

**Chevron Environmental Management Company** 

# **2019 ANNUAL GROUNDWATER MONITORING REPORT**

**Cooper-Jal Unit South Injection Station** Section 24, Township 24 South, Range 36 East Lea County, New Mexico

**OGRID No. 4323** Case No. 1R289

25 March 2020



## 2019 ANNUAL GROUNDWATER MONITORING REPORT

Cooper-Jal Unit South Injection Station GW Remediation Lea County, Texas

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## **1 INTRODUCTION**

Arcadis U.S., Inc. (Arcadis) has prepared this report for Chevron Environmental Management Company (CEMC), which summarizes semi-annual groundwater monitoring activities conducted in 2019 at the Cooper-Jal Unit South Injection Station (Site). Data presented in this report was collected during two semiannual groundwater monitoring events conducted in June 2019 and November 2019.

The Site is located on Lea County Road J7, approximately five and a half miles northwest of Jal, New Mexico, in Section 24, Township 24 South, Range 36 East, Lea County, New Mexico. The latitude and longitude coordinates of the Site are 32° 12' 7.13" N and 103° 13' 4.36" W.

Land in the vicinity of the Site is utilized primarily for livestock ranching and oil and gas production and has areas of undeveloped rangeland vegetated with indigenous grass. An injection well facility, operated by Resaca Resources, LLC (Resaca), is located adjacent to the Site. No active Chevron U.S.A. Inc. (Chevron) operations are present in the area. A Site Location Map is presented as **Figure 1**. Additional Site background information is in **Appendix A**.

## **2 GROUNDWATER MONITORING RESULTS**

Groundwater at the Site is monitored semi-annually from a network of 18 monitoring wells and 2 recovery wells. A Site Details Map is presented as **Figure 2**. Arcadis performed semi-annual groundwater sampling events on June 20, 2019, and November 23-24, 2019. Field monitoring methodologies are detailed in **Appendix B**.

## 2.1 Groundwater Gauging Data

Groundwater and light non-aqueous phase liquid (LNAPL) measurements collected during the semiannual monitoring events conducted in 2019 indicate:

- Groundwater elevations ranged from
  - 3,181.43 feet above mean sea level (ft AMSL) (MW-11) to 3,190.61 ft AMSL (MW-12) during the June 2019 gauging event, and
  - 3,181.52 ft AMSL (MW-11) to 3,190.68 ft AMSL (MW-12) during the November 2019 event.
- The groundwater elevations during the 2019 period appear to be consistent with historical levels, with groundwater flow generally to the southeast.
- Potentiometric elevation data for the sampling events are presented in **Table 1**. Groundwater potentiometric surface maps for June 2019 and November 2019 are presented on **Figure 3**.
- The calculated gradient was
  - o 0.0155 feet/foot (ft/ft) for the June 2019 gauging event, and
  - o 0.00293 ft/ft for the November 2019 gauging event.
- LNAPL was not detected during either the June 2019 or the November 2019 monitoring events.

### **2.2 Groundwater Analytical Results**

18 of the 20 wells were sampled at the Site during the June 2019 sampling event. Monitoring wells MW-8 and MW-10 were not sampled due to obstructions observed downhole by the field crew. These obstructions prevented deployment of the HydraSleeves<sup>™</sup> for sample retrieval. The obstructions were not encountered during the November 2019 sampling event and all 20 wells were sampled. Groundwater analytical results for chloride and total dissolved solids (TDS) were compared to the New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards. A summary of the groundwater sample analytical results is presented in **Table 2**.

Cumulative summary tables of groundwater analytical results and potentiometric elevation data obtained for the Site from 1998 through 2019 are presented in **Appendices C and E**, respectively. Copies of the certified analytical reports and chain-of-custody documentation from Eurofins TestAmerica are provided in **Appendix D**.

Isoconcentration maps for chloride for the June 2019 and November 2019 sampling events are presented on **Figure 4**. The isoconcentration maps for TDS for the June 2019 and November 2019 sampling events are presented on **Figure 5**. The icoconcentration maps for sulfate for the June 2019 and November 2019 sampling events are presented on **Figure 6**. The groundwater analytical results are further summarized below.

