TETRA TECH

APPROVED
By Nelson Velez at 10:03 am, Dec 28, 2021

Review of 2020 Groundwater Monitoring Report: Content satisfactory

1. Continued semi-annual groundwater monitoring and PSH recovery system operation
2. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022

May 11, 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: Groundwater Monitoring Report
Glenn Springs Holdings, Inc.
E.C. Hill "A, B and C" Tank Battery
Section 27, Township 23 South, Range 37 East
Lea County, New Mexico
1RP-440 and 1RP-462

Mr. Rose-Coss,

This report summarizes the results of the semi-annual sampling events that occurred in 2019 for the E. C. Hill A, B and C Tank Battery (Site). The Site is located in Lea County, Section 27, Township 23 South, Range 37 East, approximately 11 miles south of Eunice, New Mexico. The GPS coordinates for the Site are 32.272283°N, 103.151018°W. Prior to being operated by OXY, the facility was operated by Plains Exploration and Production, Pogo Producing Company (Pogo) and Chevron Mid-Continent. The Site location is shown on **Figures 1** and **2**.

FACILITY BACKGROUND

This facility is a historic tank battery, which accumulated numerous spills from previous operators. Prior to being operated by OXY, the facility was operated by Plains Exploration and Production, Pogo Producing Company (Pogo) and Chevron Mid-Continent. During Pogo's operation of this facility, several documented spills occurred at the facility. The majority of the spills occurred around production equipment and active underground lines. Pogo had proposed deferring all major cleanup activities on the inaccessible areas of the tank battery until the tank battery was abandoned.

In November 2003, Pogo decided to shut down all production to the tank battery and removed all tanks, vessels, equipment and lines in order to make the former tank battery location accessible to perform further assessment. Once the facility was dismantled, the impacted soils were excavated in the areas of the tanks, vessels and lines. In February 2004, fifteen test trenches were excavated to a depth of 5 feet below ground surface (bgs) throughout the former tank battery location to delineate the extent of impacted soils. The trenches were found to be impacted with elevated levels of Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Chlorides. Based on the results of the trenching, it was decided that soil borings would be required to complete the delineation at the site.

Between May and August 2005, thirteen boreholes were installed throughout the former tank battery area. The soil laboratory results indicated the Site was impacted to groundwater with elevated levels of TPH, BTEX and chlorides. It was evident from the

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boreholes and excavations performed at the site that there was very little lateral migration of hydrocarbons in subsurface soils and the impact was defined. In order to prevent leaching of the surrounding soils to groundwater, a 40-mil thick plastic liner (CAP) was installed in the excavation measuring 100' by 180'. The liner was installed to a depth of 3.5 feet bgs with the impacted excavated soils placed beneath the liner to prevent leaching. Once placed in the ground, the liner was backfilled, and the excavation brought up to grade with clean soils.

Between September 2004 and July 2006, Pogo installed five monitor wells (MW-1 through MW-5) to assess the groundwater impacts to the Site. Monitor well MW-1 was installed immediately south of the excavation, while monitor wells MW-2 and MW-3 were installed north of the excavation. Monitor wells MW-4 and MW-5 were installed to the east and southeast of the excavation. Phase separated hydrocarbons (PSH) were measured in monitor well MW-1, while dissolved phase hydrocarbons were detected in monitor wells MW-3, MW-4 and MW-5 at concentrations below the New Mexico Water Quality Control Commission (NMWQCC) standards.

Between May 2, 2011 and May 11, 2011, OXY installed two recovery wells (RW-1 and RW-2) for PSH recovery. Recovery well RW-1 was installed just north of monitor well MW-1, whereas recovery well RW-2 was installed just southwest of monitor well MW-3. PSH were measured in both recovery well RW-1 and recovery well RW-2.

On September 29, 2015, one permanent monitor well (MW-6) was installed to the northeast and one temporary monitor well (TMW-7) was installed to the southwest of the Site. Temporary monitor well TMW-7 was plugged and abandoned on March 2, 2016. The locations of all monitor and recovery wells are depicted on **Figure 3**.

RECOVERY SYSTEM OPERATIONS AND MAINTENANCE

During 2014, QED™ skimmer pumps were installed in monitor wells MW-1 and MW-2 and a Xitech skimmer pump was installed in recovery well RW-1 for the recovery of PSH. The skimmer pumps operate with solar recharged battery power and a nitrogen bottle. The PSH from each well was pumped into drums inside secondary containment where it is periodically removed for offsite disposal. System schematics are included in **Appendix A**. An estimated volume of 30 gallons of phase separated product (PSH) was recovered during 2019, bringing the estimated total volume of PSH recovered since the system started in 2014 to 1,007 gallons.

GAUGING AND MONITOR WELL SAMPLING

In 2019, Tetra Tech Inc. personnel were onsite to gauge monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, RW-1, and RW-2 on a semi-annual basis. All of the wells on site were gauged with an electronic interface probe to the nearest 0.01 foot. The gauging data is summarized in **Table 1**. During all of the 2019 sampling events, PSH were measured in two monitor wells (MW-1 and MW-3) and in both recovery wells (RW-1 and RW-2). The range of PSH thickness measured during the 2019 sampling events were as follows: (MW-1), 1.79 – 2.10 feet; (MW-3), 1.45 – 2.18 feet; (RW-1), 2.47 – 2.52 feet and (RW-2), 2.52 – 6.04 feet. Utilizing the water level elevation calculations, groundwater gradient maps were generated for the February 7, 2019 and August 8, 2019 sampling events. The groundwater gradient in 2019 was to the southeast which is consistent with previous years. Groundwater gradient maps for the two 2019 sampling events are included as **Figure 4** and **Figure 5.**

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

Analytical results indicate that BTEX concentrations were below method detection limits for all monitor wells sampled during all 2019 sampling events.

Chloride analytical results for monitor wells MW-2 and MW-5, were below the 250 milligrams per liter (mg/L) NMWQCC standard during the two 2019 sampling events. The chloride analytical results for MW-4 and MW-6 exceeded the NMWQCC standards during both 2019 sampling events. Chloride concentrations in monitor well MW-4 decreased from 602 mg/L on February 7, 2019 to 555 mg/L on August 8, 2019. Chloride concentrations in monitor well MW-6 decreased from 1,000 mg/L on February 7, 2019 to 887 mg/L on August 8, 2019.

Graphs of chloride concentrations versus groundwater elevations for monitor wells MW-2, MW-4, MW-5, and MW-6 are included in **Appendix B**. These graphs indicate generally stable chloride concentrations in monitor well MW-2 and fluctuations within the historic range of concentrations in monitor well MW-5. For the two monitor wells with chloride concentrations exceeding the NMWQCC standards, chloride concentrations in downgradient monitor well MW-4 have been fluctuating within the historic range of previously detected concentrations and chloride concentrations in cross-gradient monitor well MW-6 generally increased between 2017 and February 7, 2019 but significantly decreased during the August 8, 2019 sampling event.

Chloride concentration maps for the two 2019 sampling events are included as **Figures 6** and **7.** The groundwater analytical data is summarized in **Table 2**. Copies of the laboratory analytical reports are included in **Appendix C.**

CONCLUSIONS

1. The chloride analytical results for monitor wells MW-4 and MW-6 exceeded the NMWQCC standards during both 2019 sampling events which is consistent with previous results. Chloride concentrations in monitor wells MW-4 and MW-6 decreased over the reporting period.
2. Chloride concentrations for monitor wells MW-2 and MW-5 were below the NMWQCC standard of 250 mg/L during both 2019 sampling events which is consistent with previous results.
3. Analytical results indicate that at all four wells sampled had no BTEX concentrations exceeding the method detection limits.
4. A total estimated volume of 1,007 gallons of PSH has been recovered by the remediation system between startup in 2014 and December 2019.

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PROPOSED 2020 GROUNDWATER MONITORING PROGRAM

Continued semiannual groundwater monitoring and PSH recovery system operations are proposed for 2020.

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.

Ray Cheatham
Principal Geologist

Greg Pope
Principal Geologist

Attachments:
Figures
Tables
Appendix A – Recovery System Schematics
Appendix B – Groundwater Elevation and Chloride Concentration Graphs
Appendix C – Groundwater Laboratory Reports

cc: Dusty Wilson – Glenn Springs Holdings, Inc.

NOTE: Concur with offered recovery and monitoring plan for now.

Bradford Billings 10/07/2021

Figures

GLENN SPRINGS HOLDINGS

FIGURE 1

E.C. HILL A,B,C TANK BATTERY
(32.272283°,-103.151018°)

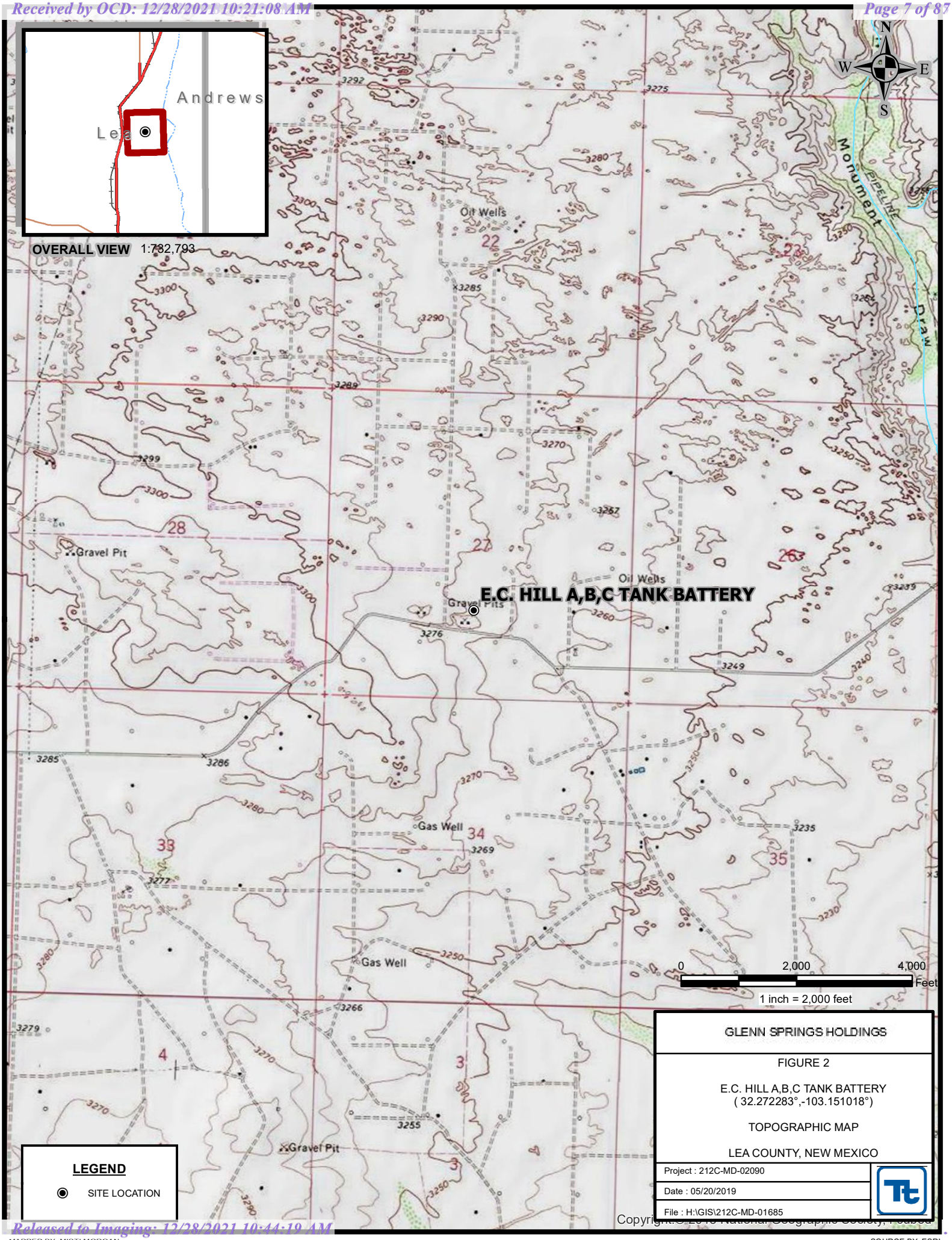
OVERVIEW MAP

LEA COUNTY, NEW MEXICO

Project : 212C-MD-02090	
Date : 05/20/2019	
File : H:\GIS\212C-MD-01685	

MAPPED BY: MISTI MORGAN

SOURCE BY: ESRI



GLENN SPRINGS HOLDINGS

FIGURE 2

E.C. HILL A,B,C TANK BATTERY
(32.272283°,-103.151018°)

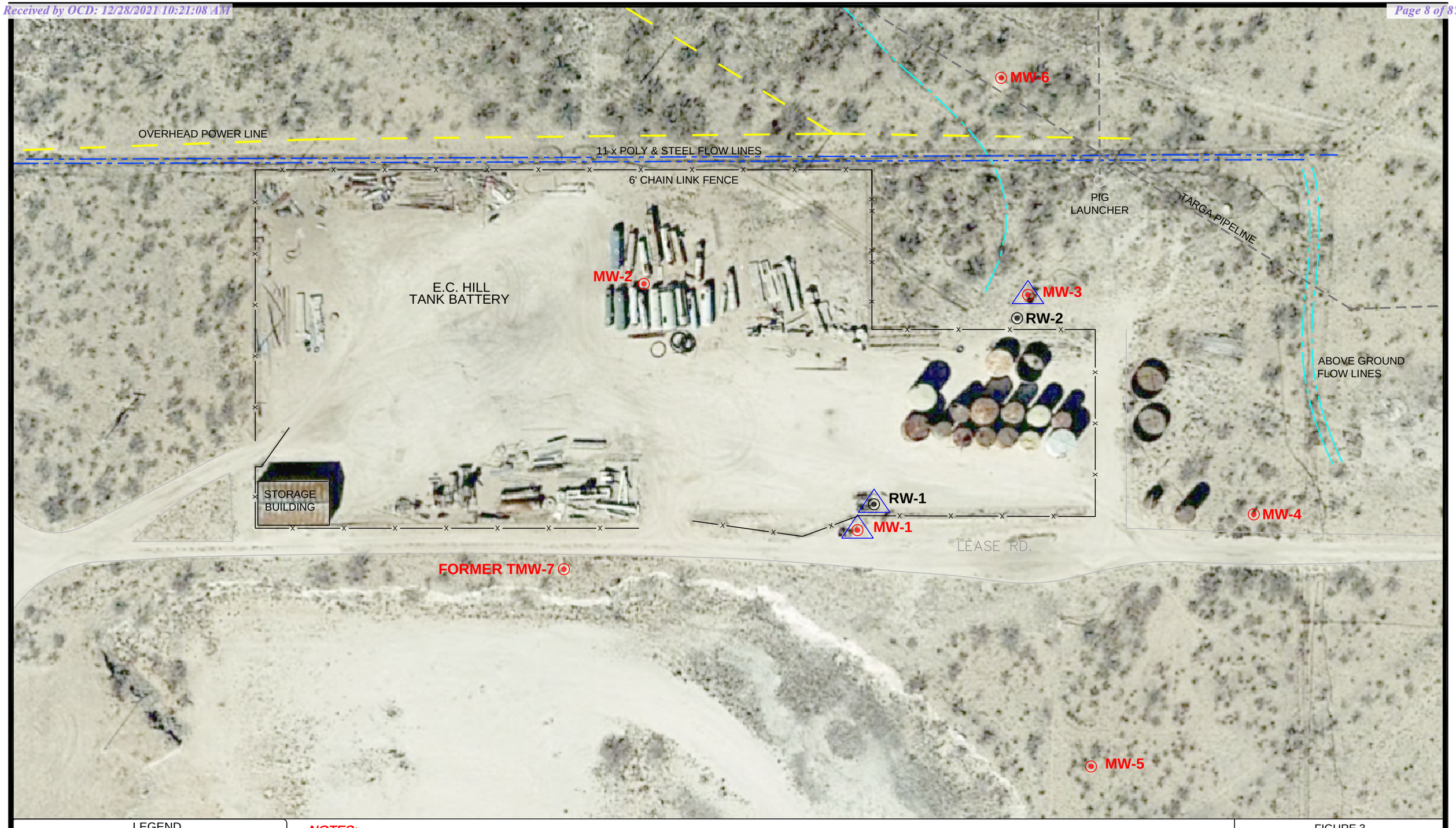
TOPOGRAPHIC MAP

LEA COUNTY, NEW MEXICO

Project : 212C-MD-02090	
Date : 05/20/2019	
File : H:\GIS\212C-MD-01685	

MAPPED BY: MISTI MORGAN

SOURCE BY: ESRI



LEGEND

- = MONITOR WELL LOCATIONS
- = RECOVERY WELL LOCATIONS
- = SKIMMER PUMP SYSTEM
- = BURIED PIPELINE
- = FENCE LINE
- = O.H. POWERLINE
- = ABOVEGROUND FLOWLINE
- = STEEL PIPE

NOTES:

