundwater		22-Feb-2018 14:20	24-Feb-2018 09:15	☐
HS18021254-04	DUP	Groundwater		22-Feb-2018 00:00	24-Feb-2018 09:15	☐
HS18021254-05	Trip Blank	Water	ALS 020218-47	22-Feb-2018 00:00	24-Feb-2018 09:15	☐

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS18021254

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R311659

Sample ID: HS18021108-08MS

- MS and MSD are for an unrelated sample

Batch ID: R311585

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

WetChemistry by Method E300

Batch ID: R312266

Sample ID: HS18021252-05MS

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 22-Feb-2018 14:05

ANALYTICAL REPORT

WorkOrder:HS18021254
 Lab ID:HS18021254-01
 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	27-Feb-2018 15:05
Ethylbenzene	U		0.50	5.0	ug/L	1	27-Feb-2018 15:05
Toluene	U		0.50	5.0	ug/L	1	27-Feb-2018 15:05
Xylenes, Total	U		0.50	5.0	ug/L	1	27-Feb-2018 15:05
Surr: 1,2-Dichloroethane-d4	91.2			70-126	%REC	1	27-Feb-2018 15:05
Surr: 4-Bromofluorobenzene	99.9			82-124	%REC	1	27-Feb-2018 15:05
Surr: Dibromofluoromethane	97.5			77-123	%REC	1	27-Feb-2018 15:05
Surr: Toluene-d8	101			82-127	%REC	1	27-Feb-2018 15:05
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	254		2.00	5.00	mg/L	10	08-Mar-2018 20:24

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 22-Feb-2018 14:40

ANALYTICAL REPORT

WorkOrder:HS18021254
 Lab ID:HS18021254-02
 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	27-Feb-2018 14:08
Ethylbenzene	U		0.50	5.0	ug/L	1	27-Feb-2018 14:08
Toluene	U		0.50	5.0	ug/L	1	27-Feb-2018 14:08
Xylenes, Total	U		0.50	5.0	ug/L	1	27-Feb-2018 14:08
Surr: 1,2-Dichloroethane-d4	70.4			70-126	%REC	1	27-Feb-2018 14:08
Surr: 4-Bromofluorobenzene	85.9			82-124	%REC	1	27-Feb-2018 14:08
Surr: Dibromofluoromethane	79.3			77-123	%REC	1	27-Feb-2018 14:08
Surr: Toluene-d8	90.0			82-127	%REC	1	27-Feb-2018 14:08
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	158		2.00	5.00	mg/L	10	08-Mar-2018 21:07

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 22-Feb-2018 14:20

ANALYTICAL REPORT

WorkOrder:HS18021254
 Lab ID:HS18021254-03
 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	27-Feb-2018 17:18
Ethylbenzene	U		0.50	5.0	ug/L	1	27-Feb-2018 17:18
Toluene	U		0.50	5.0	ug/L	1	27-Feb-2018 17:18
Xylenes, Total	U		0.50	5.0	ug/L	1	27-Feb-2018 17:18
Surr: 1,2-Dichloroethane-d4	93.3			70-126	%REC	1	27-Feb-2018 17:18
Surr: 4-Bromofluorobenzene	98.8			82-124	%REC	1	27-Feb-2018 17:18
Surr: Dibromofluoromethane	100			77-123	%REC	1	27-Feb-2018 17:18
Surr: Toluene-d8	99.4			82-127	%REC	1	27-Feb-2018 17:18
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	120		2.00	5.00	mg/L	10	08-Mar-2018 21:22