#### Chloride

- Chloride concentrations detected during the June 2019 groundwater sampling event exceeded the NMWQCC standard of 250 milligrams per liter (mg/L) in
  - 12 of the 18 wells sampled (MW-1, MW-2, MW-4, MW-4A, MW-5, MW-7, MW-9, MW-9A, RW-1, RW-2, RW-2R, and the upgradient offsite monitoring well MW-12).
  - Chloride concentrations exceeding the NMWQCC standard of 250 mg/L ranged from 254 mg/L at monitoring well MW-12 up to 9,290 mg/L at recovery well RW-1.
- Chloride concentrations detected during the November 2019 groundwater sampling event exceeded the NMWQCC standard of 250 mg/L in
  - 10 of the 20 wells sampled (MW-1, MW-4 through MW-5, MW-7, MW-9, RW-1 through RW-2R and the upgradient offsite monitoring well MW-12).
  - Concentrations exceeding the NMWQCC standard of 250 mg/L ranged from 321 mg/L (MW-4A) up to 7,720 mg/L (RW-2R).

### TDS

- TDS concentrations detected during the June 2019 groundwater sampling event exceeded the NMWQCC standard of 1,000 mg/L in
  - 10 of the 18 wells sampled (MW-1, MW-4, MW-4A, MW-5, MW-7, MW-9, MW-9A, RW-1, RW-2, and RW-2R).

- TDS concentrations exceeding the NMWQCC standard of 1,000 mg/L ranged from 1,040 mg/L (MW-4A) up to 29,400 mg/L (RW-2R).
- TDS concentrations detected during the November 2019 groundwater sampling event exceeded the NMWQCC standard of 1,000 mg/L in
  - 9 of the 20 wells (MW-1, MW-4, MW-5, MW-7, MW-9, MW-12, and RW-1 through RW-2R) at concentrations ranging from 1,010 mg/L (MW-12) up to 21,000 mg/L (RW-2R).

## Sulfate

- Groundwater samples were not analysed for sulfate during the June 2019 groundwater sampling event.
- Sulfate concentrations detected during the November 2019 semi-annual groundwater sampling event exceeded the NMWQCC standard of 600 mg/L in
  - 2 of the 20 wells (RW-1 and RW-2R) at concentrations of 722 mg/L (RW-1) and 943 mg/L (RW-2R), respectively.

## **3 SUMMARY**

In summary, the semi-annual monitoring activities conducted at the Site in June 2019 and November 2019 indicate the following:

- 19 of the 20 monitoring wells were gauged during the June 2019 event, and all 20 monitoring wells were gauged during the November 2019 event;
- Groundwater elevations at the Site have remained relatively consistent over the last 10 years;
- 18 of the 20 monitoring wells were sampled during the June 2019 event, and all 20 monitoring wells were sampled during November 2019 event; and
- Potentiometric surface conditions were consistent with historical results showing groundwater flow to the southeast towards Monument Draw.

Groundwater sample analytical results reported for the June 2019 and November 2019 sampling events indicate:

- Chloride exceeded the NMWQCC standard in 12 wells sampled during the June 2019 event, and concentrations exceeded in 10 wells sampled during the November 2019 event;
- TDS exceeded the NMWQCC standard in 10 wells sampled during the June 2019 event, and concentrations exceeded in 9 monitoring wells sampled during the November 2019 event;
- Sulfate exceeded the NMWQCC standard in 2 wells sampled during the November 2019 event;
- Chloride and TDS concentrations have remained relatively stable in wells MW-1, MW-2, MW-2A, MW-3, MW-4A, MW-5A, MW-6R, MW-8, MW-10, MW-11, and MW-14;
- Chloride and TDS concentrations have exhibited a downward trend in wells MW-4 and MW-5;
- Chloride and/or TDS concentrations exhibited an upward trend in wells MW-12 and RW-2R; and
- TDS increased in wells MW-7, MW-9, MW-9A, RW-1, RW-2 during the June 2019 event, however the November 2019 sampling results were consistent with the historical data trends.