1. ALL ELEVATIONS IN FEET AMSL
2. TMW = TEMPORARY MONITOR WELL

SOURCE: "NEW MEXCIO" 32°16'20.23"N, 103° 9'3.44"W. **GOOGLE EARTH.** FEBRUARY 20,2019. APRIL 20, 2020

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GLENN SPRINGS HOLDINGS

NORTH

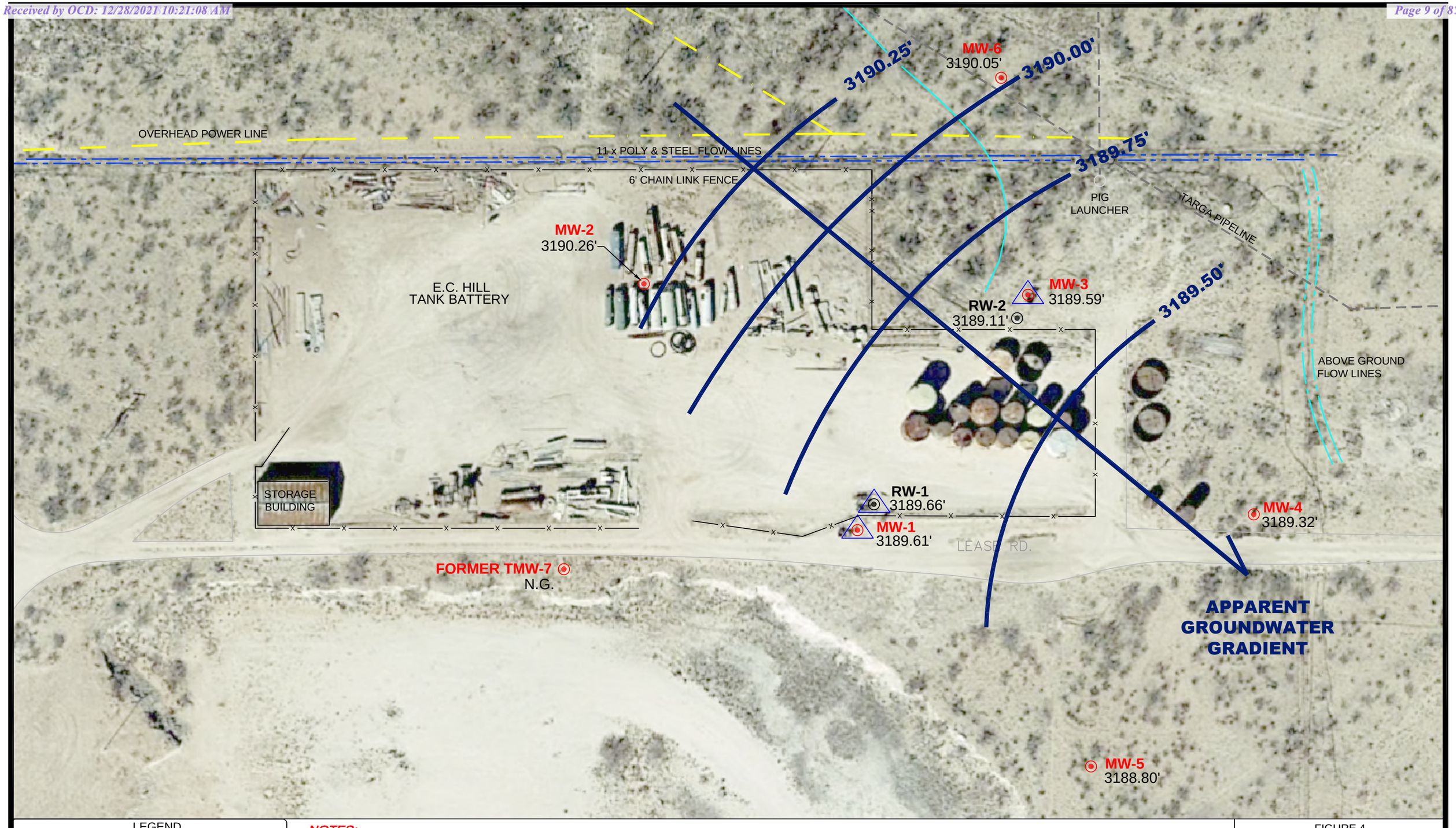
0 20 50ft

FIGURE 3

SITE MAP

E.C. HILL "A", "B", "C" TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 4/21/20	
File: H:\Acad Data\GLENN SPRINGS\2019\01685	



LEGEND

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- = RECOVERY WELL LOCATIONS
- = SKIMMER PUMP SYSTEM
- = BURIED PIPELINE
- = FENCE LINE
- = O.H. POWER LINE
- = ABOVEGROUND FLOWLINE
- = STEEL PIPE
- = CONTOUR INTERVALS .25 FT.
- = APPARENT GROUND WATER GRADIENT DIRECTIONAL

NOTES:

1. ALL ELEVATIONS IN FEET AMSL
2. TMW = TEMPORARY MONITOR WELL
3. N.G. = NOT GAUGED

SOURCE: "NEW MEXCIO" 32°16'20.23"N, 103° 9'3.44"W. **GOOGLE EARTH.** FEBRUARY 20,2019. APRIL 20, 2020

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NORTH

0 20 50ft

FIGURE 4

GROUND WATER GRADIENT MAP
FEBRUARY 07, 2019
E.C. HILL "A", "B", "C" TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 4/23/20	
File: H:\Acad Data\GLENN SPRINGS\2019\01685	

MW-6
3190.44'

OVERHEAD POWER LINE

11 x POLY & STEEL FLOW LINES

6' CHAIN LINK FENCE

3190.00'

PIG
LAUNCHER

TARGA PIPELINE

3189.75'

MW-2
3190.21'

E.C. HILL
TANK BATTERY

MW-3
3189.66'

RW-2
3189.67'

3189.50'

ABOVE GROUND
FLOW LINES

3189.25'

STORAGE
BUILDING

RW-1
3189.66'

MW-4
3189.27'

MW-1
3189.61'

LEASE RD.

FORMER TMW-7
N.G.

MW-5
3189.25'

APPARENT
GROUNDWATER
GRADIENT

LEGEND

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- = STEEL PIPE
- = CONTOUR INTERVALS .25 FT.
- = APPARENT GROUND WATER GRADIENT DIRECTIONAL

NOTES:

1. ALL ELEVATIONS IN FEET AMSL
2. TMW = TEMPORARY MONITOR WELL
3. N.G. = NOT GAUGED

SOURCE: "NEW MEXCIO" 32°16'20.23"N, 103° 9'3.44"W. **GOOGLE EARTH.** FEBRUARY 20,2019. APRIL 20, 2020

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GLENN SPRINGS HOLDINGS

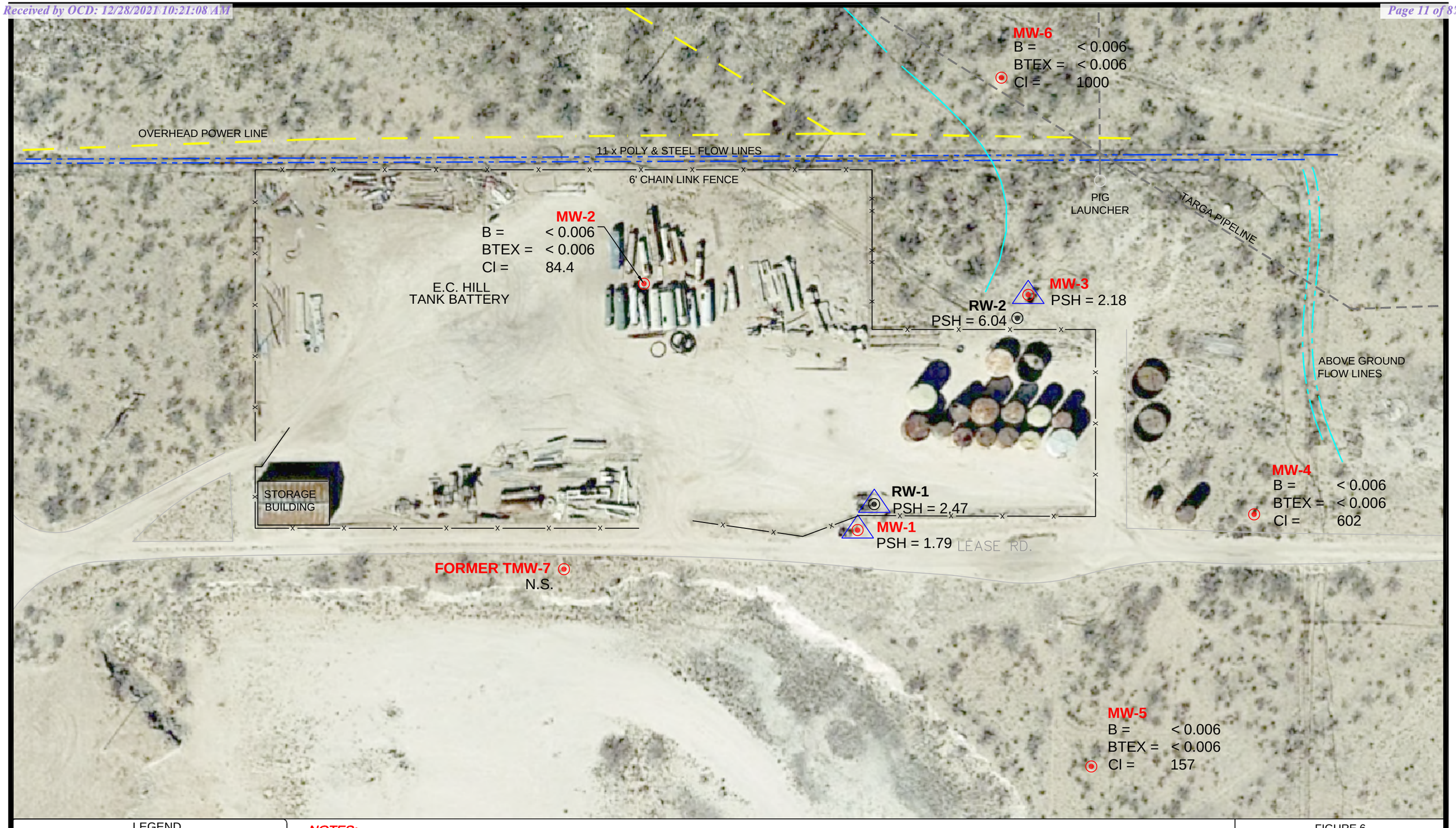
NORTH

0 20 50ft

FIGURE 5

GROUND WATER GRADIENT MAP
AUGUST 08, 2019
E.C. HILL "A", "B", "C" TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 4/21/20	
File: H:\Acad Data\GLENN SPRINGS\2019\01685	



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- = ABOVEGROUND FLOWLINE
- = STEEL PIPE

B = BEZENE CONCENTRATION (MG/L)
T = TOLUENE CONCENTRATION (MG/L)
E = ETHYLBENZENE CONCENTRATION (MG/L)
X = XYLENES CONCENTRATION(MG/L)
Cl = CHLORIDE CONCENTRATION (MG/L)

NOTES:

1. ALL ELEVATIONS IN FEET AMSL
2. TMW = TEMPORARY MONITOR WELL
3. N.S. = NOT SAMPLED
4. CONCENTRATIONS IN MILLIGRAMS PER LITER(MG/L)
5. PSH = PHASE SEPARATED HYDROCARBONS IN FEET

SOURCE: "NEW MEXCIO" 32°16'20.23"N, 103° 9'3.44"W. **GOOGLE EARTH**. FEBRUARY 20,2019. APRIL 20, 2020

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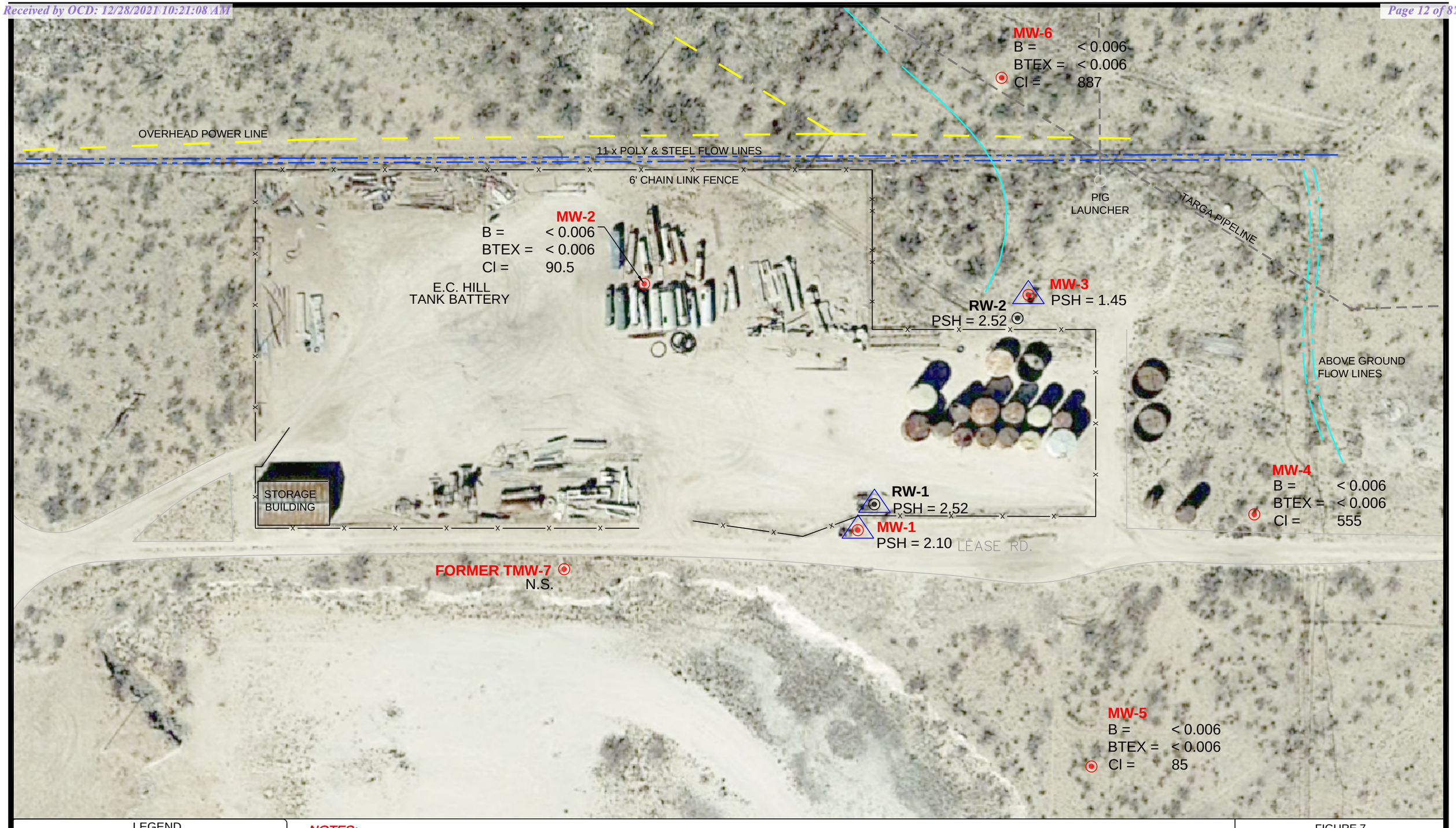
NORTH

0 20 50ft

FIGURE 6
BTEX & CHLORIDE CONCENTRATION MAP
FEBRUARY 07, 2019
E.C. HILL "A", "B", "C" TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 5/7/20	
File: H:\Acad Data\GLENN SPRINGS\2019\01685	



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- = STEEL PIPE

B = BEZENE CONCENTRATION (MG/L)
T = TOLUENE CONCENTRATION (MG/L)
E = ETHYLBENZENE CONCENTRATION (MG/L)
X = XYLENES CONCENTRATION(MG/L)
Cl = CHLORIDE CONCENTRATION (MG/L)

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SOURCE: "NEW MEXCIO" 32°16'20.23"N, 103° 9'3.44"W. **GOOGLE EARTH.** FEBRUARY 20,2019. APRIL 20, 2020

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GLENN SPRINGS HOLDINGS

NORTH

0 20 50ft

FIGURE 7
BTEX & CHLORIDE CONCENTRATION MAP
AUGUST 08, 2019
E.C. HILL "A", "B", "C" TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 4/29/20	
File: H:\Acad Data\GLENN SPRINGS\2019\01685	

Tables

Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-1	09/17/04	115	-	88.46	-	3274.52	3186.06
	06/17/05	115	86.01	86.04	0.03	3274.52	3188.48
	11/14/05	115	85.82	85.94	0.12	3274.52	3188.49
	03/22/06	115	85.89	87.14	1.25	3274.52	3188.32
	09/22/06	115	85.63	88.26	2.63	3274.52	3188.23
	03/16/07	115	85.65	88.70	3.05	3274.52	3188.11
	06/06/07	115	85.52	88.51	2.99	3274.52	3188.25
	09/28/07	115	85.60	88.62	3.02	3274.52	3188.17
	12/18/07	115	NM	NM	NM	NM	NM
	03/28/08	115	85.70	88.94	3.24	3274.52	3188.01
	06/26/08	115	85.59	88.66	3.07	3274.52	3188.16
	09/22/08	115	85.78	88.20	2.42	3274.52	3188.14
	12/04/08	115	86.01	88.80	2.79	3274.52	3187.81
	03/12/09	115	85.68	88.60	2.92	3274.52	3188.11
	06/22/09	115	85.65	88.63	2.98	3274.52	3188.13
	09/16/09	115	85.74	88.94	3.20	3274.52	3187.98
	12/09/09	115	85.67	88.70	3.03	3274.52	3188.09
	03/10/10	115	85.62	88.68	3.06	3274.52	3188.14
	06/08/10	115	85.70	88.89	3.19	3274.52	3188.02
	09/13/10	115	85.68	88.84	3.16	3274.52	3188.05
	12/14/10	115	85.63	88.78	3.15	3274.52	3188.10
	03/10/11	115	85.63	88.86	3.23	3274.52	3188.08
	06/13/11	115	85.63	88.75	3.12	3274.52	3188.11
	09/19/11	115	85.81	89.13	3.32	3274.52	3187.88
	12/12/11	115	85.83	88.92	3.09	3274.52	3187.92
	03/22/12	115	85.78	89.96	4.18	3274.52	3187.70
	04/06/12	115	85.77	89.97	4.20	3274.52	3187.70
	06/20/12	115	85.75	89.03	3.28	3274.52	3187.95
	09/24/12	115	85.97	88.20	2.23	3274.52	3187.99
	12/14/12	115	86.01	87.13	1.12	3274.52	3188.23
	03/27/13	115	85.93	87.95	2.02	3274.52	3188.09
	06/07/13	115	85.94	88.30	2.36	3274.52	3187.99
	06/24/13	115	86.05	88.43	2.38	3274.52	3187.88
	07/08/13	115	86.28	87.51	1.23	3274.52	3187.93
	07/23/13	115	86.30	87.20	0.90	3274.52	3188.00
	08/06/13	115	86.40	86.70	0.30	3274.52	3188.05
	09/19/13	115	NG	NG	-	3274.52	-
	11/07/13	115	86.12	87.60	1.48	3274.52	3188.03
	12/27/13	115	86.26	87.38	1.12	3274.52	3187.98
	03/27/14	112.68	86.14	87.39	1.25	3274.52	3188.07
	06/17/14	112.68	86.11	88.04	1.93	3274.52	3187.93
	09/26/14	112.68	86.24	86.78	0.54	3274.52	3188.15
	12/16/14	112.68	86.27	86.84	0.57	3274.52	3188.11
	03/24/15	-	86.20	86.35	0.15	3274.52	3188.28
	04/09/15	-	86.11	86.57	0.46	3274.52	3188.30
	06/18/15	-	86.10	86.90	0.80	3274.52	3188.22
	07/30/15	-	85.88	87.30	1.42	3274.52	3188.29