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 22-Feb-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18021254
 Lab ID:HS18021254-04
 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	27-Feb-2018 17:45
Ethylbenzene	U		0.50	5.0	ug/L	1	27-Feb-2018 17:45
Toluene	U		0.50	5.0	ug/L	1	27-Feb-2018 17:45
Xylenes, Total	U		0.50	5.0	ug/L	1	27-Feb-2018 17:45
Surr: 1,2-Dichloroethane-d4	92.4			70-126	%REC	1	27-Feb-2018 17:45
Surr: 4-Bromofluorobenzene	95.5			82-124	%REC	1	27-Feb-2018 17:45
Surr: Dibromofluoromethane	97.0			77-123	%REC	1	27-Feb-2018 17:45
Surr: Toluene-d8	105			82-127	%REC	1	27-Feb-2018 17:45
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	118		2.00	5.00	mg/L	10	08-Mar-2018 21:36

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 22-Feb-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18021254
 Lab ID:HS18021254-05
 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	27-Feb-2018 18:12
Ethylbenzene	U		0.50	5.0	ug/L	1	27-Feb-2018 18:12
Toluene	U		0.50	5.0	ug/L	1	27-Feb-2018 18:12
Xylenes, Total	U		0.50	5.0	ug/L	1	27-Feb-2018 18:12
Surr: 1,2-Dichloroethane-d4	88.9			70-126	%REC	1	27-Feb-2018 18:12
Surr: 4-Bromofluorobenzene	91.0			82-124	%REC	1	27-Feb-2018 18:12
Surr: Dibromofluoromethane	96.8			77-123	%REC	1	27-Feb-2018 18:12
Surr: Toluene-d8	104			82-127	%REC	1	27-Feb-2018 18:12

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R311585	Test Name : VOLATILES - SW8260C		Matrix: Water			
HS18021254-05	Trip Blank	22 Feb 2018 00:00			27 Feb 2018 18:12	1
Batch ID R311585	Test Name : VOLATILES - SW8260C		Matrix: Groundwater			
HS18021254-01	MW-2	22 Feb 2018 14:05			27 Feb 2018 15:05	1
HS18021254-03	MW-4	22 Feb 2018 14:20			27 Feb 2018 17:18	1
HS18021254-04	DUP	22 Feb 2018 00:00			27 Feb 2018 17:45	1
Batch ID R311659	Test Name : VOLATILES - SW8260C		Matrix: Groundwater			
HS18021254-02	MW-3	22 Feb 2018 14:40			27 Feb 2018 14:08	1
Batch ID R312266	Test Name : ANIONS BY E300.0		Matrix: Groundwater			
HS18021254-01	MW-2	22 Feb 2018 14:05			08 Mar 2018 20:24	10
HS18021254-02	MW-3	22 Feb 2018 14:40			08 Mar 2018 21:07	10
HS18021254-03	MW-4	22 Feb 2018 14:20			08 Mar 2018 21:22	10
HS18021254-04	DUP	22 Feb 2018 00:00			08 Mar 2018 21:36	10

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

QC BATCH REPORT

Batch ID: R311585		Instrument: VOA1		Method: SW8260					
MBLK	Sample ID: VBLKW-180227	Units: ug/L		Analysis Date: 27-Feb-2018 13:17					
Client ID:	Run ID: VOA1_311585	SeqNo: 4454035		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	49.86	0	50	0	99.7	70 - 123			
Surr: 4-Bromofluorobenzene	49.58	0	50	0	99.2	83 - 122			
Surr: Dibromofluoromethane	49.54	0	50	0	99.1	73 - 126			
Surr: Toluene-d8	48.42	0	50	0	96.8	81 - 119			

LCS	Sample ID: VLCSW-180227	Units: ug/L		Analysis Date: 27-Feb-2018 12:23					
Client ID:	Run ID: VOA1_311585	SeqNo: 4454034		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	41.56	5.0	50	0	83.1	74 - 120			
Ethylbenzene	42.44	5.0	50	0	84.9	77 - 117			
Toluene	40.69	5.0	50	0	81.4	77 - 118			
Xylenes, Total	135.7	5.0	150	0	90.4	75 - 122			
Surr: 1,2-Dichloroethane-d4	49.37	0	50	0	98.7	70 - 130			
Surr: 4-Bromofluorobenzene	48.01	0	50	0	96.0	83 - 122			
Surr: Dibromofluoromethane	49.97	0	50	0	99.9	73 - 126			
Surr: Toluene-d8	46.71	0	50	0	93.4	81 - 119			