# **TABLES**

#### Table 1

2019 Groundwater Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico



Well ID	TOC1 Elevation	Well Screen Interval (ft bgs <sup>2</sup> )	Collection Date	Total Depth (ft below TOC <sup>1</sup> )	Depth to Groundwater (ft below TOC <sup>1</sup> )	Groundwater Elevation (ft)
			06/20/19	171.17	134.56	3187.38
MW-1	3321.94	153-173	11/20/19	174.20	134.45	3187.49
			06/20/19	168.39	134.27	3187.00
MW-2	3321.27	163-173	11/20/19	168.57	134.21	3187.06
			06/20/19	142.47	134.43	3186.87
MW-2A	3321.30	130-145	11/20/19	142.23	134.24	3187.06
			06/20/19	474.00	100.04	2407.04
MW-3	3320.08	161-171	11/19/19	171.93 175.90	132.24 132.50	3187.84 3187.58
	0020100		11/10/10	110.00	102.00	0101.00
			06/20/19	171.81	136.21	3185.37
MW-4	3321.58	161-171	11/19/19	177.64	135.06	3186.52
MW-4A	3321.42	128-143	06/20/19 11/19/19	145.55	134.98	3186.44 3186.47
IVI VV-4A	3321.42	120-143	11/19/19	147.60	134.95	3100.47
			06/20/19	173.72	136.65	3186.33
MW-5	3322.98	161-171	11/19/19	177.50	136.91	3186.07
			06/20/19	176.71	144.05	3177.02
MW-5A	3321.07	126-141	11/19/19	139.98	136.46	3184.61
MW-6	3321.15		V	andoned on 9/30/201	3	
			06/20/19			
MW-6R	3323.04	136-176	11/19/19	187.37	136.04	3187.00
NA14/ 7	2200.40	454 400	06/20/19	162.60	135.48	3184.71
MW-7	3320.19	151-166	11/20/19	162.58	135.50	3184.69
		06/20/19	146.85	133.87	3185.19	
MW-8	3319.06	155-170	11/20/19	146.92	133.84	3185.22
			06/20/19	161.46	131.95	3182.73
MW-9	3314.68	149-164	11/20/19	162.00	131.86	3182.82
			06/20/19	141.72	131.69	3182.79
MW-9A	3314.48	127-142	11/20/19	145.66	131.63	3182.85
			06/20/19	160.72	136.28	3184.84
MW-10	3321.12	151-166	11/20/19	160.71	136.36	3184.76
			06/00/40	10E 74	400.40	0404 40
MW-11	3311.56	125-140	06/20/19 11/20/19	165.71 172.30	130.13 130.04	3181.43 3181.52
	0077.00	120-140	11/20/13	172.50	100.04	5101.52
			06/20/19	171.02	139.72	3190.61
MW-12*	3330.33	157-172	11/20/19	174.57	139.65	3190.68
MW-13*	3338.49		v	Vell Plugged and Ab	andoned on 7/11/201	7
			06/20/19	178.74	134.78	3183.58
MW-14	3318.36	131-171	11/20/19	178.42	130.48	3187.88
			06/20/19	164.03	133.64	3186.67
RW-1	3320.31	130-175	11/20/19	163.79	133.63	3186.68

Table 1

2019 Groundwater Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico



Well ID	TOC1 Elevation	Well Screen Interval (ft bgs <sup>2</sup> )	Collection Date	Total Depth (ft below TOC <sup>1</sup> )	Depth to Groundwater (ft below TOC <sup>1</sup> )	Groundwater Elevation (ft)
			06/20/19	156.50	135.23	3185.19
RW-2	3320.42	135-160	11/19/19	172.60	135.08	3185.34
			06/20/19	176.82	136.79	3183.89
RW-2R	3320.68	133-173	11/19/19	188.97	136.71	3183.97

Notes:

1. TOC - Top of Casing

2. MSL - Mean Sea Level

3. ft bgs - feet below ground surface

4. in - inches

5. A - Indicates groundwater monitor well installed in shallow Uppermost Groundwater Bearing Unit.

6. \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.

Table 22019 Groundwater Analytical ResultsCooper-Jal Unit Injection StationLea County, New Mexico