212C-MD-02090

Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-1 Cont.	08/05/15	-	85.86	87.51	1.65	3274.52	3188.25
	08/18/15	-	86.06	86.09	0.03	3274.52	3188.45
	09/09/15	112.68	86.11	86.35	0.24	3274.52	3188.35
	12/18/15	-	86.12	86.65	0.53	3275.89	3189.64
	03/14/16	-	85.95	87.45	1.50	3275.89	3189.57
	06/28/16	-	86.19	86.48	0.29	3275.89	3189.63
	09/07/16	-	86.01	86.52	0.51	3275.89	3189.79
	12/06/16	-	86.12	86.90	0.78	3275.89	3189.63
	03/01/17	112.30	86.10	87.25	1.15	3275.89	3189.59
	08/29/17	-	86.96	88.18	1.22	3275.89	3188.72
	02/20/18	-	85.77	88.02	2.25	3275.89	3189.72
	08/23/18		85.86	88.10	2.24	3275.89	3189.64
	02/07/19	112.22	85.96	87.75	1.79	3275.89	3189.61
	08/08/19	112.22	85.91	88.01	2.10	3275.89	3189.61
MW-2	06/17/05	102	-	86.04	-	3274.99	3188.95
	11/14/05	102	-	85.9	-	3274.99	3189.09
	03/22/06	102	-	86.08	-	3274.99	3188.91
	09/22/06	102	NM	NM	NM	3274.99	NM
	03/16/07	102	-	86.23	-	3274.99	3188.76
	06/06/07	102	-	86.10	-	3274.99	3188.89
	09/28/07	102	-	86.22	-	3274.99	3188.77
	12/18/07	102	-	86.20	-	3274.99	3188.79
	03/28/08	102	-	86.26	-	3274.99	3188.73
	06/26/08	102	-	86.16	-	3274.99	3188.83
	09/22/08	102	-	86.23	-	3274.99	3188.76
	12/04/08	102	-	86.60	-	3274.99	3188.39
	03/12/09	102	-	86.25	-	3274.99	3188.74
	06/22/09	102	-	86.25	-	3274.99	3188.74
	09/16/09	102	-	86.58	-	3274.99	3188.41
	12/09/09	102	-	86.28	-	3274.99	3188.71
	03/10/10	102	-	86.57	-	3274.99	3188.42
	06/08/10	102	-	86.29	-	3274.99	3188.70
	09/13/10	102	-	86.23	-	3274.99	3188.76
	12/14/10	102	-	87.02	-	3274.99	3187.97
	03/10/11	102	-	86.25	-	3274.99	3188.74
	06/13/11	102	-	86.23	-	3274.99	3188.76
	09/19/11	102	-	86.36	-	3274.99	3188.63
	12/12/11	102	-	86.40	-	3274.99	3188.59
	03/22/12	102	-	86.41	-	3274.99	3188.58
	04/06/12	102	-	86.27	-	3274.99	3188.72
	06/20/12	102	-	86.39	-	3274.99	3188.60
	09/24/12	102	-	86.32	-	3274.99	3188.67
	12/14/12	102	-	86.30	-	3274.99	3188.69
	03/27/13	102	-	86.32	-	3274.99	3188.67
	06/06/13	102	-	86.40	-	3274.99	3188.59
	09/19/13	101.60	-	86.38	-	3274.99	3188.61
	11/07/13	101.60	-	86.49	-	3274.99	3188.50

Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-2 Cont.	12/26/13	101.60	-	86.48	-	3274.99	3188.51
	03/27/14	100.10	-	86.42	-	3274.99	3188.57
	06/17/14	100.10	-	86.45	-	3274.99	3188.54
	09/26/14	100.00	-	86.49	-	3274.99	3188.50
	12/16/14	100.00	-	86.23	-	3274.99	3188.76
	03/24/15	-	-	86.26	-	3274.99	3188.73
	06/18/15	-	-	86.33	-	3274.99	3188.66
	08/05/15	-	-	86.25	-	3274.99	3188.74
	09/09/15	100.00	-	86.21	-	3274.99	3188.78
	12/18/15	-	-	86.16	-	3276.46	3190.30
	03/14/16	100.00	-	86.23	-	3276.46	3190.23
	06/28/16	100.00	-	86.31	-	3276.46	3190.15
	09/07/16	-	-	86.29	-	3276.46	3190.17
	12/06/16	-	-	86.38	-	3276.46	3190.08
	03/01/17	99.25	-	86.40	-	3276.46	3190.06
	08/29/17	99.25	-	86.34	-	3276.46	3190.12
	02/20/18	99.55	-	86.19	-	3276.46	3190.27
	08/23/18	-	-	86.44	-	3276.46	3190.02
	02/07/19	99.56	-	86.20	-	3276.46	3190.26
	08/08/19	99.56	-	86.25	-	3276.46	3190.21
MW-3	11/14/05	101	-	87.96	-	3276.48	3188.50
	03/22/06	101	-	87.99	-	3276.48	3188.49
	09/22/06	101	-	88.02	-	3276.48	3188.46
	03/16/07	101	-	88.08	-	3276.48	3188.40
	06/06/07	101	-	88.00	-	3276.48	3188.48
	09/28/07	101	-	88.10	-	3276.48	3188.38
	12/18/07	101	-	88.08	-	3276.48	3188.40
	03/28/08	101	87.76	90.27	2.51	3276.48	3188.09
	06/26/08	101	87.60	90.51	2.91	3276.48	3188.15
	09/22/08	101	87.66	90.63	2.97	3276.48	3188.08
	12/04/08	101	87.94	90.98	3.04	3276.48	3187.78
	03/12/09	101	87.63	90.67	3.04	3276.48	3188.09
	06/22/09	101	87.60	90.69	3.09	3276.48	3188.11
	09/16/09	101	87.73	90.82	3.09	3276.48	3187.98
	12/09/09	101	87.64	90.69	3.05	3276.48	3188.08
	03/10/10	101	87.58	90.68	3.10	3276.48	3188.13
	06/08/10	101	87.68	89.80	2.12	3276.48	3188.27
	09/13/10	101	87.66	90.77	3.11	3276.48	3188.04
	12/14/10	101	87.63	90.67	3.04	3276.48	3188.09
	03/10/11	101	87.60	90.67	3.07	3276.48	3188.11
	06/13/11	101	87.59	90.67	3.08	3276.48	3188.12
	09/19/11	101	87.80	90.67	2.87	3276.48	3187.96
	12/12/11	101	87.74	90.67	2.93	3276.48	3188.01
	03/22/12	101	87.75	90.97	3.22	3276.48	3187.93
	04/06/12	101	87.74	90.96	3.22	3276.48	3187.94
	06/20/12	101	87.71	90.95	3.24	3276.48	3187.96
	09/24/12	101	87.77	91.03	3.26	3276.48	3187.90

Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-3 Cont.	12/14/12	101	87.73	91.02	3.29	3276.48	3187.93
	03/27/13	101	87.72	90.96	3.24	3276.48	3187.95
	06/07/13	101	87.78	91.10	3.32	3276.48	3187.87
	06/24/13	101	87.87	91.15	3.28	3276.48	3187.79
	07/08/13	101	87.97	90.88	2.91	3276.48	3187.78
	07/23/13	101	87.90	91.00	3.10	3276.48	3187.81
	08/06/13	101	87.91	91.03	3.12	3276.48	3187.79
	09/19/13	101	NG	NG	-	3276.48	-
	11/07/13	101	87.79	91.11	3.32	3276.48	3187.86
	12/26/13	101	87.90	91.08	3.18	3276.48	3187.79
	03/27/14	106.14	87.83	90.70	2.87	3276.48	3187.93
	06/17/14	106.14	88.02	90.37	2.35	3276.48	3187.87
	09/26/14	106.14	87.99	90.73	2.74	3276.48	3187.81
	12/16/14	106.14	87.90	90.71	2.81	3276.48	3187.88
	03/24/15	-	88.20	88.56	0.36	3276.48	3188.19
	04/09/15	-	87.82	90.17	2.35	3276.48	3188.07
	06/18/15	-	87.91	90.24	2.33	3276.48	3187.99
	07/30/15	-	87.74	90.08	2.34	3276.48	3188.16
	08/05/15	-	88.15	88.30	0.15	3276.48	3188.29
	08/18/15	-	88.06	88.25	0.19	3276.48	3188.37
	09/09/15	106.14	87.71	90.48	2.77	3276.48	3188.08
	12/18/15	-	87.90	90.06	2.16	3277.87	3189.43
	03/14/16	106.14	87.89	89.55	1.66	3277.87	3189.57
	06/28/16	-	87.75	90.60	2.85	3277.87	3189.41
	09/07/16	-	87.72	89.89	2.17	3277.87	3189.77
	12/06/16	-	87.73	89.92	2.19	3277.87	3189.76
	03/01/17	104.52	88.00	90.33	2.33	3277.87	3189.46
	08/29/17	104.52	87.99	91.02	3.03	3277.87	3189.35
	02/20/18	-	87.85	89.67	1.82	3277.87	3189.70
	08/23/18	-	88.00	89.84	1.84	3277.87	3189.55
	02/07/19	104.52	87.90	90.08	2.18	3277.87	3189.59
	08/08/19	104.52	87.96	89.41	1.45	3277.87	3189.66
MW-4	09/22/06	100	-	87.22	-	3275.22	3188.00
	03/16/07	100	-	87.29	-	3275.22	3187.93
	06/06/07	100	-	87.20	-	3275.22	3188.02
	09/28/07	100	-	87.31	-	3275.22	3187.91
	12/18/07	100	-	87.29	-	3275.22	3187.93
	03/28/08	100	-	87.33	-	3275.22	3187.89
	06/26/08	100	-	87.26	-	3275.22	3187.96
	09/22/08	100	-	87.32	-	3275.22	3187.90
	12/04/08	100	-	87.50	-	3275.22	3187.72
	03/12/09	100	-	87.34	-	3275.22	3187.88
	06/22/09	100	-	87.32	-	3275.22	3187.90
	09/16/09	100	-	87.39	-	3275.22	3187.83
	12/09/09	100	-	87.32	-	3275.22	3187.90
	03/10/10	100	-	87.27	-	3275.22	3187.95
	06/08/10	100	-	87.34	-	3275.22	3187.88

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Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-4 Cont.	09/13/10	100	-	87.32	-	3275.22	3187.90
	12/14/10	100	-	88.13	-	3275.22	3187.09
	03/10/11	100	-	87.34	-	3275.22	3187.88
	06/13/11	100	-	87.32	-	3275.22	3187.90
	09/19/11	100	-	87.43	-	3275.22	3187.79
	12/12/11	100	-	87.48	-	3275.22	3187.74
	03/22/12	100	-	87.31	-	3275.22	3187.91
	04/06/12	100	-	87.35	-	3275.22	3187.87
	06/20/12	100	-	87.43	-	3275.22	3187.79
	09/24/12	100	-	87.36	-	3275.22	3187.86
	12/14/12	100	-	87.44	-	3275.22	3187.78
	03/27/13	100	-	87.43	-	3275.22	3187.79
	06/06/13	100	-	87.51	-	3275.22	3187.71
	09/19/13	100	-	87.51	-	3275.22	3187.71
	11/07/13	100	-	87.61	-	3275.22	3187.61
	12/26/13	100	-	87.56	-	3275.22	3187.66
	03/27/14	101.31	-	87.52	-	3275.22	3187.70
	06/17/14	101.31	-	87.52	-	3275.22	3187.70
	09/26/14	101.22	-	87.59	-	3275.22	3187.63
	12/16/14	101.22	-	87.35	-	3275.22	3187.87
	03/24/15	-	-	87.32	-	3275.22	3187.90
	06/18/15	100.66	-	87.48	-	3275.22	3187.74
	08/05/15	-	-	87.38	-	3275.22	3187.84
	09/09/15	100.66	-	87.27	-	3275.22	3187.95
	12/18/15	100.66	-	87.30	-	3276.59	3189.29
	03/14/16	100.66	-	87.29	-	3276.59	3189.30
	06/28/16	100.66	-	87.36	-	3276.59	3189.23
	09/07/16	-	-	87.41	-	3276.59	3189.18
	12/06/16	-	-	87.45	-	3276.59	3189.14
	03/01/17	100.67	-	87.43	-	3276.59	3189.16
	08/29/17	100.67	-	87.41	-	3276.59	3189.18
	02/20/18	100.71	-	87.21	-	3276.59	3189.38
	08/23/18	-	-	87.52	-	3276.59	3189.07
	02/07/19	100.67	-	87.27	-	3276.59	3189.32
	08/08/19	101.2	-	87.32	-	3276.59	3189.27
MW-5	09/22/06	100	-	87.04	-	3275.04	3188.00
	03/16/07	100	-	87.11	-	3275.04	3187.93
	06/06/07	100	-	87.02	-	3275.04	3188.02
	09/28/07	100	-	87.10	-	3275.04	3187.94
	12/18/07	100	-	87.09	-	3275.04	3187.95
	03/28/08	100	-	87.14	-	3275.04	3187.90
	06/26/08	100	-	87.08	-	3275.04	3187.96
	09/22/08	100	-	87.13	-	3275.04	3187.91
	12/04/08	100	-	87.50	-	3275.04	3187.54
	03/12/09	100	-	87.17	-	3275.04	3187.87
	06/22/09	100	-	87.12	-	3275.04	3187.92
	09/16/09	100	-	87.23	-	3275.04	3187.81

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Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-5 Cont.	12/09/09	100	-	87.23	-	3275.04	3187.81
	03/10/10	100	-	87.10	-	3275.04	3187.94
	06/08/10	100	-	87.19	-	3275.04	3187.85
	09/13/10	100	-	87.18	-	3275.04	3187.86
	12/14/10	100	-	87.94	-	3275.04	3187.10
	03/10/11	100	-	87.17	-	3275.04	3187.87
	06/13/11	100	-	87.14	-	3275.04	3187.90
	09/19/11	100	-	87.25	-	3275.04	3187.79
	12/12/11	100	-	87.29	-	3275.04	3187.75
	03/22/12	100	-	87.31	-	3275.04	3187.73
	04/06/12	100	-	87.21	-	3275.04	3187.83
	06/20/12	100	-	87.29	-	3275.04	3187.75
	09/24/12	100	-	87.30	-	3275.04	3187.74
	12/14/12	100	-	87.25	-	3275.04	3187.79
	03/27/13	100	-	87.21	-	3275.04	3187.83
	06/06/13	100	-	87.31	-	3275.04	3187.73
	09/19/13	101.48	-	87.30	-	3275.04	3187.74
	11/07/13	101.48	-	87.43	-	3275.04	3187.61
	12/26/13	101.48	-	87.41	-	3275.04	3187.63
	03/27/14	99.33	-	87.34	-	3275.04	3187.70
	06/17/14	99.33	-	87.34	-	3275.04	3187.70
	09/26/14	99.32	-	87.40	-	3275.04	3187.64
	12/16/14	99.32	-	87.15	-	3275.04	3187.89
	03/24/15	-	-	87.12	-	3275.04	3187.92
	06/18/15	99.30	-	87.60	-	3275.04	3187.44
	08/05/15	-	-	87.15	-	3275.04	3187.89
	09/09/15	99.30	-	87.10	-	3275.04	3187.94
	12/18/15	99.30	-	87.09	-	3276.40	3189.31
	03/14/16	99.30	-	87.11	-	3276.40	3189.29
	06/28/16	99.30	-	87.21	-	3276.40	3189.19
	09/07/16	-	-	87.24	-	3276.40	3189.16
	12/06/16	-	-	87.23	-	3276.40	3189.17
	03/01/17	98.91	-	87.27	-	3276.40	3189.13
	08/29/17	98.91	-	87.25	-	3276.40	3189.15
	02/20/18	98.97	-	87.06	-	3276.40	3189.34
	08/23/18	-	-	87.31	-	3276.40	3189.09
	02/07/19	99.00	-	87.60	-	3276.40	3188.80
	08/08/19	99.10	-	87.15	-	3276.40	3189.25
MW-6	10/02/15		-	86.77	-	3276.75	3189.98
	10/29/16			86.79		3276.75	3189.96
	12/18/15		-	86.79	-	3276.75	3189.96
	03/14/16	100	-	86.75	-	3276.75	3190.00
	06/28/16	100	-	86.86	-	3276.75	3189.89
	09/07/16	-	-	86.81	-	3276.75	3189.94
	12/06/16	-	-	86.89	-	3276.75	3189.86
	03/01/17	101.20	-	86.89	-	3276.75	3189.86
	08/29/17	101.20	-	86.87	-	3276.75	3189.88

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Table 1
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
MW-6 Cont.	02/20/18	100.95	-	86.72	-	3276.75	3190.03
	08/23/18	-	-	86.90	-	3276.75	3189.85
	02/07/19	101.20	-	86.70	-	3276.75	3190.05
	08/08/19	100.25	-	86.31	-	3276.75	3190.44
TMW-7	10/02/15	-	-	92.56	-	3280.64	3188.08
	10/29/16	94.80	-	90.58	-	3280.64	3190.06
	12/18/15	-	-	90.56	-	3280.64	3190.08
	03/02/16	94.80	-	90.59	-	3280.64	3190.05
RW-1	06/13/11	-	-	88.70	-	NA	NA
	09/19/11	-	88.67	89.96	1.29	-	-
	12/12/11	-	88.32	91.45	3.13	-	-
	03/22/12	-	88.31	91.47	3.16	-	-
	04/06/12	-	88.30	91.46	3.16	-	-
	06/20/12	-	88.30	91.50	3.20	-	-
	09/24/12	-	88.33	91.55	3.22	-	-
	12/14/12	-	88.46	90.55	2.09	-	-
	03/27/13	-	88.83	88.88	0.05	-	-
	06/07/13	-	88.41	91.32	2.91	-	-
	09/19/13	-	NG	-	-	-	-
	11/07/13	-	88.42	91.40	2.98	-	-
	12/26/13	-	88.41	91.44	3.03	-	-
	03/27/14	-	88.39	91.46	3.07	-	-
	06/17/14	-	88.48	91.51	3.03	-	-
	09/26/14	-	88.38	91.37	2.99	-	-
	12/16/14	-	88.39	91.41	3.02	-	-
	03/24/15	-	88.35	91.11	2.76	-	-
	04/09/15	-	88.31	91.11	2.80	-	-
	06/18/15	-	88.26	91.05	2.79	-	-
	07/09/15	-	88.30	90.96	2.66	-	-
	07/29/15	-	88.30	90.81	2.51	-	-
	08/05/15	-	88.26	90.67	2.41	-	-
	08/18/15	-	88.58	88.93	0.35	-	-
	09/09/15	-	88.26	91.39	3.13	-	-
	12/18/15	-	88.40	90.60	2.20	3278.48	3189.53
	03/14/16	-	88.32	90.68	2.36	3278.48	3189.57
	06/28/16	-	88.37	90.75	2.38	3278.48	3189.52
	09/07/16	-	88.35	90.77	2.42	3278.48	3189.70
	12/06/16	-	88.33	90.80	2.47	3278.48	3189.72
	03/01/17	104.20	88.45	90.80	2.35	3278.48	3189.62
	08/29/17	104.20	88.59	91.05	2.46	3278.48	3189.46
	02/20/18	-	88.29	90.58	2.29	3278.48	3189.79
	08/23/18	-	88.39	90.88	2.49	3278.48	3189.65
	02/07/19	104.20	88.39	90.86	2.47	3278.48	3189.66
	08/08/19	104.20	88.38	90.90	2.52	3278.48	3189.66
RW-2	06/13/11	-	-	88.75	-	NA	NA
	09/19/11	-	-	88.92	-	-	-
	12/12/11	-	-	88.88	-	-	-

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Table 1
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Summary of Groundwater Elevations and PSH Thickness
Lea County, New Mexico