MS	Sample ID: HS18021252-05MS	Units: ug/L		Analysis Date: 27-Feb-2018 15:31					
Client ID:	Run ID: VOA1_311585	SeqNo: 4454401		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	48.81	5.0	50	0	97.6	70 - 127			
Ethylbenzene	47.42	5.0	50	0	94.8	70 - 124			
Toluene	46.65	5.0	50	0	93.3	70 - 123			
Xylenes, Total	138.3	5.0	150	0	92.2	70 - 130			
Surr: 1,2-Dichloroethane-d4	47.7	0	50	0	95.4	70 - 126			
Surr: 4-Bromofluorobenzene	51.09	0	50	0	102	82 - 124			
Surr: Dibromofluoromethane	46.41	0	50	0	92.8	77 - 123			
Surr: Toluene-d8	49.42	0	50	0	98.8	82 - 127			

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

QC BATCH REPORT

Batch ID: R311585		Instrument: VOA1		Method: SW8260						
MSD	Sample ID: HS18021252-05MSD		Units: ug/L		Analysis Date: 27-Feb-2018 15:58					
	Client ID:		Run ID: VOA1_311585		SeqNo: 4454402		PrepDate:		DF: 1	
	Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene		47.06	5.0	50	0	94.1	70 - 127	48.81	3.65	20
Ethylbenzene		44.43	5.0	50	0	88.9	70 - 124	47.42	6.5	20
Toluene		43.79	5.0	50	0	87.6	70 - 123	46.65	6.31	20
Xylenes, Total		136.2	5.0	150	0	90.8	70 - 130	138.3	1.56	20
Surr: 1,2-Dichloroethane-d4		51.37	0	50	0	103	70 - 126	47.7	7.42	20
Surr: 4-Bromofluorobenzene		47.72	0	50	0	95.4	82 - 124	51.09	6.82	20
Surr: Dibromofluoromethane		46.61	0	50	0	93.2	77 - 123	46.41	0.434	20
Surr: Toluene-d8		48.64	0	50	0	97.3	82 - 127	49.42	1.61	20
The following samples were analyzed in this batch:										
HS18021254-01		HS18021254-03		HS18021254-04		HS18021254-05				

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

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.

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

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: HS18021254-02

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

QC BATCH REPORT

Batch ID: R312266		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW2-030718	Units: mg/L		Analysis Date: 08-Mar-2018 15:55						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468067		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: WLCSW2-030718	Units: mg/L		Analysis Date: 08-Mar-2018 16:10						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468068		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.6	0.500	20	0	103	90 - 110				
LCSD	Sample ID: WLCSDW2-030718	Units: mg/L		Analysis Date: 08-Mar-2018 16:24						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468069		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	20.6	0.897	20	
MS	Sample ID: HS18030283-11MS	Units: mg/L		Analysis Date: 08-Mar-2018 16:53						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468071		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1253	10.0	200	1054	99.3	80 - 120				O
MS	Sample ID: HS18021252-05MS	Units: mg/L		Analysis Date: 08-Mar-2018 19:40						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468080		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	556	5.00	100	482.1	74.0	80 - 120				SO
MSD	Sample ID: HS18030283-11MSD	Units: mg/L		Analysis Date: 08-Mar-2018 17:08						
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468072		PrepDate:		DF: 20				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1279	10.0	200	1054	112	80 - 120	1253	2.08	20	O

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

QC BATCH REPORT

Batch ID: R312266		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS18021252-05MSD	Units: mg/L		Analysis Date: 08-Mar-2018 19:54	
Client ID:	Run ID: ICS2100_312266	SeqNo: 4468081		PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	604.7	5.00	100	482.1 123	80 - 120 556 8.38 20 SO
The following samples were analyzed in this batch:					
HS18021254-01 HS18021254-02 HS18021254-03 HS18021254-04					