Sample ID	Sample Date	Chloride	TDS	Sulfate
NMWQCC Groundwate	er Standard (mg/L)	250	1,000	600
MW-1	6/20/2019	1,110	2,510	NS
141 44 - 1	11/24/2019	1,110	2,190	222
MW-2	6/20/2019	283	960	NS
141 44 -2	11/23/2019	27.7	274	42
MW-2A	6/20/2019	86.5	554	NS
IVI VV-ZA	11/23/2019	88	414	76.5
MW-3	6/20/2019	40	448	NS
14144-2	11/23/2019	60	352	96.6
MW-4	6/20/2019	2,760	7,830	NS
141 4 4	11/24/2019	3,050	5,960	420
MW-4A	6/20/2019	336	1,040	NS
10100-474	11/24/2019	250         1,110         1,110         283         27.7         86.5         88         40         60         2,760         3,050         336         321         1,700         1,530         118         116         59.1         64.4         69.4         4,210         2,080         NS         12.9         621         337         268         231         NS         230         34.4         45.8	824	94.5
MW-5	6/20/2019	1,700	4,280	NS
C-VVIVI	11/23/2019	1,530	3,900	250
	6/20/2019	118	650	NS
MW-5A	11/23/2019	116	502	61.1
MW-6R	6/20/2019	59.1	482	NS
Duplicate	6/20/2019	64.4	592	NS
	11/23/2019	69.4	384	95.2
	6/20/2019	4,210	15,500	NS
MW-7	11/24/2019	2,080	6,300	272
	6/20/2019	NS	NS	NS
MW-8	11/24/2019	12.9	239	27.6
	6/20/2019	621	2,930	NS
MW-9	11/24/2019	337	1,170	80.6
	6/20/2019	268	1,220	NS
MW-9A	11/24/2019	231	838	83.2
	6/20/2019	NS	NS	NS
MW-10	11/24/2019	230	826	78
	6/20/2019	34.4	407	NS
MW-11	11/24/2019	45.8	364	113
	6/20/2019		580	NS
MW-12*	11/23/2019	337	1,010	140
	6/20/2019		481	NS
MW-14	11/24/2019		328	94.5
Duplicate	11/24/2019	-	324	95.9
RW-1	6/20/2019		22,100	NS
Duplicate	6/20/2019		22,800	NS
	11/24/2019		12,200	722
	6/20/2019		10,200 H	NS
RW-2	11/24/2019		9,880	464
	6/20/2019		29,400	404 NS
RW-2R	11/24/2019		29,400	943
	11/24/2019	7,720	21,000	943

Notes:

1. Bold and colored cells indicate New Mexico Water Quality Control Commission (NMWQCC) standard exceedance.

2. NS - Not Sampled

3. Results shown in milligrams/liter (mg/L).

4. < - Analyte not detected above quantitation limit

6. \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.

7. \*\* - Indicates groundwater monitor well that was sampled prior to semiannual groundwater event via low-flow purge for internal use.

# **FIGURES**





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- Recovery Well
- $oldsymbol{igen}$
- Cooper Jal Oil Well  $\bigcirc$







Chevron Environmental Management Company Cooper-Jal Unit South Injection Site Lea County, New Mexico

## SITE DETAILS MAP



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# **APPENDIX A**

Site Background



### **REGULATORY BACKGROUND**

Site assessment activities were initiated in 1993 when Environmental Spill Control, Inc. (ESCI) of Hobbs, New Mexico, performed a subsurface assessment of an unlined earthen produced water overflow pit, reportedly located adjacent to the western edge of the Site. During the investigation, five boreholes were advanced to depths ranging from 15 feet below ground surface (ft bgs) to 100 ft bgs. The investigation revealed the presence of hydrocarbon-impacted soil. In 1996, Texaco Exploration and Production, Inc. (Texaco) filed a notice of intent to close the pit with the New Mexico Oil Conservation Division (NMOCD). Approximately 1,248 cubic yards (cy) of hydrocarbon-impacted soil were removed from the pit. During the closure activities, the excavation was lined with imported clay and backfilled with imported caliche. Texaco submitted a pit closure report to the NMOCD in December 1996.

In 1997, the NMOCD requested additional assessment activities to define the vertical extent of affected soil beneath the former pit. Assessment activities performed by Highlander Environmental Corporation revealed elevated chloride concentrations in the soil. In October 1997, monitoring well MW-1 was installed near the former pit. Groundwater samples collected from the monitoring well contained chloride concentrations above the New Mexico Water Quality Control Commission (NMWQCC) Human Health Standards for Groundwater (250 milligrams per liter [mg/L]). Assessment activities performed through May 1998 included the installation of 13 additional monitoring wells. In 1998, electromagnetic (EM 34) terrain conductivity surveys were completed to identify areas of elevated chloride concentrations in soil.