Well/ Borehole ID	Date Gauged	Well Total Depth (ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Top of Casing Elevation, feet AMSL	Groundwater Elevation (ft)
RW-2 Cont.	03/22/12	-	88.87	88.91	0.04	-	-
	04/06/12	-	88.88	88.93	0.05	-	-
	06/20/12	-	88.84	88.96	0.12	-	-
	09/24/12	-	88.87	89.11	0.24	-	-
	12/14/12	-	88.89	89.01	0.12	-	-
	03/27/13	-	88.83	89.11	0.28	-	-
	06/07/13	-	88.91	89.32	0.41	-	-
	06/24/13	-	88.96	89.34	0.38	-	-
	07/08/13	-	89.03	89.24	0.21	-	-
	07/23/13	-	89.00	89.20	0.20	-	-
	08/06/13	-	89.00	89.20	0.20	-	-
	09/19/13	-	NG	-	-	-	-
	11/07/13	-	88.93	89.26	0.33	-	-
	12/26/13	-	88.95	89.25	0.30	-	-
	03/27/14	-	88.88	89.21	0.33	-	-
	06/17/14	-	88.96	89.39	0.43	-	-
	09/26/14	-	88.96	89.48	0.52	-	-
	12/16/14	-	88.92	89.47	0.55	-	-
	03/24/15	-	88.74	89.35	0.61	-	-
	06/18/15	-	88.70	89.50	0.80	-	-
	08/05/15	-	88.71	89.04	0.33	-	-
	08/18/15	-	88.71	88.72	0.01	-	-
	09/09/15	-	88.74	88.75	0.01	-	-
	12/18/15	-	88.70	89.45	0.75	3278.47	3189.58
	03/14/16	-	88.60	89.49	0.89	3278.47	3189.65
	06/28/16	-	88.71	89.48	0.77	3278.47	3189.57
	09/07/16	-	88.68	89.46	0.78	3278.47	3189.65
	12/06/16	-	88.66	89.49	0.83	3278.47	3189.67
	03/01/17	107.92	88.56	90.80	2.24	3278.47	3189.52
	08/29/17	107.92	88.40	91.34	2.94	3278.47	3189.56
	02/20/18	-	88.26	90.98	2.72	3278.47	3189.74
	08/23/18	-	88.35	90.91	2.56	3278.47	3189.67
	02/07/19	107.92	88.31	94.35	6.04	3278.47	3189.11
	08/08/19	-	88.36	90.88	2.52	3278.47	3189.67

(-) No data (TOC) Top of casing
(MW-1 and MW-3) Groundwater elevation corrected using 0.75 specific gravity
NM - Not Measured
NA - Top of Casing Elevation not available
NG - Not Gauged, instrument malfunction
TOC elevations resurveyed by John West Survey Company on October 29, 2015. This was the initial survey-
-for MW-6, TMW-7, RW-1 and RW-2.
TMW-7 plugged on March 2, 2016.
8/26/2016, LNAPL Specific Gravity analysis: RW-1 = 0.824 and MW-3 = 0.826, used to correct groundwater elevations
Specific Gravity of 0.824 to correct RW-1 and MW-1; SG = 0.826 to correct RW-2 and MW-3 groundwater elevations

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-1	09/17/04	-	**0.0385**	**0.0146**	**0.00694**	**0.0341**	**0.09414**	**195**
	10/12/04	-	**0.111**	**0.0197**	**0.0166**	**0.0699**	**0.2172**	**133**
	06/24/05	0.03	-	-	-	-	-	-
	11/14/05	0.12	**0.495**	**0.0809**	**0.137**	**0.253**	**0.9659**	**178**
	03/22/06	1.25	-	-	-	-	-	-
	09/22/06	2.63	-	-	-	-	-	-
	03/16/07	3.05	-	-	-	-	-	-
	06/06/07	2.99	-	-	-	-	-	-
	09/28/07	3.02	-	-	-	-	-	-
	12/18/07	NM	-	-	-	-	-	-
	03/28/08	3.24	-	-	-	-	-	-
	06/26/08	3.07	-	-	-	-	-	-
	09/22/08	2.42	-	-	-	-	-	-
	12/04/08	2.79	-	-	-	-	-	-
	03/12/09	2.92	-	-	-	-	-	-
	06/22/09	2.98	-	-	-	-	-	-
	09/16/09	3.20	-	-	-	-	-	-
	12/09/09	3.03	-	-	-	-	-	-
	03/10/10	3.06	-	-	-	-	-	-
	06/08/10	3.19	-	-	-	-	-	-
	09/13/10	3.16	-	-	-	-	-	-
	12/14/10	3.15	-	-	-	-	-	-
	03/10/11	3.23	-	-	-	-	-	-
	06/13/11	3.12	-	-	-	-	-	-
	09/19/11	3.32	-	-	-	-	-	-
	12/12/11	3.09	-	-	-	-	-	-
	03/22/12	4.18	-	-	-	-	-	-

212C-MD-02090

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
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Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-1 Cont.	04/06/12	4.20	-	-	-	-	-	-
	06/20/12	3.28	-	-	-	-	-	-
	09/24/12	2.23	-	-	-	-	-	-
	12/14/12	1.12	-	-	-	-	-	-
	03/27/13	2.02	-	-	-	-	-	-
	06/07/13	2.36	-	-	-	-	-	-
	09/19/13	NG	-	-	-	-	-	-
	12/27/13	1.12	-	-	-	-	-	-
	03/27/14	1.25	-	-	-	-	-	-
	06/19/14	1.93	-	-	-	-	-	-
	09/26/14	0.54	-	-	-	-	-	-
	12/16/14	0.73	-	-	-	-	-	-
	03/24/15	0.15	-	-	-	-	-	-
	04/09/15	0.46	-	-	-	-	-	-
	06/18/15	0.80	-	-	-	-	-	-
	09/09/15	0.24	-	-	-	-	-	-
	12/18/15	0.53	-	-	-	-	-	-
	03/16/16	1.50	-	-	-	-	-	-
	06/30/16	0.29	-	-	-	-	-	-
	09/09/16	0.51	-	-	-	-	-	-
	12/07/16	0.78	-	-	-	-	-	-
	03/01/17	1.15	-	-	-	-	-	-
	08/29/17	1.22	-	-	-	-	-	-
	02/20/18	2.25	-	-	-	-	-	-
	08/23/18	2.24	-	-	-	-	-	-
	02/07/19	1.79	-	-	-	-	-	-
	08/08/19	2.10	-	-	-	-	-	-

Table 2
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Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-2	06/24/05	-	<0.001	<0.001	<0.001	<0.001	<0.001	**102**
	11/14/05	-	<0.001	<0.001	<0.001	<0.001	<0.001	**61.9**
	03/22/06	-	<0.001	<0.001	<0.001	<0.001	<0.001	**63.0**
	09/22/06	NM	NM	NM	NM	NM	NM	NM
	03/16/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**74.0**
	06/06/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**71.8**
	09/28/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**47.6**
	12/18/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	<200
	03/28/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**83.3**
	06/26/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**85.0**
	09/22/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**78.0**
	12/04/08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.001	**94.5**
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**87.2**
	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**83.3**
	12/09/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**87.9**
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**88.3**
	06/08/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**90.3**
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**86.0**
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**85.3**
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	**82.2**
	06/13/11	-	<0.00014	<0.00020	<0.00030	<0.00023	<0.00030	**89**
	09/19/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	**88**
	12/12/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	**87**
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**295**
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**98.0**
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**96.9**
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**82.4**

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-2 Cont,	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**86.6**
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**95.7**
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**94.1**
	12/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**87.4**
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**93.2**
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**101**
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**94.2**
	12/16/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**89.4**
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**88.5**
	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**89.4**
	09/09/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**86.2**
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**83.2**
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**91.4**
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**85.2**
	09/09/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**86.3**
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	**103**
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**86.7**
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**85.5**
	02/21/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**90.7**
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**88.6**
	02/07/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**84.4**
	08/08/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**90.5**
MW-3	06/24/05	-	**0.00166**	**0.0026**	**0.00143**	**0.0137**	**0.01939**	**420**
	11/14/05	-	**0.0037**	<0.001	**0.00132**	**0.006**	**0.01102**	**310**
	03/22/06	-	**0.0028**	<0.001	**0.00397**	**0.0047**	**0.01147**	**285**
	09/22/06	-	**0.00232**	<0.001	<0.001	<0.001	**0.00232**	**330**
	03/16/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**297**

Table 2
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Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-3 Cont.	06/06/07	-	**0.00114**	<0.001	<0.001	<0.001	**0.00114**	**302**
	09/28/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**279**
	12/18/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	<200
	03/28/08	2.51	-	-	-	-	-	-
	06/26/08	2.91	-	-	-	-	-	-
	09/22/08	2.97	-	-	-	-	-	-
	12/04/08	3.04	-	-	-	-	-	-
	03/12/09	3.04	-	-	-	-	-	-
	06/22/09	3.09	-	-	-	-	-	-
	09/16/09	2.97	-	-	-	-	-	-
	12/09/09	3.05	-	-	-	-	-	-
	03/10/10	3.10	-	-	-	-	-	-
	06/08/10	2.97	-	-	-	-	-	-
	09/13/10	3.11	-	-	-	-	-	-
	12/14/10	3.04	-	-	-	-	-	-
	03/10/11	3.05	-	-	-	-	-	-
	06/13/11	3.08	-	-	-	-	-	-
	09/19/11	3.08	-	-	-	-	-	-
	12/12/11	3.22	-	-	-	-	-	-
	03/22/12	3.22	-	-	-	-	-	-
	04/06/12	3.22	-	-	-	-	-	-
	06/20/12	3.24	-	-	-	-	-	-
	09/24/12	3.26	-	-	-	-	-	-
	12/14/12	3.29	-	-	-	-	-	-
	03/27/13	3.24	-	-	-	-	-	-
	06/07/13	3.32	-	-	-	-	-	-
	09/19/13	NG	-	-	-	-	-	-

Table 2
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E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-3 Cont.	12/27/13	3.18	-	-	-	-	-	-
	03/27/14	2.87	-	-	-	-	-	-
	06/19/14	2.35	-	-	-	-	-	-
	09/26/14	2.74	-	-	-	-	-	-
	12/16/14	2.83	-	-	-	-	-	-
	03/24/15	0.36	-	-	-	-	-	-
	04/09/15	2.69	-	-	-	-	-	-
	06/18/15	2.33	-	-	-	-	-	-
	09/09/15	2.77	-	-	-	-	-	-
	12/18/15	2.16	-	-	-	-	-	-
	03/16/16	1.66	-	-	-	-	-	-
	06/30/16	2.85	-	-	-	-	-	-
	09/09/16	2.17	-	-	-	-	-	-
	12/07/16	2.19	-	-	-	-	-	-
	03/01/17	2.33	-	-	-	-	-	-
	08/29/17	3.03	-	-	-	-	-	-
	02/20/18	1.82	-	-	-	-	-	-
	08/23/18	1.84	-	-	-	-	-	-
	02/07/19	2.18	-	-	-	-	-	-
	08/08/19	1.45	-	-	-	-	-	-
MW-4	09/22/06	-	<0.001	<0.001	<0.001	<0.001	<0.001	**606**
	03/16/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**462**
	06/06/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**480**
	09/28/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**638**
	12/18/07	-	<0.001	<0.001	<0.001	<0.001	<0.001	**238**
	03/28/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**510**
	06/26/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**1,080**

Table 2
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Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-4 Cont.	09/22/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**932**
	12/04/08	-	**0.00068**	<0.0005	<0.0005	<0.001	<0.001	**761**
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**383**
	06/22/09	-	**0.00051**	<0.001	<0.001	<0.003	<0.003	**717**
	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**773**
	12/09/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**711**
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**749**
	06/08/10	-	**0.00069**	<0.001	<0.001	<0.003	<0.003	**616**
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**450**
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**355**
	03/10/11	-	**0.00078**	<0.001	<0.001	<0.003	**0.00078**	**256**
	06/13/11	-	**0.00038**	<0.00020	<0.00030	<0.00023	**0.00038**	**520**
	09/19/11	-	**0.00051 J**	<0.00030	<0.00020	<0.00023	**0.00051 J**	**630**
	12/12/11	-	**0.00091 J**	<0.00030	<0.00020	<0.00023	**0.00091 J**	**660**
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**161**
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**668**
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**708**
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**349**
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**565**
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**388**
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**378**
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**499**
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**537**
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**545**
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**223**
	12/16/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**465**
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**477**

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-4 Cont.	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**750**
	09/09/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**683**
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**526**
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**525**
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**471**
	09/09/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**568**
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	**666**
Dup	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	**678**
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**487**
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**517**
	02/21/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**501**
Dup	02/21/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**482**
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**386**
	02/07/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**602**
	08/08/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**555**
MW-5	09/22/06	-	<0.001	<0.001	<0.001	<0.001	<0.001	**95.7**
	03/16/07	-	**0.00375**	<0.001	<0.001	<0.001	**0.00375**	**102**
	06/06/07	-	**0.00277**	<0.001	<0.001	<0.001	**0.00277**	**126**
	09/28/07	-	**0.0132**	<0.001	<0.001	<0.001	**0.0132**	**31.7**
	12/18/07	-	**0.0290**	<0.001	<0.001	**0.0024**	**0.0314**	<200
	03/28/08	-	**0.0018**	<0.001	<0.001	<0.001	**0.0018**	**85.4**
	06/26/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**132**
	09/22/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	**90.9**
	12/04/08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.001	**124**
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**90.5**
Dup	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**82.7**
	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**82.6**

Table 2
OXY USA, Inc.
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Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
Dup	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**92.2**
MW-5 Cont.	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**77.1**
Dup	09/16/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**104**
	12/09/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	**78.5**
	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**79.2**
Dup	03/10/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**77.4**
	06/08/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**80.3**
	09/13/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**81.8**
	12/14/10	-	<0.001	<0.001	<0.001	<0.003	<0.003	**73.3**
	03/10/11	-	<0.001	<0.001	<0.001	<0.003	<0.003	**72.6**
	06/13/11	-	<0.00014	<0.00020	<0.00030	<0.00023	<0.00030	**80**
	09/19/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	**76**
	12/12/11	-	<0.00014	<0.00030	<0.00020	<0.00023	<0.00030	**81**
	04/06/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**116**
	06/20/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**103**
	09/24/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**139**
	12/14/12	-	<0.005	<0.005	<0.005	<0.015	<0.015	**108**
	03/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**151**
	06/07/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**153**
	09/19/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**150**
	12/27/13	-	<0.005	<0.005	<0.005	<0.015	<0.015	**159**
	03/27/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**112**
	06/19/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**110**
	09/30/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**102**
	12/16/14	-	<0.005	<0.005	<0.005	<0.015	<0.015	**109**
	03/24/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**92.3**
	06/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**108**

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-5 Cont.	09/09/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**116**
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**125**
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**99.6**
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**77.2**
	09/09/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**74.7**
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	**89.1**
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**75.0**
Dup	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**41.5**
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**75.9**
	02/21/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**117**
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**103**
	02/07/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**157**
	08/08/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**85**
MW-6	10/29/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**617**
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**581**
	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**639**
Dup	03/16/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**646**
	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**429**
Dup	06/30/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**446**
	09/09/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**724**
Dup	09/09/16	-	<0.005	<0.005	<0.005	<0.015	<0.015	**732**
	12/07/16	-	<0.005	<0.005	<0.005	<0.005	<0.005	**758**
	03/03/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**485**
	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**914**
Dup	08/31/17	-	<0.005	<0.005	<0.005	<0.005	<0.005	**953**
	02/21/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**1,030**
	08/23/18	-	<0.005	<0.005	<0.005	<0.005	<0.005	**1,110**

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
MW-6 Cont.	02/07/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**1,000**
	08/08/19	-	<0.006	<0.005	<0.005	<0.005	<0.006	**887**
TMW-7	10/29/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**102**
	12/18/15	-	<0.005	<0.005	<0.005	<0.015	<0.015	**102**
RW-1	06/13/11	-	-	-	-	-	-	-
	09/19/11	1.29	-	-	-	-	-	-
	12/12/11	3.13	-	-	-	-	-	-
	04/06/12	3.16	-	-	-	-	-	-
	06/20/12	3.20	-	-	-	-	-	-
	09/24/12	3.22	-	-	-	-	-	-
	12/14/12	2.09	-	-	-	-	-	-
	03/27/13	0.05	-	-	-	-	-	-
	06/07/13	2.91	-	-	-	-	-	-
	09/19/13	NG	-	-	-	-	-	-
	12/27/13	3.03	-	-	-	-	-	-
	03/27/14	3.07	-	-	-	-	-	-
	06/19/14	3.03	-	-	-	-	-	-
	09/26/14	2.99	-	-	-	-	-	-
	12/16/14	2.97	-	-	-	-	-	-
	03/24/15	2.76	-	-	-	-	-	-
	04/09/15	2.80	-	-	-	-	-	-
	06/18/15	2.79	-	-	-	-	-	-
	09/09/15	3.13	-	-	-	-	-	-
	12/18/15	2.20	-	-	-	-	-	-
	03/16/16	2.36	-	-	-	-	-	-
	06/30/16	2.38	-	-	-	-	-	-
	09/09/16	2.42	-	-	-	-	-	-

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
RW-1 Cont.	12/07/16	2.47	-	-	-	-	-	-
	03/01/17	2.35	-	-	-	-	-	-
	08/29/17	2.46	-	-	-	-	-	-
	02/20/18	2.29	-	-	-	-	-	-
	08/23/18	2.49	-	-	-	-	-	-
	02/07/19	2.47	-	-	-	-	-	-
	08/08/19	2.52	-	-	-	-	-	-
RW-2	06/13/11	-	-	-	-	-	-	-
	09/19/11	-	-	-	-	-	-	-
	12/12/11	-	-	-	-	-	-	-
	04/06/12	0.05	-	-	-	-	-	-
	06/20/12	0.12	-	-	-	-	-	-
	09/24/12	0.24	-	-	-	-	-	-
	12/14/12	0.12	-	-	-	-	-	-
	03/27/13	0.28	-	-	-	-	-	-
	06/07/13	0.41	-	-	-	-	-	-
	09/19/13	NG	-	-	-	-	-	-
	12/27/13	0.30	-	-	-	-	-	-
	03/27/14	0.33	-	-	-	-	-	-
	06/19/14	0.43	-	-	-	-	-	-
	09/26/14	0.52	-	-	-	-	-	-
	12/16/14	0.48	-	-	-	-	-	-
	03/24/15	0.61	-	-	-	-	-	-
	06/18/15	0.80	-	-	-	-	-	-
	09/09/15	0.01	-	-	-	-	-	-
	12/18/15	0.75	-	-	-	-	-	-
	03/16/16	0.89	-	-	-	-	-	-

Table 2
OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Summary of Analysis of Groundwater Samples
Lea County, New Mexico

Sample ID	Sample Date	PSH Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Xylene (mg/l)	Total BTEX (mg/l)	Chloride (mg/l)
New Mexico Water Quality Control Commission Human Health Standard Maximum Allowable Concentration			**0.005 mg/L**	**1.0 mg/L**	**0.7 mg/L**	**0.62 mg/L**		**250.0 mg/L***
RW-2 Cont.	06/30/16	0.77	-	-	-	-	-	-
	09/09/16	0.78	-	-	-	-	-	-
	12/07/16	0.83	-	-	-	-	-	-
	03/01/17	2.24	-	-	-	-	-	-
	08/29/17	2.94	-	-	-	-	-	-
	02/20/18	2.72	-	-	-	-	-	-
	08/23/18	2.56	-	-	-	-	-	-
	02/07/19	6.04	-	-	-	-	-	-
	08/08/19	2.52	-	-	-	-	-	-