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

ALS Group USA, Corp

Date: 09-Mar-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18021254

**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

ALS Group USA, Corp

Date: 09-Mar-18

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

ALS Group USA, Corp

Date: 09-Mar-18

Sample Receipt Checklist

Client Name: Glen Springs/CRA

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

Work Order: HS18021254

Received by: **JRM**

Checklist completed by:	<u>Jared R. Makan</u>	<u>24-Feb-2018</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>26-Feb-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):	1.9c/2.3c UC/C	IR30
--------------------------------	----------------	------

Cooler(s)/Kit(s):	43723
-------------------	-------

Date/Time sample(s) sent to storage:	02/24/2018 14:45
--------------------------------------	------------------

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:


 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: 174484

 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	GSHI PXP Hill EC B ATB at Well			A	8260_W (BTEX)											
Work Order				Project Number	55625DM (ENV749A007)			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												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-1			Groundwa	1.8	4	X	X									
2	MW-2	2-22-18	1405	Groundwa	1.8	4	X	X									
3	MW-3	2-22-18	1440	Groundwa	1.8	4	X	X									
4	MW-4	2-22-18	1420	Groundwa	1.8	4	X	X									
5	RW-1			Groundwa	1.8	4	X	X									
6	DUP	2-22-18		Groundwa	1.8	4	X	X									
7	Trip Blank			Water	1	2			X								
8																	
9																	
10																	

Sampler(s) Please Print & Sign				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>Sherry Z...</i>		Date: 2-23-18	Time: 1120	Received by: <i>Jim</i>		Notes: [GSHI PXP Hill EC B ATB at 24]							
Relinquished by:		Date: 2/24/18	Time: 09:15	Received by (Laboratory):		Cooler ID 43723		Cooler Temp. 1.9		QC Package: (Check One Box Below)			
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):						☒ Level II Std QC ☐ Level III Std QC/Raw Data ☐ 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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FedEx		SATURDAY 12:00P	
TRK	TRK#	PRIORITY OVERNIGHT	
022	0221	7376 9752 3283	
XO SGRA		77099	
42723		TX--US IAH	
		P 01/19	
			

ALS		CUSTODY SEAL		Seal Broken By:	
10450 Stancil Rd., Suite 210		23-18 Time: 1120		Jm	
Houston, Texas 77099		Name: <u>Stacy R. L.</u>		Date:	
Tel. +1 281 530 5656		Company: <u>Tetra Tech</u>		4/24/18	
Fax. +1 281 530 5887					



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

September 04, 2018

James Abston
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS18081351**

Laboratory Results for: **55625DM GSHI PXP Hill EC B ATB at Well 24**

Dear James,

ALS Environmental received 5 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: JUMOKE.LAWAL
Dane J. Wacasey

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS18081351

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18081351-01	MW-2	Groundwater		23-Aug-2018 16:00	28-Aug-2018 08:50	☐
HS18081351-02	MW-3	Groundwater		23-Aug-2018 15:15	28-Aug-2018 08:50	☐
HS18081351-03	MW-4	Groundwater		23-Aug-2018 15:00	28-Aug-2018 08:50	☐
HS18081351-04	DUP	Groundwater		23-Aug-2018 00:00	28-Aug-2018 08:50	☐
HS18081351-05	Trip Blank	Water	ALS-080918-1	23-Aug-2018 00:00	28-Aug-2018 08:50	☐

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
Work Order: HS18081351

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: MW-2 (HS18081351-01MS)

- The RPD between the MS and MSD was outside of the control limit. (Ethylbenzene, Toluene)

WetChemistry by Method E300

Batch ID: R322686

Sample ID: HS18081473-02MS

- MS is for an unrelated sample (Chloride)
-

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-2
 Collection Date: 23-Aug-2018 16:00