#### **REGULATORY FRAMEWORK**

The NMOCD of the New Mexico Energy, Minerals, and Natural Resources Department has regulatory jurisdiction over corrective actions conducted at the Site. Corrective actions follow guidance given by the NMOCD in *Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993)*. These guidelines require remediation of four constituents of concern (COCs) in groundwater to the human health standards of the NMWQCC set forth in New Mexico Administrative Code 20.6.2.3103B as follows:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride	250
Total Dissolved Solids (TDS)	1,000
Fluoride	1.6
Sulfate (SO4)	600

Note: mg/L = milligrams per liter

The original analyte list included carbonate alkalinity, bicarbonate alkalinity, total alkalinity, nitrate-N, calcium, magnesium, potassium, sodium, chloride, TDS, fluoride, and sulfate. In a letter to the NMOCD, dated December 15, 2014, GHD, on behalf of CEMC, requested a reduction in the list of analytical parameters and a reduction in the wells included in the monitoring program. In a subsequent email, dated May 19, 2015, the NMOCD approved the reduction of the list of analyses to chloride, TDS, fluoride, and sulfate only. No wells were eliminated from the monitoring program.

## **GROUNDWATER SAMPLING AND ANALYSIS**

Groundwater at the Site is monitored semiannually via a network of 18 monitor wells and 2 recovery wells as outlined in the *Work Plan for Plume Delineation and Modification to Proposed Groundwater Monitoring Schedule* submitted on November 18, 1998 and approved by the NMOCD on February 2, 1999. Five down gradient monitoring wells (MW-8, MW-9, MW-10, MW-11, and MW-14) were sampled during the first semi-annual monitoring event conducted on May 22, 2018. All 20 monitoring and recovery wells were sampled during the second semi-annual monitoring event performed on October 15 through 19, 2018. Semi-annual groundwater monitoring activities and annual reporting to the NMOCD for this Site have been performed by GHD (formerly Conestoga-Rovers & Associates, Inc. [CRA]) since 2005 and continued until 2018.

In June 1998, Texaco prepared a groundwater corrective action plan to mitigate chloride concentrations and to provide plume containment by extracting groundwater from the affected groundwater-bearing unit (GWBU). Between 1999 and 2013, assessment activities included the installation of wells MW-6R, MW-11 through MW-14, RW-1, RW-2, and RW-2R. Monitoring well MW-6 was plugged and abandoned in September 2013 due to a damaged well casing. Due to on-Site wells (MW-1, MW-2, MW-2A, MW-3, and MW-6) fully delineating the northern boundary of the chloride plume, monitoring well MW-13, located approximately 1,000 feet up-gradient and off-Site, was plugged and abandoned on July 11, 2017.

Historically, chloride concentrations show decreasing trends in upgradient monitor wells MW-1, MW-2, and MW-5, as shown on concentration versus date graphs in Exhibit 1A, available in the *2018 Annual Groundwater Monitoring Report*. Increasing trends have been observed since 1997 in downgradient monitor wells MW-7, MW-9, MW-9A, and MW-10, as indicated in Exhibit 1B (available in the *2018 Annual Groundwater Monitoring Report*), although more recent data indicate that these concentrations are stabilizing with some variability, with the exception of monitor well MW-7. Similar trends are apparent in TDS and sulfate concentrations. There are no strong trends in the observed historical concentrations of fluoride. Based on current and historical concentration data, the groundwater plume at the Site is fully delineated.

### Soil Boring and Monitor Well Installation

The New Mexico Office of the State Engineer (NMOSE) governs water usage in the State of New Mexico. Applications for Permits to Appropriate Groundwater were submitted by Texaco in October 1999 and were approved with specific conditions in June 2008. A total of 65 acre-feet (ac-ft) per annum from the two on-Site recovery wells (RW-1 and RW-2) was granted by the NMOSE for environmental remediation purposes. Usage of groundwater was granted by the NMOSE under well permits CP-884 (RW-2; 32.5 ac-ft per annum) and CP-885 (RW-1; 32.5 ac-ft per annum).

Due to apparent damage at RW-2 that would prevent the installation of a pump, RW-2R was installed under well permit CP-884-POD2 to replace RW-2 in 2013. An application to change the designation of RW-2 from a recovery well to a monitoring well was submitted on December 16, 2016. This was done to allow the well to remain in the monitoring well network instead of being plugged and abandoned. The change was conditionally approved, pending further assessment of the well integrity, by the NMOSE in a phone conversation on January 9, 2017. On February 10, 2017, GHD further assessed RW-2 and found the annular seal to be compliant with New Mexico Administrative Code (NMAC) 19.27.4.30 Regulations and the well casing and well pad to be in good condition. These findings were documented in a letter sent

to the NMOSE on February 16, 2017. Based on GHD's reported understanding of the January 9, 2017, conversation, RW-2 is now designated as a monitoring well.