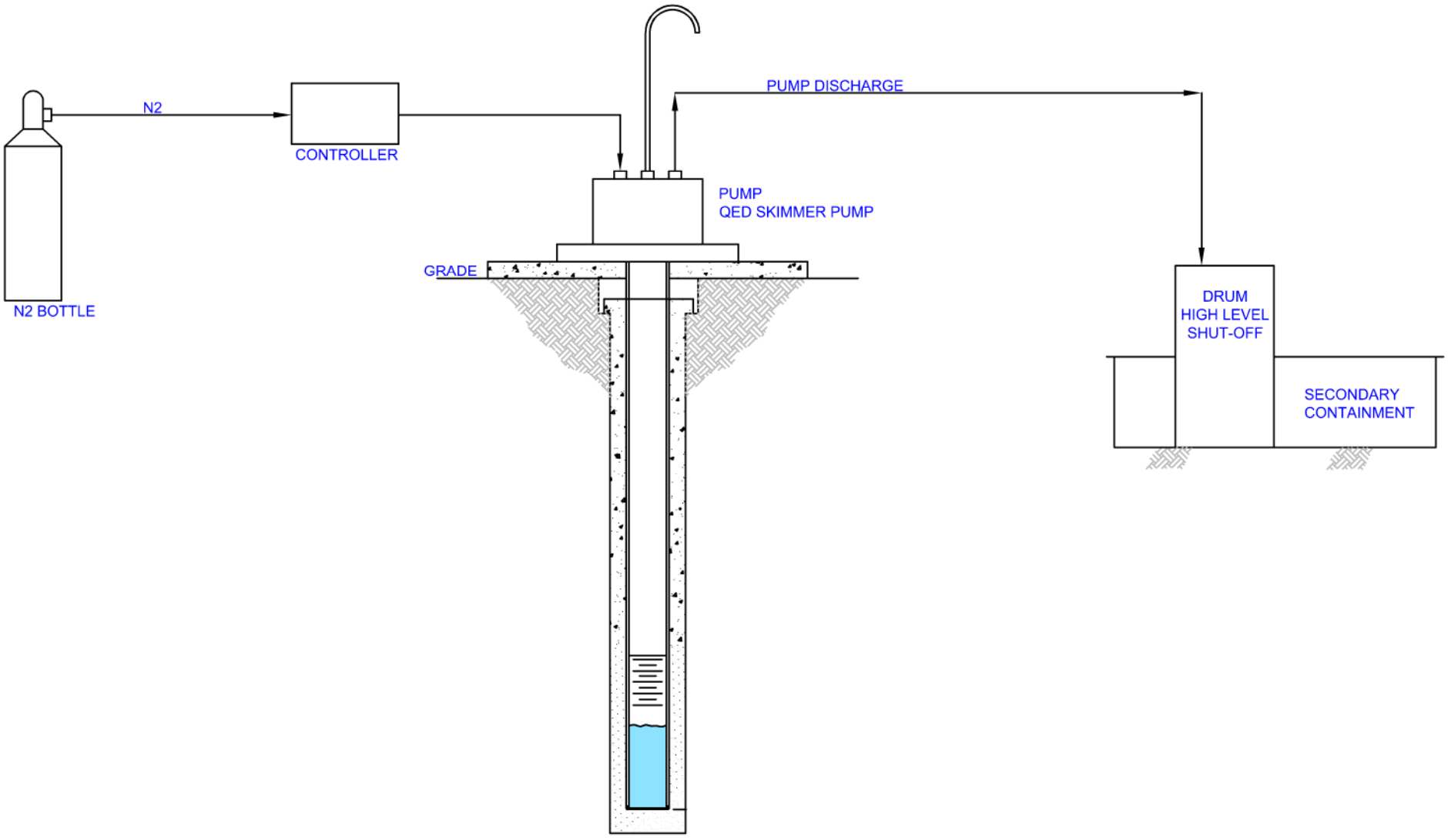
(-) Not Analyzed
NM - Not Measured
NG - Not Gauged, Instrument Malfunction

212C-MD-02090

Appendix A

Recovery System Schematics

MW-1



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

GLENN SPRINGS HOLDINGS

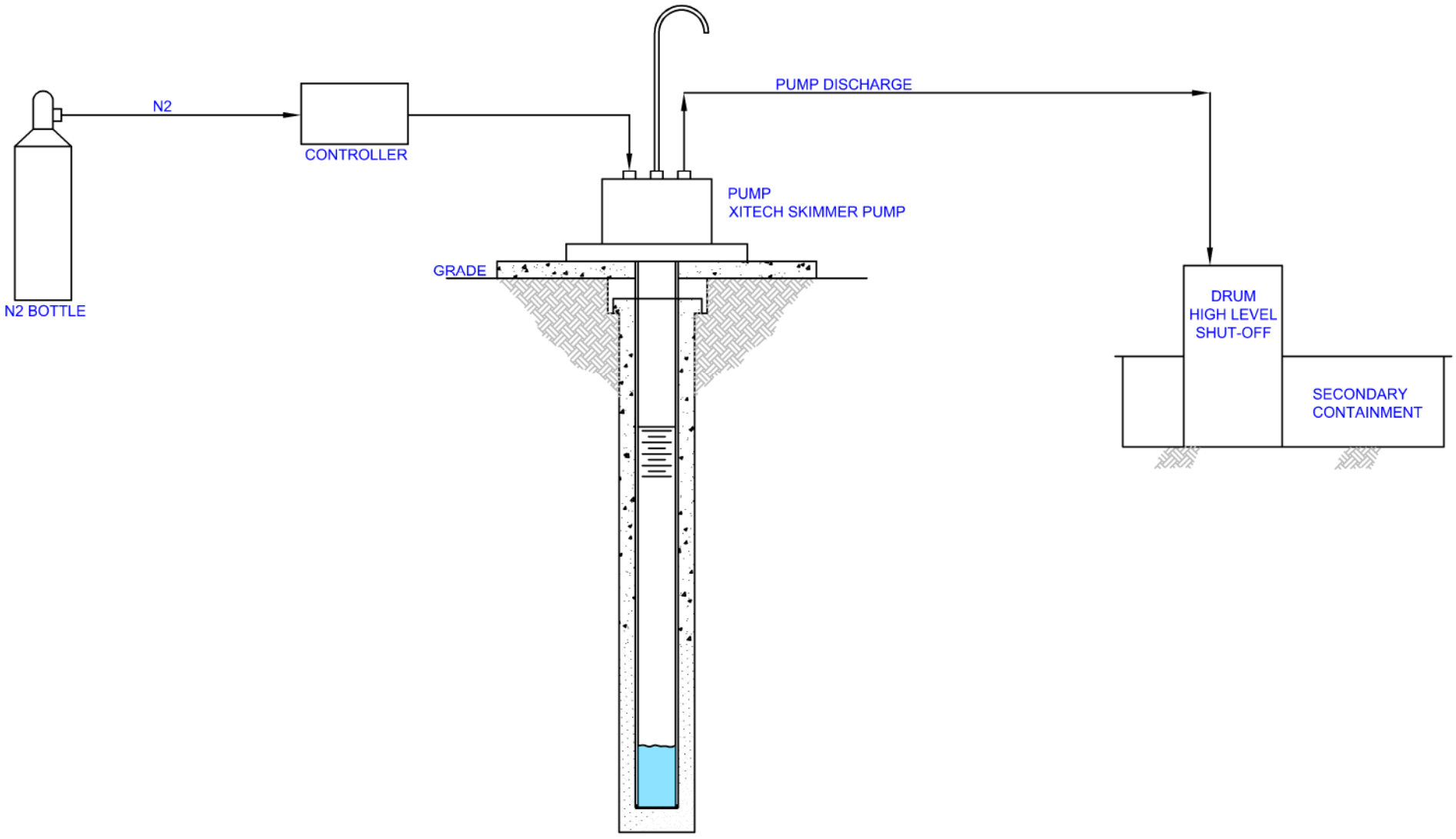
PFD SCHEMATIC/PRODUCT WELLS

E.C. HILL A, B, C, TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090	REV.
Date: 4/24/20	
File: GLENN SPRINGS HOLDINGS A,B,C TB_DETAL_MW1	

Drawn By: MORGAN, MISTI Date: 5/27/2019

MW-2



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

GLENN SPRINGS HOLDINGS

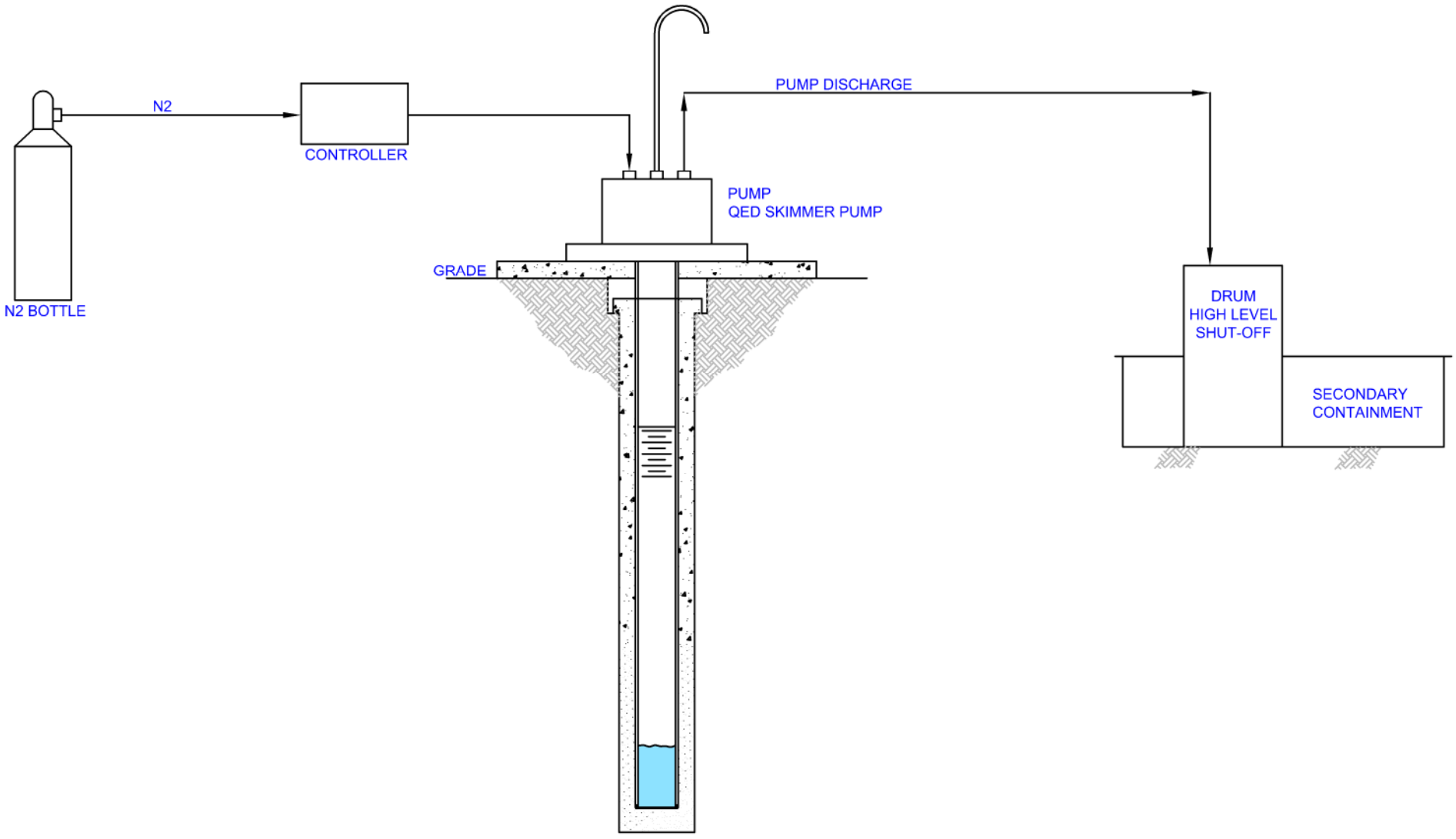
PFD SCHEMATIC/PRODUCT WELLS

E.C. HILL A, B, C, TANK BATTERY
LEA COUNTY, NEW MEXICO

Project: 212C-MD-02090
Date: 4/24/20
File: GLENN SPRINGS HOLDINGS A,B,C TB_DETAL_RW1
REV.

Drawn By: MORGAN, MISTI

RW-1



TETRA TECH
901 W. WALL STREET STE. 100
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GLENN SPRINGS HOLDINGS

PFD SCHEMATIC/PRODUCT WELLS

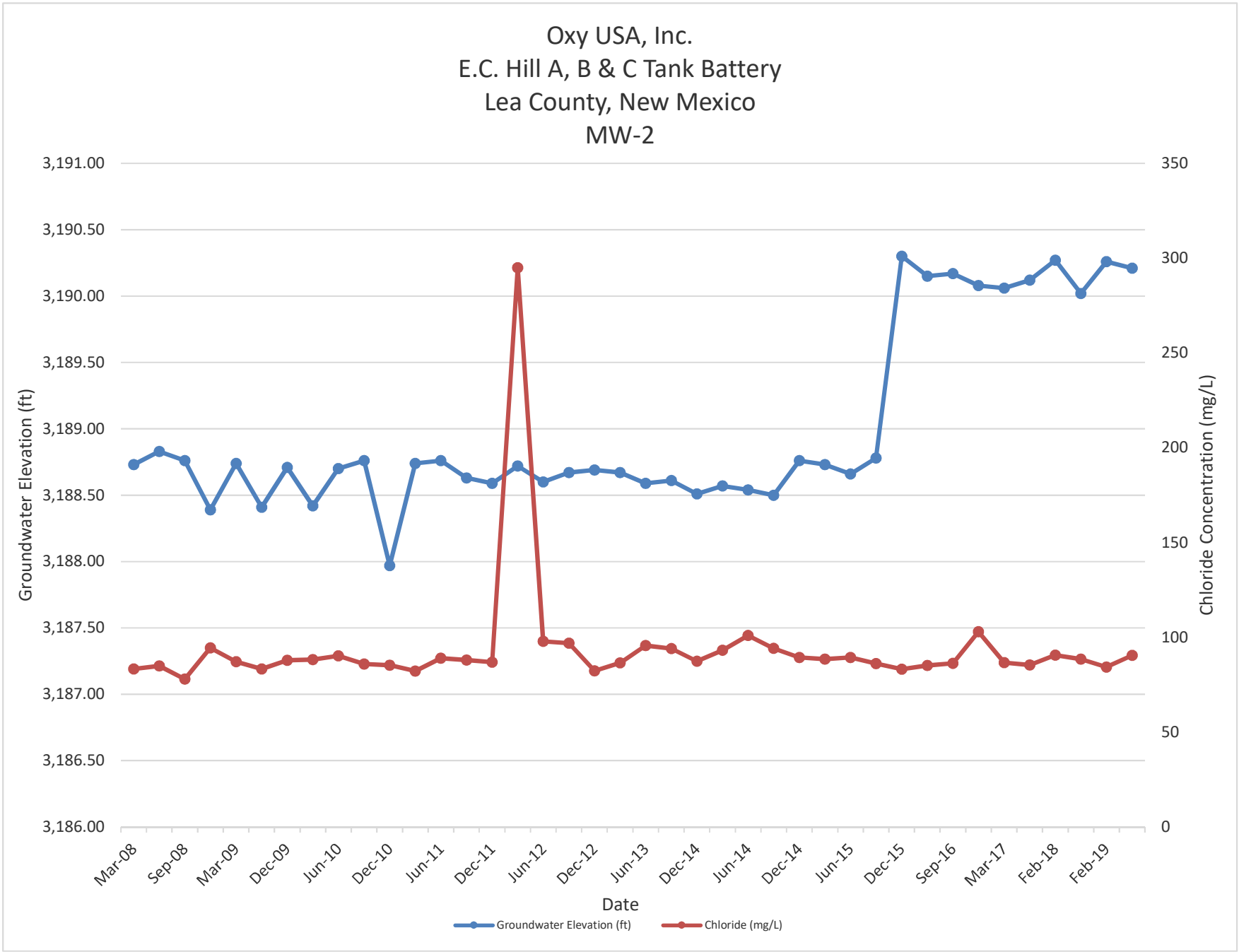
E.C. HILL A, B, C, TANK BATTERY
LEA COUNTY, NEW MEXICO

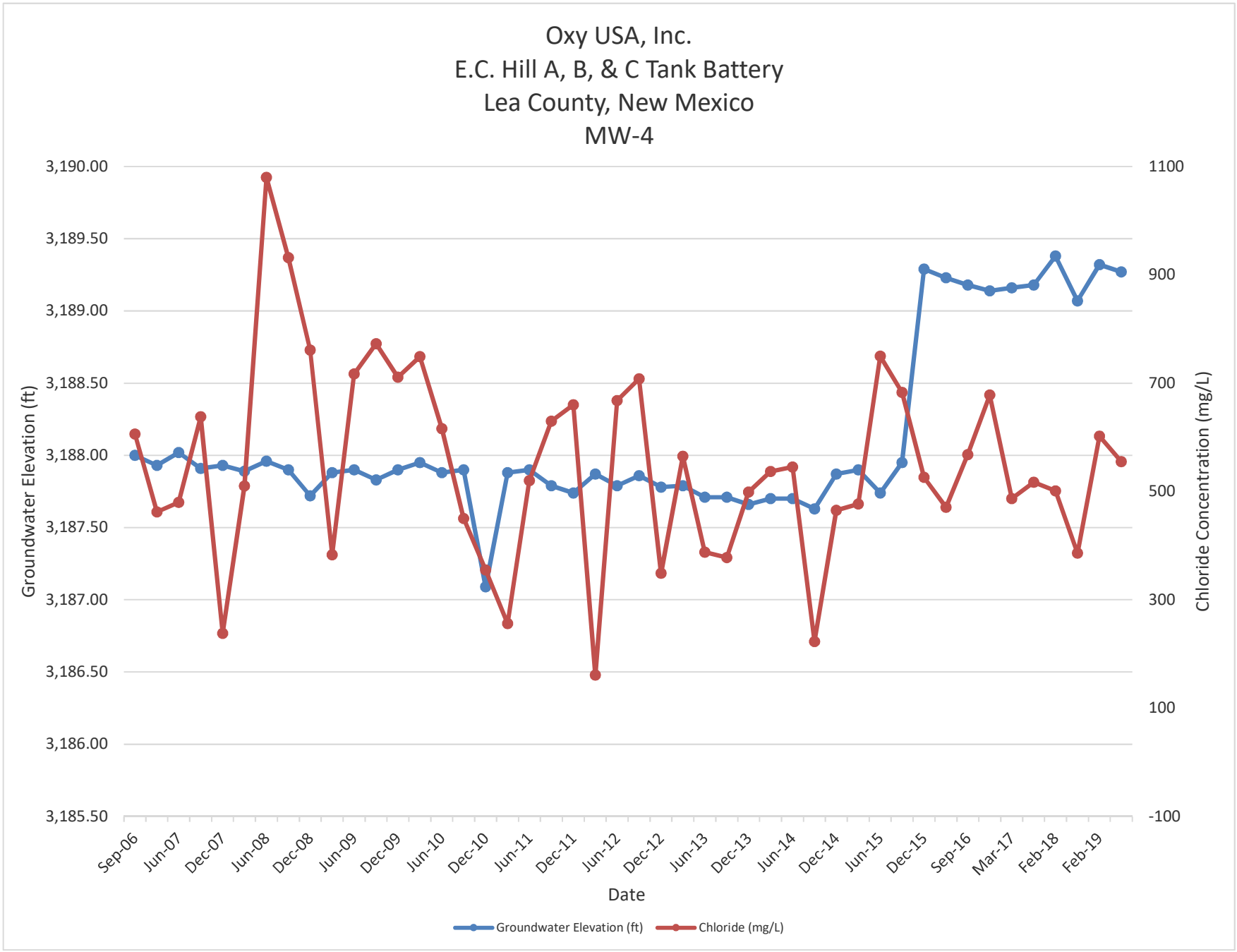
Project: 212C-MD-02090	REV.
Date: 4/24/20	
File: GLENN SPRINGS HOLDINGS A,B,C TB_DETAL_RW2	