ANALYTICAL REPORT

WorkOrder:HS18081351
 Lab ID:HS18081351-01
 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 08:08
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 08:08
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 08:08
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 08:08
Surr: 1,2-Dichloroethane-d4	121			70-126	%REC	1	31-Aug-2018 08:08
Surr: 4-Bromofluorobenzene	112			82-124	%REC	1	31-Aug-2018 08:08
Surr: Dibromofluoromethane	101			77-123	%REC	1	31-Aug-2018 08:08
Surr: Toluene-d8	105			82-127	%REC	1	31-Aug-2018 08:08
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	216		2.00	5.00	mg/L	10	30-Aug-2018 16:12

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-3
 Collection Date: 23-Aug-2018 15:15

ANALYTICAL REPORT

WorkOrder:HS18081351
 Lab ID:HS18081351-02
 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 09:57
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 09:57
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 09:57
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 09:57
Surr: 1,2-Dichloroethane-d4	116			70-126	%REC	1	31-Aug-2018 09:57
Surr: 4-Bromofluorobenzene	108			82-124	%REC	1	31-Aug-2018 09:57
Surr: Dibromofluoromethane	99.6			77-123	%REC	1	31-Aug-2018 09:57
Surr: Toluene-d8	104			82-127	%REC	1	31-Aug-2018 09:57
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	145		2.00	5.00	mg/L	10	30-Aug-2018 16:27

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: MW-4
 Collection Date: 23-Aug-2018 15:00

ANALYTICAL REPORT

WorkOrder:HS18081351
 Lab ID:HS18081351-03
 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	31-Aug-2018 20:43
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 20:43
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 20:43
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 20:43
Surr: 1,2-Dichloroethane-d4	120			70-126	%REC	1	31-Aug-2018 20:43
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	31-Aug-2018 20:43
Surr: Dibromofluoromethane	99.5			77-123	%REC	1	31-Aug-2018 20:43
Surr: Toluene-d8	105			82-127	%REC	1	31-Aug-2018 20:43
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	151		2.00	5.00	mg/L	10	30-Aug-2018 16:41

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: DUP
 Collection Date: 23-Aug-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18081351
 Lab ID:HS18081351-04
 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	31-Aug-2018 22:23
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 22:23
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 22:23
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 22:23
Surr: 1,2-Dichloroethane-d4	120			70-126	%REC	1	31-Aug-2018 22:23
Surr: 4-Bromofluorobenzene	110			82-124	%REC	1	31-Aug-2018 22:23
Surr: Dibromofluoromethane	101			77-123	%REC	1	31-Aug-2018 22:23
Surr: Toluene-d8	106			82-127	%REC	1	31-Aug-2018 22:23
ANIONS BY E300.0		Method:E300				Analyst: KMU	
Chloride	259		2.00	5.00	mg/L	10	30-Aug-2018 17:25

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
 Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
 Sample ID: Trip Blank
 Collection Date: 23-Aug-2018 00:00

ANALYTICAL REPORT

WorkOrder:HS18081351
 Lab ID:HS18081351-05
 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	31-Aug-2018 22:48
Ethylbenzene	U		0.50	5.0	ug/L	1	31-Aug-2018 22:48
Toluene	U		0.50	5.0	ug/L	1	31-Aug-2018 22:48
Xylenes, Total	U		0.50	5.0	ug/L	1	31-Aug-2018 22:48
Surr: 1,2-Dichloroethane-d4	120			70-126	%REC	1	31-Aug-2018 22:48
Surr: 4-Bromofluorobenzene	109			82-124	%REC	1	31-Aug-2018 22:48
Surr: Dibromofluoromethane	100			77-123	%REC	1	31-Aug-2018 22:48
Surr: Toluene-d8	106			82-127	%REC	1	31-Aug-2018 22:48