To date, neither RW-1 nor RW-2R have been equipped for groundwater recovery. Notifications to NMOSE will be submitted if these wells become equipped in the future. Until each well is permanently equipped, an Extension of Time (EOT) request will be sent to the NMOSE. An EOT was received by NMOSE on April 23, 2018. The request was approved in written correspondence and extended through April 30, 2020.

### **GEOLOGY/HYDROGEOLOGY ASSESSMENT**

#### **Site Setting**

The Site is located on Lea County Road J7, approximately five and a half miles northwest of Jal, New Mexico, in Section 24, Township 24 South, Range 36 East, Lea County, New Mexico. The latitude and longitude coordinates of the Site are 32° 12' 7.13" N and 103° 13' 4.36" W.

Land in the vicinity of the Site is utilized primarily for livestock ranching and oil and gas production, and production and has areas of undeveloped rangeland vegetated with indigenous grass. An injection well facility, operated by Resaca Resources, LLC (Resaca), is located adjacent to the Site. No active Chevron U.S.A. Inc. (Chevron) operations are present in the area.

#### **Regional Geologic Conditions**

The region is characterized by a surface cover of up to 200 feet of unconsolidated to semi-lithified sediments of the Ogallala Formation consisting of sand, clay, and fluvial gravel. The upper portion of the Ogallala Formation has been heavily cemented by caliche. The Tertiary-aged sediments are underlain by the Triassic-aged Dockum Group shale ("red beds").

#### **Site Geology**

The Site boring logs used to interpret the Site geology included the October 2013 GHD field work and logs from previous groundwater assessments. The locations of the soil borings and monitoring wells are shown on Figure 2. The subsurface stratigraphy typically included the following:

- A thick sand (0 to 163 feet) layer of unconsolidated fine sand containing trace caliche nodules. Sand grains gradually increasing to fine to medium grained at 140 feet,
- A fine sand layer typically ranging from 3 feet to 30 feet,
- A sandy clay layer typically ranging from 2 feet to 11 feet directly above the upper Dockum "redbeds",
- Red and gray weathered shale and mudstone "redbeds" of the Triassic Dockum Group that form the underlying confining layer.

#### **Hydrogeologic Conditions**

Regional groundwater flow in the Ogallala Aquifer is controlled by the slope of the land surface to the south with localized eastward flow into the valley of Monument Draw. The aquifer typically behaves as an unconfined aquifer. Monument Draw is an intermittent stream that contains water only after heavy rains (Texas Water Development Board [TWDB], 2008)1. The Dockum Group Shale is considered the underlying aquitard for the Ogallala Aquifer.

arcadis.com Appendix A\_Final\_02.10.20

#### Site Hydrogeology

Groundwater beneath the Site is found within the lower Ogallala deposits. The depth to groundwater at the Site ranges from approximately 140 to 190 ft bgs, based on the groundwater monitoring event conducted in June/November 2019. The saturated thickness of the unconfined aquifer ranges from approximately 15 to 30 ft. The saturated thickness varies in conjunction with the elevation of the top of the Dockum shale. The thickest saturated portion of the Ogallala is to the southwest where the bedrock surface of the Dockum is the lowest. A dry borehole was encountered at BH-C, east of the property boundary of the Site.

At the Site, the local groundwater flow direction trends to the southeast with an average horizontal hydraulic gradient of approximately 0.0169 feet per foot (ft/ft), as presented in the attached figures. The southeast groundwater flow direction observed at the Site is consistent with the regional groundwater flow direction to the southeast in the Ogallala Aquifer. The deflection to the east at the eastern property boundary is likely related to the break of the slope of the land towards the Monument Draw to the east.