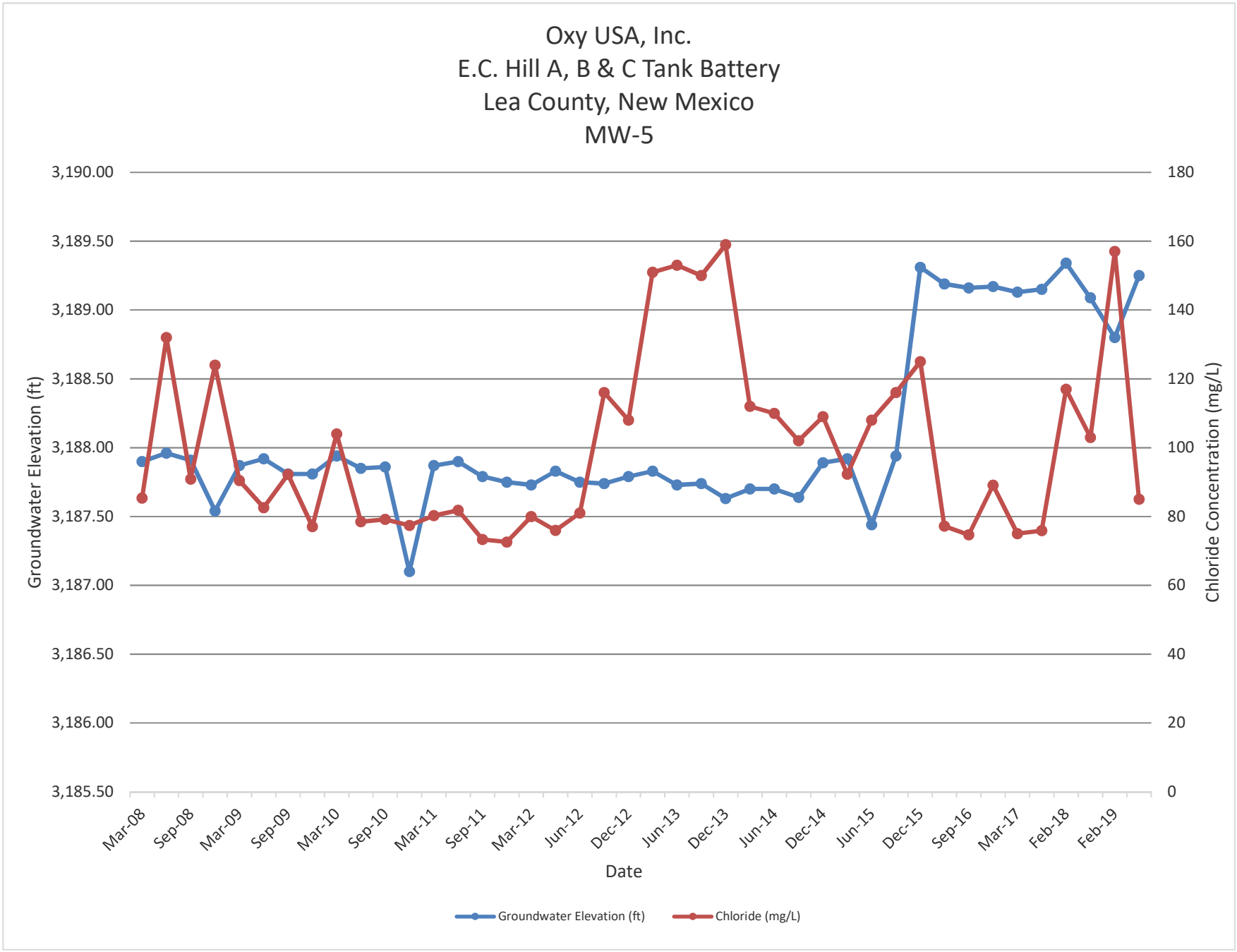
Drawn By: MORGAN, MISTI

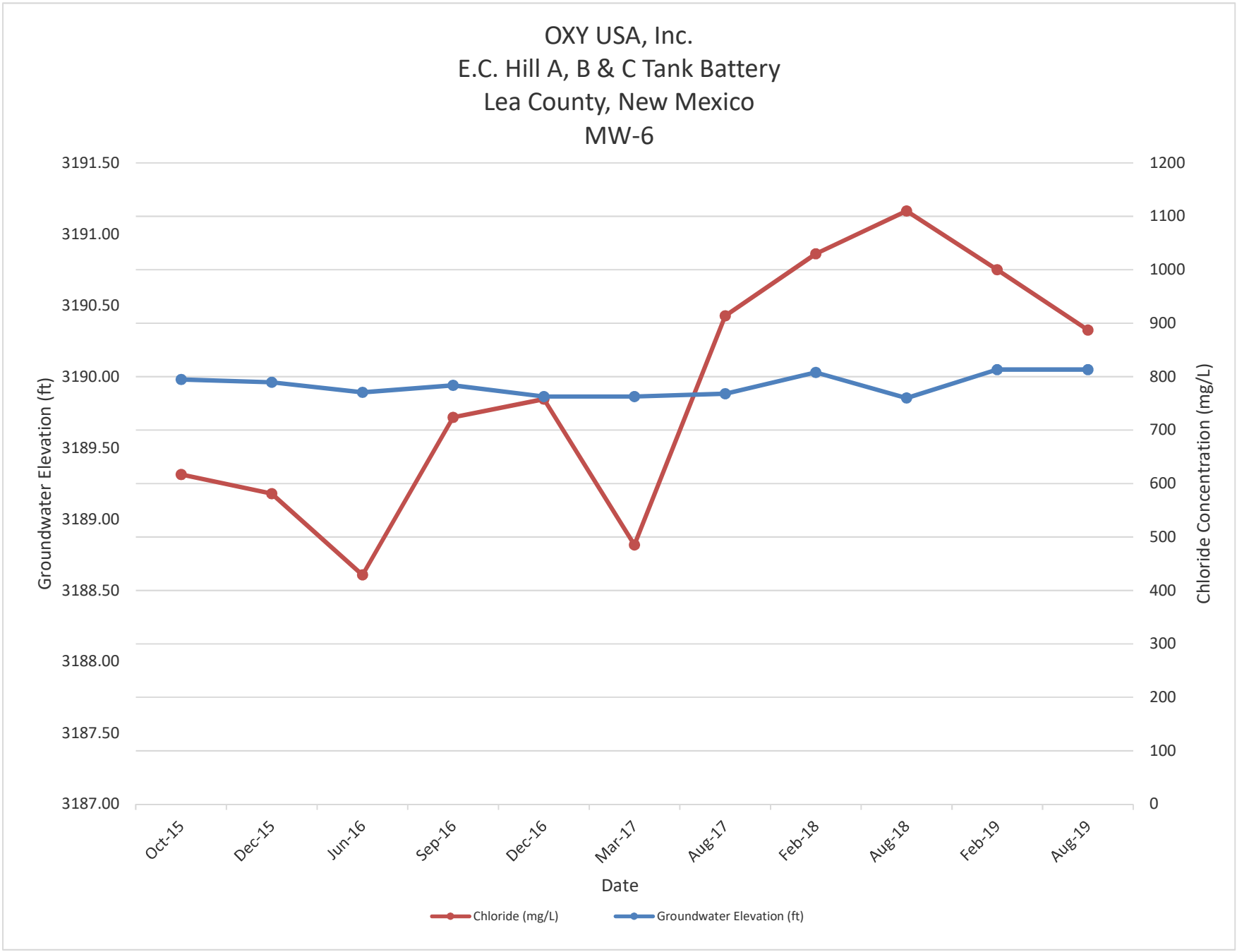
Appendix B

Groundwater Elevation and Chloride Concentration Graphs


Oxy USA, Inc.
E.C. Hill A, B & C Tank Battery
Lea County, New Mexico
MW-2
Groundwater Elevation (ft)
3,191.00
3,190.50
3,190.00
3,189.50
3,189.00
3,188.50
3,188.00
3,187.50
3,187.00
3,186.50
3,186.00
Chloride Concentration (mg/L)
350
300
250
200
150
100
50
0
Mar-08
Sep-08
Mar-09
Dec-09
Jun-10
Dec-10
Jun-11
Dec-11
Jun-12
Dec-12
Jun-13
Dec-14
Jun-14
Dec-14
Jun-15
Dec-15
Sep-16
Mar-17
Feb-18
Feb-19
Date
Groundwater Elevation (ft)
Chloride (mg/L)


Oxy USA, Inc.
E.C. Hill A, B, & C Tank Battery
Lea County, New Mexico
MW-4
Groundwater Elevation (ft)
3,190.00
3,189.50
3,189.00
3,188.50
3,188.00
3,187.50
3,187.00
3,186.50
3,186.00
3,185.50
Chloride Concentration (mg/L)
1100
900
700
500
300
100
-100
Sep-06
Jun-07
Dec-07
Jun-08
Dec-08
Jun-09
Dec-09
Jun-10
Dec-10
Jun-11
Dec-11
Jun-12
Dec-12
Jun-13
Dec-13
Jun-14
Dec-14
Jun-15
Dec-15
Sep-16
Mar-17
Feb-18
Feb-19
Date
Groundwater Elevation (ft)
Chloride (mg/L)


Oxy USA, Inc.
E.C. Hill A, B & C Tank Battery
Lea County, New Mexico
MW-5
Groundwater Elevation (ft)
Chloride Concentration (mg/L)
3,190.00
3,189.50
3,189.00
3,188.50
3,188.00
3,187.50
3,187.00
3,186.50
3,186.00
3,185.50
180
160
140
120
100
80
60
40
20
0
Mar-08
Sep-08
Mar-09
Sep-09
Mar-10
Sep-10
Mar-11
Sep-11
Mar-12
Jun-12
Dec-12
Jun-13
Dec-13
Jun-14
Dec-14
Jun-15
Dec-15
Sep-16
Mar-17
Feb-18
Feb-19
Date
Groundwater Elevation (ft)
Chloride (mg/L)


OXY USA, Inc.
E.C. Hill A, B & C Tank Battery
Lea County, New Mexico
MW-6
Groundwater Elevation (ft)
3191.50
3191.00
3190.50
3190.00
3189.50
3189.00
3188.50
3188.00
3187.50
3187.00
Chloride Concentration (mg/L)
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
Oct-15
Dec-15
Jun-16
Sep-16
Dec-16
Mar-17
Aug-17
Feb-18
Aug-18
Feb-19
Aug-19
Date
Chloride (mg/L)
Groundwater Elevation (ft)

Appendix C

Groundwater Laboratory Reports

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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February 26, 2019

James Abston
Glenn Springs Holdings, Inc.
PO Box 2148

Houston, TX 77252-2148

Work Order: **HS19020503**

Laboratory Results for: **55628DM GSHI PXP Hill E.C. ABC TB**

Dear James,

ALS Environmental received 6 sample(s) on Feb 08, 2019 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: DANE.WACASEY
Dane J. Wacasey

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Work Order: HS19020503

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19020503-01	MW-2	Groundwater		07-Feb-2019 14:20	08-Feb-2019 09:00	☐
HS19020503-02	MW-4	Groundwater		07-Feb-2019 14:00	08-Feb-2019 09:00	☐
HS19020503-03	MW-5	Groundwater		07-Feb-2019 13:50	08-Feb-2019 09:00	☐
HS19020503-04	MW-6	Groundwater		07-Feb-2019 14:20	08-Feb-2019 09:00	☐
HS19020503-05	DUP	Groundwater		07-Feb-2019 00:00	08-Feb-2019 09:00	☐
HS19020503-06	Trip Blank	Water	ALS-011119-100	07-Feb-2019 00:00	08-Feb-2019 09:00	☐

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Work Order: HS19020503

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R332802,R332988

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

WetChemistry by Method E300

Batch ID: R333413

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-2
Collection Date: 07-Feb-2019 14:20

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-01
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	16-Feb-2019 01:44
Ethylbenzene		U	0.50	5.0	ug/L	1	16-Feb-2019 01:44
Toluene		U	0.50	5.0	ug/L	1	16-Feb-2019 01:44
Xylenes, Total		U	0.50	5.0	ug/L	1	16-Feb-2019 01:44
Surr: 1,2-Dichloroethane-d4	*86.9*			*70-126*	*%REC*	*1*	*16-Feb-2019 01:44*
Surr: 4-Bromofluorobenzene	*98.5*			*82-124*	*%REC*	*1*	*16-Feb-2019 01:44*
Surr: Dibromofluoromethane	*93.3*			*77-123*	*%REC*	*1*	*16-Feb-2019 01:44*
Surr: Toluene-d8	*97.2*			*82-127*	*%REC*	*1*	*16-Feb-2019 01:44*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**84.4**		**2.00**	**5.00**	**mg/L**	10	23-Feb-2019 18:06

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-4
Collection Date: 07-Feb-2019 14:00

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-02
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	16-Feb-2019 02:56
Ethylbenzene		U	0.50	5.0	ug/L	1	16-Feb-2019 02:56
Toluene		U	0.50	5.0	ug/L	1	16-Feb-2019 02:56
Xylenes, Total		U	0.50	5.0	ug/L	1	16-Feb-2019 02:56
Surr: 1,2-Dichloroethane-d4	*87.9*			*70-126*	*%REC*	*1*	*16-Feb-2019 02:56*
Surr: 4-Bromofluorobenzene	*96.4*			*82-124*	*%REC*	*1*	*16-Feb-2019 02:56*
Surr: Dibromofluoromethane	*94.4*			*77-123*	*%REC*	*1*	*16-Feb-2019 02:56*
Surr: Toluene-d8	*98.9*			*82-127*	*%REC*	*1*	*16-Feb-2019 02:56*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**602**		**10.0**	**25.0**	**mg/L**	50	23-Feb-2019 17:08

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-5
Collection Date: 07-Feb-2019 13:50

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-03
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	16-Feb-2019 03:20
Ethylbenzene		U	0.50	5.0	ug/L	1	16-Feb-2019 03:20
Toluene		U	0.50	5.0	ug/L	1	16-Feb-2019 03:20
Xylenes, Total		U	0.50	5.0	ug/L	1	16-Feb-2019 03:20
Surr: 1,2-Dichloroethane-d4	*87.2*			*70-126*	*%REC*	*1*	*16-Feb-2019 03:20*
Surr: 4-Bromofluorobenzene	*99.0*			*82-124*	*%REC*	*1*	*16-Feb-2019 03:20*
Surr: Dibromofluoromethane	*93.3*			*77-123*	*%REC*	*1*	*16-Feb-2019 03:20*
Surr: Toluene-d8	*96.7*			*82-127*	*%REC*	*1*	*16-Feb-2019 03:20*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**157**		**2.00**	**5.00**	**mg/L**	10	23-Feb-2019 17:52

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-6
Collection Date: 07-Feb-2019 14:20

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-04
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	16-Feb-2019 03:44
Ethylbenzene		U	0.50	5.0	ug/L	1	16-Feb-2019 03:44
Toluene		U	0.50	5.0	ug/L	1	16-Feb-2019 03:44
Xylenes, Total		U	0.50	5.0	ug/L	1	16-Feb-2019 03:44
Surr: 1,2-Dichloroethane-d4	*86.9*			*70-126*	*%REC*	*1*	*16-Feb-2019 03:44*
Surr: 4-Bromofluorobenzene	*97.6*			*82-124*	*%REC*	*1*	*16-Feb-2019 03:44*
Surr: Dibromofluoromethane	*93.7*			*77-123*	*%REC*	*1*	*16-Feb-2019 03:44*
Surr: Toluene-d8	*96.1*			*82-127*	*%REC*	*1*	*16-Feb-2019 03:44*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**1,000**		**10.0**	**25.0**	**mg/L**	50	23-Feb-2019 18:50

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: DUP
Collection Date: 07-Feb-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		**Method:SW8260**					Analyst: PC
Benzene		U	0.60	5.0	ug/L	1	16-Feb-2019 04:08
Ethylbenzene		U	0.50	5.0	ug/L	1	16-Feb-2019 04:08
Toluene		U	0.50	5.0	ug/L	1	16-Feb-2019 04:08
Xylenes, Total		U	0.50	5.0	ug/L	1	16-Feb-2019 04:08
Surr: 1,2-Dichloroethane-d4	*88.7*			*70-126*	*%REC*	*1*	*16-Feb-2019 04:08*
Surr: 4-Bromofluorobenzene	*98.3*			*82-124*	*%REC*	*1*	*16-Feb-2019 04:08*
Surr: Dibromofluoromethane	*94.0*			*77-123*	*%REC*	*1*	*16-Feb-2019 04:08*
Surr: Toluene-d8	*95.9*			*82-127*	*%REC*	*1*	*16-Feb-2019 04:08*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**1,000**		**4.00**	**10.0**	**mg/L**	20	23-Feb-2019 19:05

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: Trip Blank
Collection Date: 07-Feb-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19020503
Lab ID:HS19020503-06
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C	**Method:SW8260**						Analyst: PC
Benzene	U		0.60	5.0	ug/L	1	13-Feb-2019 15:24
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Feb-2019 15:24
Toluene	U		0.50	5.0	ug/L	1	13-Feb-2019 15:24
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Feb-2019 15:24
Surr: 1,2-Dichloroethane-d4	*86.7*			*70-126*	*%REC*	*1*	*13-Feb-2019 15:24*
Surr: 4-Bromofluorobenzene	*98.0*			*82-124*	*%REC*	*1*	*13-Feb-2019 15:24*
Surr: Dibromofluoromethane	*94.0*			*77-123*	*%REC*	*1*	*13-Feb-2019 15:24*
Surr: Toluene-d8	*97.9*			*82-127*	*%REC*	*1*	*13-Feb-2019 15:24*