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R322686	Test Name : ANIONS BY E300.0			Matrix: Groundwater		
HS18081351-01	MW-2	23 Aug 2018 16:00			30 Aug 2018 16:12	10
HS18081351-02	MW-3	23 Aug 2018 15:15			30 Aug 2018 16:27	10
HS18081351-03	MW-4	23 Aug 2018 15:00			30 Aug 2018 16:41	10
HS18081351-04	DUP	23 Aug 2018 00:00			30 Aug 2018 17:25	10
Batch ID R322687	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18081351-01	MW-2	23 Aug 2018 16:00			31 Aug 2018 08:08	1
HS18081351-02	MW-3	23 Aug 2018 15:15			31 Aug 2018 09:57	1
Batch ID R322792	Test Name : VOLATILES - SW8260C			Matrix: Water		
HS18081351-05	Trip Blank	23 Aug 2018 00:00			31 Aug 2018 22:48	1
Batch ID R322792	Test Name : VOLATILES - SW8260C			Matrix: Groundwater		
HS18081351-03	MW-4	23 Aug 2018 15:00			31 Aug 2018 20:43	1
HS18081351-04	DUP	23 Aug 2018 00:00			31 Aug 2018 22:23	1

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

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: MW-2	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.

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

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: MW-2		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	R
Toluene	18.35	5.0	20	0	91.8	70 - 123	23.62	25.1	20	R
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: HS18081351-01 HS18081351-02

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

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: MW-4	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.

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

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: MW-4		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 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:									
HS18081351-03		HS18081351-04		HS18081351-05					

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

QC BATCH REPORT

Batch ID: R322686		Instrument: ICS2100		Method: E300						
MBLK	Sample ID: WBLKW1-083018	Units: mg/L		Analysis Date: 30-Aug-2018 11:31						
Client ID:	Run ID: ICS2100_322686	SeqNo: 4711944		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: WLCSW1-083018	Units: mg/L		Analysis Date: 30-Aug-2018 11:45						
Client ID:	Run ID: ICS2100_322686	SeqNo: 4711945		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.86	0.500	20	0	99.3	90 - 110				
LCSD	Sample ID: WLCSDW1-083018	Units: mg/L		Analysis Date: 30-Aug-2018 12:00						
Client ID:	Run ID: ICS2100_322686	SeqNo: 4711946		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.8	0.500	20	0	99.0	90 - 110	19.86	0.293	20	
MS	Sample ID: HS18081473-02MS	Units: mg/L		Analysis Date: 30-Aug-2018 13:13						
Client ID:	Run ID: ICS2100_322686	SeqNo: 4711950		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	85.43	0.500	10	72.01	134	80 - 120				SO
MS	Sample ID: HS18081351-04MS	Units: mg/L		Analysis Date: 30-Aug-2018 17:39						
Client ID: DUP	Run ID: ICS2100_322686	SeqNo: 4711967		PrepDate:		DF: 10				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	360.8	5.00	100	258.6	102	80 - 120				
MSD	Sample ID: HS18081473-02MSD	Units: mg/L		Analysis Date: 30-Aug-2018 13:27						
Client ID:	Run ID: ICS2100_322686	SeqNo: 4711951		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	82.71	0.500	10	72.01	107	80 - 120	85.43	3.23	20	O

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

QC BATCH REPORT

Batch ID: R322686		Instrument: ICS2100		Method: E300	
MSD	Sample ID: HS18081351-04MSD	Units: mg/L		Analysis Date: 30-Aug-2018 17:54	
Client ID: DUP	Run ID: ICS2100_322686		SeqNo: 4711968	PrepDate:	DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value %REC	Control Limit RPD Ref Value %RPD RPD Limit Qual
Chloride	362	5.00	100	258.6 103	80 - 120 360.8 0.314 20
The following samples were analyzed in this batch:					
HS18081351-01 HS18081351-02 HS18081351-03 HS18081351-04					

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

ALS Group Houston, Corp

Date: 04-Sep-18

Client: Glenn Springs Holdings, Inc.
Project: 55625DM GSHI PXP Hill EC B ATB at Well 24
WorkOrder: HS18081351