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

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID R332802	**Test Name :** VOLATILES - SW8260C			**Matrix:** Water		
HS19020503-06	Trip Blank	07 Feb 2019 00:00			13 Feb 2019 15:24	1
Batch ID R332988	**Test Name :** VOLATILES - SW8260C			**Matrix:** Groundwater		
HS19020503-01	MW-2	07 Feb 2019 14:20			16 Feb 2019 01:44	1
HS19020503-02	MW-4	07 Feb 2019 14:00			16 Feb 2019 02:56	1
HS19020503-03	MW-5	07 Feb 2019 13:50			16 Feb 2019 03:20	1
HS19020503-04	MW-6	07 Feb 2019 14:20			16 Feb 2019 03:44	1
HS19020503-05	DUP	07 Feb 2019 00:00			16 Feb 2019 04:08	1
Batch ID R333413	**Test Name :** ANIONS BY E300.0			**Matrix:** Groundwater		
HS19020503-01	MW-2	07 Feb 2019 14:20			23 Feb 2019 18:06	10
HS19020503-02	MW-4	07 Feb 2019 14:00			23 Feb 2019 17:08	50
HS19020503-03	MW-5	07 Feb 2019 13:50			23 Feb 2019 17:52	10
HS19020503-04	MW-6	07 Feb 2019 14:20			23 Feb 2019 18:50	50
HS19020503-05	DUP	07 Feb 2019 00:00			23 Feb 2019 19:05	20

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R332802 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-190213** Units: **ug/L** Analysis Date: **13-Feb-2019 10:51**
Client ID: Run ID: **VOA6_332802** SeqNo: **4948445** 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	*43.19*	*0*	*50*	*0*	*86.4*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*48.34*	*0*	*50*	*0*	*96.7*	*82 - 115*				
Surr: Dibromofluoromethane	*46.41*	*0*	*50*	*0*	*92.8*	*73 - 126*				
Surr: Toluene-d8	*48.69*	*0*	*50*	*0*	*97.4*	*81 - 120*				

LCS Sample ID: **VLCSW-190213** Units: **ug/L** Analysis Date: **13-Feb-2019 10:02**
Client ID: Run ID: **VOA6_332802** SeqNo: **4948444** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.15	5.0	20	0	95.7	74 - 120				
Ethylbenzene	19.3	5.0	20	0	96.5	77 - 117				
Toluene	18.8	5.0	20	0	94.0	77 - 118				
Xylenes, Total	56.32	5.0	60	0	93.9	75 - 122				
Surr: 1,2-Dichloroethane-d4	*43.42*	*0*	*50*	*0*	*86.8*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*49.03*	*0*	*50*	*0*	*98.1*	*82 - 115*				
Surr: Dibromofluoromethane	*47.13*	*0*	*50*	*0*	*94.3*	*73 - 126*				
Surr: Toluene-d8	*48.54*	*0*	*50*	*0*	*97.1*	*81 - 120*				

MS Sample ID: **HS19020361-12MS** Units: **ug/L** Analysis Date: **13-Feb-2019 13:24**
Client ID: Run ID: **VOA6_332802** SeqNo: **4948448** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.59	5.0	20	0	103	70 - 127				
Ethylbenzene	20.96	5.0	20	0	105	70 - 124				
Toluene	20.02	5.0	20	0	100	70 - 123				
Xylenes, Total	59.67	5.0	60	0	99.5	70 - 130				
Surr: 1,2-Dichloroethane-d4	*45.03*	*0*	*50*	*0*	*90.1*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.08*	*0*	*50*	*0*	*98.2*	*82 - 124*				
Surr: Dibromofluoromethane	*48.69*	*0*	*50*	*0*	*97.4*	*77 - 123*				
Surr: Toluene-d8	*48.83*	*0*	*50*	*0*	*97.7*	*82 - 127*				

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R332802 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS19020361-12MSD** Units: **ug/L** Analysis Date: **13-Feb-2019 13:48**
Client ID: Run ID: **VOA6_332802** SeqNo: **4948449** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.66	5.0	20	0	93.3	70 - 127	20.59	9.84	20	
Ethylbenzene	19.17	5.0	20	0	95.8	70 - 124	20.96	8.95	20	
Toluene	18.23	5.0	20	0	91.2	70 - 123	20.02	9.37	20	
Xylenes, Total	55.58	5.0	60	0	92.6	70 - 130	59.67	7.11	20	
Surr: 1,2-Dichloroethane-d4	*43.85*	*0*	*50*	*0*	*87.7*	*70 - 126*	*45.03*	*2.65*	*20*	
Surr: 4-Bromofluorobenzene	*48.83*	*0*	*50*	*0*	*97.7*	*82 - 124*	*49.08*	*0.506*	*20*	
Surr: Dibromofluoromethane	*47.5*	*0*	*50*	*0*	*95.0*	*77 - 123*	*48.69*	*2.47*	*20*	
Surr: Toluene-d8	*48.45*	*0*	*50*	*0*	*96.9*	*82 - 127*	*48.83*	*0.789*	*20*	

The following samples were analyzed in this batch: HS19020503-06

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R332988 **Instrument: VOA6** **Method: SW8260**

MBLK Sample ID: **VBLKW-190215** Units: **ug/L** Analysis Date: **16-Feb-2019 01:20**
Client ID: Run ID: **VOA6_332988** SeqNo: **4952730** 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	*43.01*	*0*	*50*	*0*	*86.0*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*49.08*	*0*	*50*	*0*	*98.2*	*82 - 115*				
Surr: Dibromofluoromethane	*47.31*	*0*	*50*	*0*	*94.6*	*73 - 126*				
Surr: Toluene-d8	*48.47*	*0*	*50*	*0*	*96.9*	*81 - 120*				

LCS Sample ID: **VLCSW-190215** Units: **ug/L** Analysis Date: **16-Feb-2019 00:32**
Client ID: Run ID: **VOA6_332988** SeqNo: **4952728** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.98	5.0	20	0	99.9	74 - 120				
Ethylbenzene	20.3	5.0	20	0	102	77 - 117				
Toluene	19.63	5.0	20	0	98.2	77 - 118				
Xylenes, Total	58.01	5.0	60	0	96.7	75 - 122				
Surr: 1,2-Dichloroethane-d4	*43.37*	*0*	*50*	*0*	*86.7*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*48.87*	*0*	*50*	*0*	*97.7*	*82 - 115*				
Surr: Dibromofluoromethane	*48.1*	*0*	*50*	*0*	*96.2*	*73 - 126*				
Surr: Toluene-d8	*48.1*	*0*	*50*	*0*	*96.2*	*81 - 120*				

MS Sample ID: **HS19020503-01MS** Units: **ug/L** Analysis Date: **16-Feb-2019 02:08**
Client ID: **MW-2** Run ID: **VOA6_332988** SeqNo: **4952732** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.7	5.0	20	0	104	70 - 127				
Ethylbenzene	20.85	5.0	20	0	104	70 - 124				
Toluene	20.12	5.0	20	0	101	70 - 123				
Xylenes, Total	60.04	5.0	60	0	100	70 - 130				
Surr: 1,2-Dichloroethane-d4	*43.14*	*0*	*50*	*0*	*86.3*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.69*	*0*	*50*	*0*	*99.4*	*82 - 124*				
Surr: Dibromofluoromethane	*47.43*	*0*	*50*	*0*	*94.9*	*77 - 123*				
Surr: Toluene-d8	*47.65*	*0*	*50*	*0*	*95.3*	*82 - 127*				

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R332988 **Instrument: VOA6** **Method: SW8260**

MSD Sample ID: **HS19020503-01MSD** Units: **ug/L** Analysis Date: **16-Feb-2019 02:32**
Client ID: **MW-2** Run ID: **VOA6_332988** SeqNo: **4952733** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.59	5.0	20	0	103	70 - 127	20.7	0.535	20	
Ethylbenzene	21.11	5.0	20	0	106	70 - 124	20.85	1.24	20	
Toluene	20.36	5.0	20	0	102	70 - 123	20.12	1.21	20	
Xylenes, Total	60.62	5.0	60	0	101	70 - 130	60.04	0.965	20	
Surr: 1,2-Dichloroethane-d4	*43.71*	*0*	*50*	*0*	*87.4*	*70 - 126*	*43.14*	*1.32*	*20*	
Surr: 4-Bromofluorobenzene	*48.44*	*0*	*50*	*0*	*96.9*	*82 - 124*	*49.69*	*2.54*	*20*	
Surr: Dibromofluoromethane	*47.87*	*0*	*50*	*0*	*95.7*	*77 - 123*	*47.43*	*0.915*	*20*	
Surr: Toluene-d8	*47.92*	*0*	*50*	*0*	*95.8*	*82 - 127*	*47.65*	*0.566*	*20*	

The following samples were analyzed in this batch: HS19020503-01 HS19020503-02 HS19020503-03 HS19020503-04 HS19020503-05

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R333413 **Instrument: ICS2100** **Method: E300**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
MBLK Sample ID: **WBLKW1-022319** Units: **mg/L** Analysis Date: **23-Feb-2019 11:46**										
Client ID: Run ID: **ICS2100_333413** SeqNo: **4962123** PrepDate: DF: **1**										
Chloride	U	0.500								
LCS Sample ID: **WLCSW1-022319** Units: **mg/L** Analysis Date: **23-Feb-2019 12:01**										
Client ID: Run ID: **ICS2100_333413** SeqNo: **4962124** PrepDate: DF: **1**										
Chloride	19.35	0.500	20	0	96.8	90 - 110				
LCSD Sample ID: **WLCSDW1-022319** Units: **mg/L** Analysis Date: **23-Feb-2019 12:16**										
Client ID: Run ID: **ICS2100_333413** SeqNo: **4962125** PrepDate: DF: **1**										
Chloride	19.66	0.500	20	0	98.3	90 - 110	19.35	1.58	20	
MS Sample ID: **HS19020503-01MS** Units: **mg/L** Analysis Date: **23-Feb-2019 18:21**										
Client ID: **MW-2** Run ID: **ICS2100_333413** SeqNo: **4962145** PrepDate: DF: **10**										
Chloride	181.3	5.00	100	84.43	96.9	80 - 120				
MS Sample ID: **HS19020495-02MS** Units: **mg/L** Analysis Date: **23-Feb-2019 13:21**										
Client ID: Run ID: **ICS2100_333413** SeqNo: **4962128** PrepDate: DF: **10**										
Chloride	277	5.00	100	174.5	103	80 - 120				
MSD Sample ID: **HS19020503-01MSD** Units: **mg/L** Analysis Date: **23-Feb-2019 18:36**										
Client ID: **MW-2** Run ID: **ICS2100_333413** SeqNo: **4962147** PrepDate: DF: **10**										
Chloride	183.9	5.00	100	84.43	99.5	80 - 120	181.3	1.4	20	

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19020503

QC BATCH REPORT

Batch ID: R333413 **Instrument: ICS2100** **Method: E300**

MSD Sample ID: **HS19020495-02MSD** Units: **mg/L** Analysis Date: **23-Feb-2019 13:35**
Client ID: Run ID: **ICS2100_333413** SeqNo: **4962129** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	274.6	5.00	100	174.5	100	80 - 120	277	0.871	20	

The following samples were analyzed in this batch: HS19020503-01 HS19020503-02 HS19020503-03 HS19020503-04 HS19020503-05

ALS Houston, US Date: 26-Feb-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: **HS19020503**

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 Quantitaion 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 Houston, US Date: 26-Feb-19

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-0356	27-Mar-2019
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	ANAB L2231	20-Dec-2021
Kentucky	123043 - 2018	30-Apr-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Oklahoma	2018-156	31-Aug-2019
North Carolina	624-2019	31-Dec-2019
California	2919, 2018-2019	30-Apr-2019
Maryland	343, 2018-2019	30-Jun-2019

ALS Houston, US Date: 26-Feb-19

Sample Receipt Checklist

Client Name: Glen Springs/CRA Date/Time Received: **08-Feb-2019 09:00**

Work Order: HS19020503 Received by: **NDR**

Checklist completed by: *Paresh M. Giga* eSignature 11-Feb-2019 Date

Reviewed by: *Dane J. Wacasey* eSignature 17-Feb-2019 Date

Matrices: **Groundwater/Water** Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:198566
Samplers name present on COC?	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):	0.6c/0.9c U/c	IR25	
Cooler(s)/Kit(s):	44665		
Date/Time sample(s) sent to storage:	2/8/19 12:15		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
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 Charles +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 198566

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Hill E.C. ABC TB	A	8260_W (BTEX)
Work Order		Project Number	55628DM (ENV749A10)	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	

HS19020503
Glenn Springs Holdings, Inc.
55628DM GSHI PXP Hill E.C. ABC TB

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	2-7-19	1420	Groundwa	1,8	4	X	X									
3	~~MW-3~~			Groundwa	1,8	4	X	X									
4	MW-4	2-7-19	1400	Groundwa	1,8	4	X	X									
5	MW-5	2-7-19	1350	Groundwa	1,8	4	X	X									
6	MW-6	2-7-19	1420	Groundwa	1,8	4	X	X									
7	~~TMW-7~~			Groundwa	1,8	4	X	X									
8	~~RW-1~~			Groundwa	1,8	4	X	X									
9	~~RW-2~~			Groundwa	1,8	4	X	X									
10	DUP	2-7-19	—	Groundwa	1,8	4	X	X									

Sampler(s) Please Print & Sign: Preston Boteright

Shipment Method: FedEx

Required Turnaround Time: (Check Box) [ ] Other ____ [X] STD 10 Wk Days [ ] 5 Wk Days [ ] 2 Wk Days [ ] 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	2-7-19	1200	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			NTR 2/8/19 09:00
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: [GSHI PXP Hill EC ABC TB]

Cooler ID	Cooler Temp.
44665	0.6°
	4.2°
	0.3°

QC Package: (Check One Box Below)
[X] Level II Std QC
[ ] Level III Std QC/Raw Data
[ ] Level IV SW846/CLP
[ ] Other
[ ] TRRP Checklist
[ ] TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 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.

Cincinnati, OH +1 513 733 5336
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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
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

Chain of Custody Form

Page _____ of _____

COC ID: 198565

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	4502201559 ENV 749-4	Project Name	GSHI PXP Hill E.C. ABC TB	A	8260_W (BTEX)
Work Order		Project Number	55628DM (ENV749A10)	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	

HS19020503
Glenn Springs Holdings, Inc.
55628DM GSHI PXP Hill E.C. ABC TB

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Trip Blank			Water	1,8	2			X								
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Preston Bitenhut

Shipment Method: FedEx

Required Turnaround Time: (Check Box) [ ] Other _____ | Results Due Date:
[X] STD 10 Wk Days [ ] 5 Wk Days [ ] 2 Wk Days [ ] 24 Hour

Relinquished by: | Date: 2-7-19 | Time: 1700 | Received by:

Relinquished by: | Date: | Time: | Received by (Laboratory):

Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory):

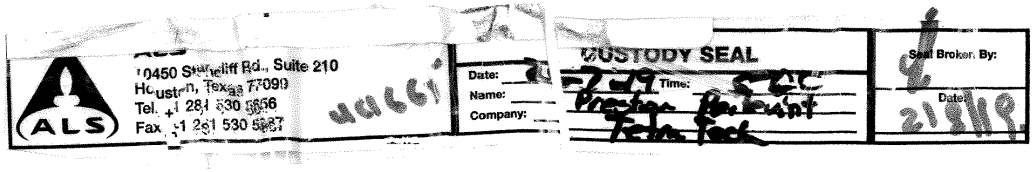
Notes: [GSHI PXP Hill EC ABC TB]

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
[X] Level II Std QC
[ ] Level III Std QC/Raw Data
[ ] Level IV SW846/CLP
[ ] Other _____
[ ] TRRP Checklist
[ ] TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 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.



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

August 21, 2019

James Abston
Glenn Springs Holdings, Inc.
PO Box 2148
Houston, TX 77252-2148

Work Order: **HS19080475**

Laboratory Results for: **55628DM GSHI PXP Hill E.C. ABC TB**

Dear James,

ALS Environmental received 6 sample(s) on Aug 09, 2019 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 Houston, US Date: 21-ago-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Work Order: HS19080475

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19080475-01	MW-2	Groundwater		08-Aug-2019 12:05	09-Aug-2019 08:45	☐
HS19080475-02	MW-4	Groundwater		08-Aug-2019 11:45	09-Aug-2019 08:45	☐
HS19080475-03	MW-5	Groundwater		08-Aug-2019 11:25	09-Aug-2019 08:45	☐
HS19080475-04	MW-6	Groundwater		08-Aug-2019 12:35	09-Aug-2019 08:45	☐
HS19080475-05	DUP	Groundwater		08-Aug-2019 00:00	09-Aug-2019 08:45	☐
HS19080475-06	Trip Blank	Water	C&G-062119-317	08-Aug-2019 00:00	09-Aug-2019 08:45	☐

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Work Order: HS19080475

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R344140

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

WetChemistry by Method E300

Batch ID: R344408

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-2
Collection Date: 08-Aug-2019 12:05

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-01
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	13-Aug-2019 01:55
Ethylbenzene		U	0.50	5.0	ug/L	1	13-Aug-2019 01:55
Toluene		U	0.50	5.0	ug/L	1	13-Aug-2019 01:55
Xylenes, Total		U	0.50	5.0	ug/L	1	13-Aug-2019 01:55
Surr: 1,2-Dichloroethane-d4	*92.9*			*70-126*	*%REC*	*1*	*13-Aug-2019 01:55*
Surr: 4-Bromofluorobenzene	*97.4*			*82-124*	*%REC*	*1*	*13-Aug-2019 01:55*
Surr: Dibromofluoromethane	*98.1*			*77-123*	*%REC*	*1*	*13-Aug-2019 01:55*
Surr: Toluene-d8	*99.0*			*82-127*	*%REC*	*1*	*13-Aug-2019 01:55*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**90.5**		**2.00**	**5.00**	**mg/L**	10	15-Aug-2019 18:35

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-4
Collection Date: 08-Aug-2019 11:45

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-02
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	13-Aug-2019 04:45
Ethylbenzene	U		0.50	5.0	ug/L	1	13-Aug-2019 04:45
Toluene	U		0.50	5.0	ug/L	1	13-Aug-2019 04:45
Xylenes, Total	U		0.50	5.0	ug/L	1	13-Aug-2019 04:45
Surr: 1,2-Dichloroethane-d4	*94.3*			*70-126*	*%REC*	*1*	*13-Aug-2019 04:45*
Surr: 4-Bromofluorobenzene	*96.0*			*82-124*	*%REC*	*1*	*13-Aug-2019 04:45*
Surr: Dibromofluoromethane	*97.3*			*77-123*	*%REC*	*1*	*13-Aug-2019 04:45*
Surr: Toluene-d8	*101*			*82-127*	*%REC*	*1*	*13-Aug-2019 04:45*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**555**		**4.00**	**10.0**	**mg/L**	20	15-Aug-2019 20:32

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-5
Collection Date: 08-Aug-2019 11:25

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-03
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	13-Aug-2019 05:09
Ethylbenzene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:09
Toluene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:09
Xylenes, Total		U	0.50	5.0	ug/L	1	13-Aug-2019 05:09
Surr: 1,2-Dichloroethane-d4	*94.2*			*70-126*	*%REC*	*1*	*13-Aug-2019 05:09*
Surr: 4-Bromofluorobenzene	*98.3*			*82-124*	*%REC*	*1*	*13-Aug-2019 05:09*
Surr: Dibromofluoromethane	*97.0*			*77-123*	*%REC*	*1*	*13-Aug-2019 05:09*
Surr: Toluene-d8	*101*			*82-127*	*%REC*	*1*	*13-Aug-2019 05:09*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**85.0**		**2.00**	**5.00**	**mg/L**	10	15-Aug-2019 20:48

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: MW-6
Collection Date: 08-Aug-2019 12:35

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-04
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	13-Aug-2019 05:34
Ethylbenzene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:34
Toluene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:34
Xylenes, Total		U	0.50	5.0	ug/L	1	13-Aug-2019 05:34
Surr: 1,2-Dichloroethane-d4	*93.9*			*70-126*	*%REC*	*1*	*13-Aug-2019 05:34*
Surr: 4-Bromofluorobenzene	*96.3*			*82-124*	*%REC*	*1*	*13-Aug-2019 05:34*
Surr: Dibromofluoromethane	*96.5*			*77-123*	*%REC*	*1*	*13-Aug-2019 05:34*
Surr: Toluene-d8	*100*			*82-127*	*%REC*	*1*	*13-Aug-2019 05:34*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**887**		**4.00**	**10.0**	**mg/L**	20	15-Aug-2019 21:05

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: DUP
Collection Date: 08-Aug-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-05
Matrix:Groundwater

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		**Method:SW8260**					Analyst: PC
Benzene		U	0.60	5.0	ug/L	1	13-Aug-2019 05:58
Ethylbenzene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:58
Toluene		U	0.50	5.0	ug/L	1	13-Aug-2019 05:58
Xylenes, Total		U	0.50	5.0	ug/L	1	13-Aug-2019 05:58
Surr: 1,2-Dichloroethane-d4	*93.8*			*70-126*	*%REC*	*1*	*13-Aug-2019 05:58*
Surr: 4-Bromofluorobenzene	*94.7*			*82-124*	*%REC*	*1*	*13-Aug-2019 05:58*
Surr: Dibromofluoromethane	*98.7*			*77-123*	*%REC*	*1*	*13-Aug-2019 05:58*
Surr: Toluene-d8	*100*			*82-127*	*%REC*	*1*	*13-Aug-2019 05:58*
ANIONS BY E300.0		**Method:E300**					Analyst: KMU
Chloride	**1,090**		**10.0**	**25.0**	**mg/L**	50	15-Aug-2019 21:21

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

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
Sample ID: Trip Blank
Collection Date: 08-Aug-2019 00:00

ANALYTICAL REPORT
WorkOrder:HS19080475
Lab ID:HS19080475-06
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES - SW8260C		**Method:SW8260**					Analyst: PC
Benzene		U	0.60	5.0	ug/L	1	13-Aug-2019 00:42
Ethylbenzene		U	0.50	5.0	ug/L	1	13-Aug-2019 00:42
Toluene		U	0.50	5.0	ug/L	1	13-Aug-2019 00:42
Xylenes, Total		U	0.50	5.0	ug/L	1	13-Aug-2019 00:42
Surr: 1,2-Dichloroethane-d4	*92.5*			*70-126*	*%REC*	*1*	*13-Aug-2019 00:42*
Surr: 4-Bromofluorobenzene	*95.0*			*82-124*	*%REC*	*1*	*13-Aug-2019 00:42*
Surr: Dibromofluoromethane	*97.8*			*77-123*	*%REC*	*1*	*13-Aug-2019 00:42*
Surr: Toluene-d8	*99.1*			*82-127*	*%REC*	*1*	*13-Aug-2019 00:42*

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

ALS Houston, US Date: 21-ago-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19080475

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID: R344140 (0)	**Test Name :** VOLATILES - SW8260C				**Matrix:** Water	
HS19080475-06	Trip Blank	08 Aug 2019 00:00			13 Aug 2019 00:42	1
Batch ID: R344140 (0)	**Test Name :** VOLATILES - SW8260C				**Matrix:** Groundwater	
HS19080475-01	MW-2	08 Aug 2019 12:05			13 Aug 2019 01:55	1
HS19080475-02	MW-4	08 Aug 2019 11:45			13 Aug 2019 04:45	1
HS19080475-03	MW-5	08 Aug 2019 11:25			13 Aug 2019 05:09	1
HS19080475-04	MW-6	08 Aug 2019 12:35			13 Aug 2019 05:34	1
HS19080475-05	DUP	08 Aug 2019 00:00			13 Aug 2019 05:58	1
Batch ID: R344408 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Groundwater	
HS19080475-01	MW-2	08 Aug 2019 12:05			15 Aug 2019 18:35	10
HS19080475-02	MW-4	08 Aug 2019 11:45			15 Aug 2019 20:32	20
HS19080475-03	MW-5	08 Aug 2019 11:25			15 Aug 2019 20:48	10
HS19080475-04	MW-6	08 Aug 2019 12:35			15 Aug 2019 21:05	20
HS19080475-05	DUP	08 Aug 2019 00:00			15 Aug 2019 21:21	50

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19080475

QC BATCH REPORT

Batch ID: R344140 (0) **Instrument: VOA9** **Method: VOLATILES - SW8260C**

MBLK Sample ID: **VBLKW-190812** Units: **ug/L** Analysis Date: **13-Aug-2019 00:17**
Client ID: Run ID: **VOA9_344140** SeqNo: **5207053** 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	*46.83*	*0*	*50*	*0*	*93.7*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*47.94*	*0*	*50*	*0*	*95.9*	*82 - 115*				
Surr: Dibromofluoromethane	*49.71*	*0*	*50*	*0*	*99.4*	*73 - 126*				
Surr: Toluene-d8	*49.92*	*0*	*50*	*0*	*99.8*	*81 - 120*				

LCS Sample ID: **VLCSW-190812** Units: **ug/L** Analysis Date: **12-Aug-2019 23:29**
Client ID: Run ID: **VOA9_344140** SeqNo: **5207052** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.08	5.0	20	0	105	74 - 120				
Ethylbenzene	21.27	5.0	20	0	106	77 - 117				
Toluene	20.62	5.0	20	0	103	77 - 118				
Xylenes, Total	64.6	5.0	60	0	108	75 - 122				
Surr: 1,2-Dichloroethane-d4	*45.04*	*0*	*50*	*0*	*90.1*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*50.43*	*0*	*50*	*0*	*101*	*82 - 115*				
Surr: Dibromofluoromethane	*48.66*	*0*	*50*	*0*	*97.3*	*73 - 126*				
Surr: Toluene-d8	*50.17*	*0*	*50*	*0*	*100*	*81 - 120*				

MS Sample ID: **HS19080475-01MS** Units: **ug/L** Analysis Date: **13-Aug-2019 03:08**
Client ID: **MW-2** Run ID: **VOA9_344140** SeqNo: **5207060** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.84	5.0	20	0	104	70 - 127				
Ethylbenzene	21.35	5.0	20	0	107	70 - 124				
Toluene	20.51	5.0	20	0	103	70 - 123				
Xylenes, Total	64.14	5.0	60	0	107	70 - 130				
Surr: 1,2-Dichloroethane-d4	*46.15*	*0*	*50*	*0*	*92.3*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*50.19*	*0*	*50*	*0*	*100*	*82 - 124*				
Surr: Dibromofluoromethane	*49.22*	*0*	*50*	*0*	*98.4*	*77 - 123*				
Surr: Toluene-d8	*50.51*	*0*	*50*	*0*	*101*	*82 - 127*				

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19080475

QC BATCH REPORT

Batch ID: R344140 (0) **Instrument:** VOA9 **Method:** VOLATILES - SW8260C

MSD Sample ID: **HS19080475-01MSD** Units: **ug/L** Analysis Date: **13-Aug-2019 03:32**
Client ID: **MW-2** Run ID: **VOA9_344140** SeqNo: **5207061** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.36	5.0	20	0	102	70 - 127	20.84	2.34	20	
Ethylbenzene	20.54	5.0	20	0	103	70 - 124	21.35	3.87	20	
Toluene	19.51	5.0	20	0	97.6	70 - 123	20.51	4.97	20	
Xylenes, Total	60.82	5.0	60	0	101	70 - 130	64.14	5.3	20	
Surr: 1,2-Dichloroethane-d4	*45.43*	*0*	*50*	*0*	*90.9*	*70 - 126*	*46.15*	*1.57*	*20*	
Surr: 4-Bromofluorobenzene	*48.91*	*0*	*50*	*0*	*97.8*	*82 - 124*	*50.19*	*2.59*	*20*	
Surr: Dibromofluoromethane	*49.43*	*0*	*50*	*0*	*98.9*	*77 - 123*	*49.22*	*0.424*	*20*	
Surr: Toluene-d8	*49.86*	*0*	*50*	*0*	*99.7*	*82 - 127*	*50.51*	*1.29*	*20*	

The following samples were analyzed in this batch: HS19080475-01 HS19080475-02 HS19080475-03 HS19080475-04 HS19080475-05 HS19080475-06

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19080475

QC BATCH REPORT

Batch ID: R344408 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0**

MBLK Sample ID: **WBLKW1-081519** Units: **mg/L** Analysis Date: **15-Aug-2019 16:39**
Client ID: Run ID: **ICS-Integrion_344408** SeqNo: **5212815** 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: **WLCSW1-081519** Units: **mg/L** Analysis Date: **15-Aug-2019 16:55**
Client ID: Run ID: **ICS-Integrion_344408** SeqNo: **5212816** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.05	0.500	20	0	100	90 - 110				

LCSD Sample ID: **WLCSDW1-081519** Units: **mg/L** Analysis Date: **15-Aug-2019 17:12**
Client ID: Run ID: **ICS-Integrion_344408** SeqNo: **5212817** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.99	0.500	20	0	100.0	90 - 110	20.05	0.295	20	

MS Sample ID: **HS19080485-01MS** Units: **mg/L** Analysis Date: **15-Aug-2019 21:55**
Client ID: Run ID: **ICS-Integrion_344408** SeqNo: **5212832** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	319	5.00	100	230.9	88.0	80 - 120				

MS Sample ID: **HS19080475-01MS** Units: **mg/L** Analysis Date: **15-Aug-2019 18:52**
Client ID: **MW-2** Run ID: **ICS-Integrion_344408** SeqNo: **5212821** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	183.7	5.00	100	90.5	93.2	80 - 120				

MSD Sample ID: **HS19080485-01MSD** Units: **mg/L** Analysis Date: **15-Aug-2019 22:11**
Client ID: Run ID: **ICS-Integrion_344408** SeqNo: **5212833** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	314.6	5.00	100	230.9	83.7	80 - 120	319	1.36	20	

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: HS19080475

QC BATCH REPORT

Batch ID: R344408 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD Sample ID: **HS19080475-01MSD** Units: **mg/L** Analysis Date: **15-Aug-2019 19:08**
Client ID: **MW-2** Run ID: **ICS-Integrion_344408** SeqNo: **5212822** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	184.1	5.00	100	90.5	93.6	80 - 120	183.7	0.174	20	

The following samples were analyzed in this batch: HS19080475-01 HS19080475-02 HS19080475-03 HS19080475-04 HS19080475-05

ALS Houston, US Date: 21-Aug-19

Client: Glenn Springs Holdings, Inc.
Project: 55628DM GSHI PXP Hill E.C. ABC TB
WorkOrder: **HS19080475**

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 Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2019	31-Dec-2019
Oklahoma	2018-156	31-Aug-2019
Texas	TX104704231-19-23	30-Apr-2020

ALS Houston, US Date: 21-Aug-19

Sample Receipt Checklist

Client Name: Glen Springs/CRA Date/Time Received: **09-Aug-2019 08:45**

Work Order: HS19080475 Received by: **JRM**

Checklist completed by: *Nilesh D. Ranchod* eSignature 9-Aug-2019 Date

Reviewed by: *Dane J. Wacasey* eSignature 21-Aug-2019 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 ☑
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	1 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	COC IDs:205742
Samplers name present on COC?	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):	2.2C UC/C	IR # 25	
Cooler(s)/Kit(s):	43849		
Date/Time sample(s) sent to storage:	08/09/2019 15:45		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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

Chain of Custody Form

Page 1 of 1

COC ID: 205742

HS19080475

Glenn Springs Holdings, Inc.
55628DM GSHI PXP Hill E.C. ABC TB

Customer Information		Project Information		ALS Project Manager:
Purchase Order	4502201559 ENV 749-402-D02-1 0	Project Name	55628DM GSHI PXP Hill E.C. ABC TB	
Work Order		Project Number	55628DM (ENV749A10)	
Company Name	Glenn Springs Holdings, Inc.	Bill To Company	Glenn Springs Holdings, Inc.	
Send Report To	Mike Carmona	Invoice Attn	Accounts Payable	
Address	PO Box 2148	Address	PO Box 2148	
City/State/Zip	Houston, TX 77252-2148	City/State/Zip	Houston TX 77252-2148	
Phone		Phone		
Fax		Fax		
e-Mail Address	Mike.Carmona@tetratech.com	e-Mail Address		

A	8260_W (BTEX)
B	300_W (Chloride)
C	8260_W (BTEX-Trip Blank)
D	
E	
F	
G	
H	
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	8-8-19	1205	Groundwa	1,8	4	X	X									
3	~~MW-3~~			Groundwa	1,8	4	X	X									
4	MW-4	8-8-19	1145	Groundwa	1,8	4	X	X									
5	MW-5	8-8-19	1125	Groundwa	1,8	4	X	X									
6	MW-6	8-8-19	1235	Groundwa	1,8	4	X	X									
7	DUP	8-8-19	—	Groundwa	1,8	4	X	X									
8	Trip Blank			Water	1,8	2			X								
9																	
10																	

Sampler(s) Please Print & Sign: Preston Poiteviut

Shipment Method: FedEx

Required Turnaround Time: (Check Box) [X] STD 10 Wk Days [ ] 5 Wk Days [ ] 2 Wk Days [ ] 24 Hour [ ] Other

Results Due Date:

Relinquished by: Date: 8-8-19 Time: 1600 Received by:

Relinquished by: Date: 8/9/19 Time: 08:45 Received by (Laboratory): J. Mangrum

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

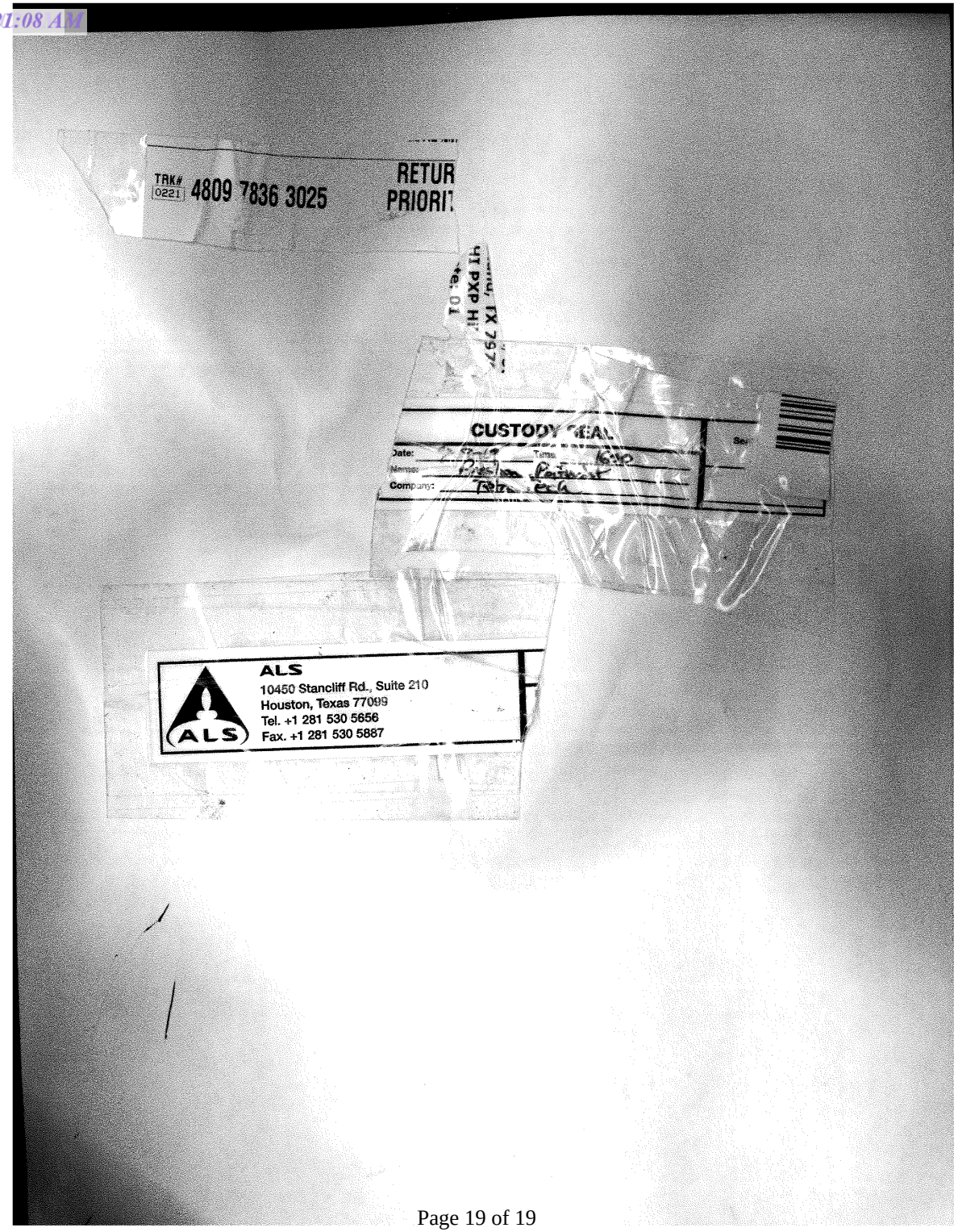
Notes: [GSHI PXP Hill EC ABC TB]

Cooler ID	Cooler Temp.
43849	we
	2.2
	1.625
	CF00

QC Package: (Check One Box Below)
[X] Level II Std QC
[ ] Level III Std QC/Raw Data
[ ] Level IV SW846/CLP
[ ] Other
[ ] TRRP Checklist
[ ] TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 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.



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

COMMENTS

Action 69103

COMMENTS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 69103
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

COMMENTS

Created By	Comment	Comment Date
nvelez	Application ID related to APP ID: 16682	12/28/2021

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 69103

CONDITIONS

Operator:	OGRID:
OXY USA INC P.O. Box 4294 Houston, TX 772104294	16696
	Action Number: 69103
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Review of 2020 Groundwater Monitoring Report: Content satisfactory 1. Continued semi-annual groundwater monitoring and PSH recovery system operation 2. Submit the Annual Monitoring Report to the OCD no later than March 31, 2022	12/28/2021