**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

ALS Group Houston, Corp

Date: 04-Sep-18

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

Date: 04-Sep-18

Sample Receipt Checklist

Client Name: Glen Springs/CRA

Date/Time Received: **28-Aug-2018 08:50**

Work Order: HS18081351

Received by: **RPG**

Checklist completed by:	<u>Nilesh D. Ranchod</u>	<u>28-Aug-2018</u>	Reviewed by:	<u>Dane J. Wacasey</u>	<u>28-Aug-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):	1.8C / 1.5C UC/C	IR # 25	
Cooler(s)/Kit(s):	44174		
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: Sample label times differ Vials 2 of 3 & 3 of 3 Sample MW-4 COC= 15:00 Label = 15:15; Logged per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



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: 190396

HS18081351

Glenn Springs Holdings, Inc.

55625DM GSHI PXP Hill EC B ATB at Well 24



Page 274 of 276

Customer Information						Project Information					
Base Order	4502201559 ENV 749-4					Project Name	GSHI PXP Hill EC B ATB at Well 24				
Work Order						Project Number	55625DM (ENV749A007)				
Company Name	Glenn Springs Holdings, Inc.					Bill To Company	Glenn Springs Holdings, Inc.				
I 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					
Email Address	Angela.Bown@ghd.com					e-Mail Address					

Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
AW-1	—	—	Groundwa	1,8	4	X	X									
AW-2	8/23/18	1600	Groundwa	1,8	4	X	X									
AW-3	8/23/18	1515	Groundwa	1,8	4	X	X									
AW-4	8/23/18	1500	Groundwa	1,8	4	X	X									
W-1	—	—	Groundwa	1,8	4	X	X									
UP	8/23/18	—	Groundwa	1,8	4	X	X									
Trip Blank			Water	1	2			X								

(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
R. MOGHIRINGA Comm. Mgr. [Signature]	[Signature]	Ship Via	FedEx	☒ STD 10 Wk Days	☐ 5 Wk Days	☐ Other _____	
Date: 8/27/18	Time: [Blank]	Received by:	[Blank]	Notes: [GSHI PXP Hill EC B ATB at 24]			
Shipped by:	Date:	Time:	Received by (Laboratory): R. Cize 8/28/18 08:50	Cooler ID: 44174	Cooler Temp.: 1-8c	QC Package: (Check One Box Below)	
Laboratory:	Date:	Time:	Checked by (Laboratory):			☒ Level II Std QC	☐ TRRP Checklist
Active 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 III Std QC/Raw Data	☐ TRRP Level IV
						☐ Level IV SW/646/CLP	

Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental. Unless otherwise agreed in a formal contract, the following conditions apply:

Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse. The Chain of Custody is a legal document. All information must be completed accurately.

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 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: SM Date: 08/28/18
	Date: 8/28/18	Time: 1600	
	Name: Houston Hunt	Company: Federal Tech	

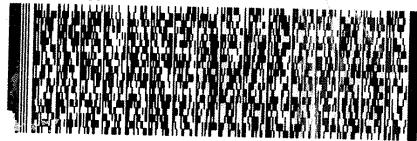
44174 AUG 28 2018

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By: SM Date: 08/28/18
	Date: 8/28/18	Time: 1600	
	Name: Houston Hunt	Company: Federal Tech	

TO CLIENT SERVICES
 ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099

(281) 530-5656
 REF: GSHI PXP-DW

RMA: 11111111



FedEx
 Express

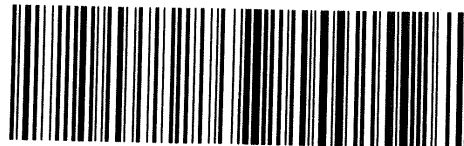


FedEx
 TRK# 4380 9531 7991
 0221

TUE - 28 AUG 10:30A
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US IAH



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 4938

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 4938
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Report accepted as written.	9/20/2021