# **APPENDIX B**

Field Methodology and Documentation



#### FIELD METHODOLOGY

Prior to sampling, static fluid water levels were measured with an electronic interface probe to the nearest hundredth of a foot and recorded. In addition, a conductivity probe was used to record the conductivity levels every 2 feet in each well to evaluate the vertical distribution of chloride-affected groundwater. After recording conductivity levels, discrete samples were collected at the interval of highest conductivity using a Hydrasleeve<sup>™</sup>. Geochemical water quality parameters (pH, temperature, and conductivity) were recorded at the sampling depth. All non-disposable groundwater sampling equipment was thoroughly decontaminated between measurements to prevent possible cross-contamination between wells. Laboratory-supplied sample containers were filled directly from the Hydrasleeve™.

Groundwater samples were placed on ice in insulated coolers and chilled to a temperature of approximately 4°C (40°F). The coolers were sealed for shipment with proper chain-of-custody documentation and shipped to Eurofins TestAmerica, located in Houston, Texas, for analysis of chloride and sulfate by Environmental Protection Agency (EPA) Method 300.0 and total dissolved solids (TDS) by SM 2540C.

		<b>Checklist and Reporti</b>	ing Form		
	evron Fuller	Project NumberB	0047270.0007		
Well Identification <u>Mu</u>	Insp	ection Date cle 113/19	Inspector_ L	R	
Measured Well Depth	HI.17 Measu	uring Point TOC	Depth to water	134.51	2
	VIS	UAL INSPECTION			
<ul> <li>2) Are hinges, latches, or</li> <li>3) Is concrete pad in satisfied</li> <li>4) Is well name or other if</li> <li>5) Is well cap in place and</li> <li>6) Is measuring point ma</li> <li>7) Does well opening/stice</li> </ul> Does water-level indicatory (Enter depth to water in the Does water-level indicatory (Total depth may be found on inspection forms. Enter to Does bailer/pump travel free Upon removal from well, doi:	I locks functional and ifactory condition? dentification marked d in good condition? rked or readily recog tkup show signs of d PHYS measuring device tra- space provided above.) measuring device tra- on drilling logs, well comple- tal depth in the space provid- cely to and from bott oes bailer show evid	avel to bottom of well? tion diagrams, or previous well ed above.) om of well?	sill?	Y Y Y Y Y Y Y Y N N N N N	N N/A N/A N/A N/A N/A N/A
Does the bailer contain exc	essive amounts of si	lt or rust?	Y	NN	I/A
Does water appear discolor	ed or have an unusua	al odor or appearance?	Y	N	I/A
Is the lock on the well cove	r/cap clean and fully	functional?	Y	) N N	[/A
NOTES AND OBSERVATIONS:					_
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Well Inspection Checklist and Reporting Form			
Site Name/ Location Chevron Fuller Project Number B0047270.00	07		
Well Identification <u>mue-</u> Inspection Date <u>cue lus lug</u> Inspector	r LR		_
Measured Well Depth 102.39 Measuring Point TCC Depth to w	ater 194	.27	_
VISUAL INSPECTION			
1) Is protective sleeve/cover in place and secure?	<u>Ŷ</u>	N	N/A
2) Are hinges, latches, or locks functional and in good condition?	Y	Ν	N/A
3) Is concrete pad in satisfactory condition?	¥	Ν	N/A
4) Is well name or other identification marked clearly on or near the well?	Y	N	N/A
5) Is well cap in place and in good condition?	Ŷ	N	N/A
<ul> <li>6) Is measuring point marked or readily recognized?</li> <li>7) December 2011</li> </ul>	Y	N	N/A
7) Does well opening/stickup show signs of damage or deterioration?	Y	N	N/A
PHYSICAL INSPECTION			
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Ŷ	N	N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	r	Ν	N/A
Does bailer/pump travel freely to and from bottom of well?	Y N	N/	A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	YN (	N/A	
Does the bailer contain excessive amounts of silt or rust?	YN	(N/.	A
Does water appear discolored or have an unusual odor or appearance?	Y N	N/.	4
s the lock on the well cover/cap clean and fully functional?	(Y)N	N/2	4
NOTES AND			
OBSERVATIONS:			

Well Inspection Checklist and Reporting Form Cuper Jun			
Site Name/ Location Chevron Fuller Project Number B0047270.0007	-		
Well Identification MW-21 Inspection Date 00/13/19 Inspector	ß		
Measured Well Depth 142, 47 Measuring Point TU Depth to wate	er 171	1.43	_
VISUAL INSPECTION			
	$-\tilde{n}$	0.	
1) Is protective sleeve/cover in place and secure?	Y		N/A
2) Are hinges, latches, or locks functional and in good condition?	Y		N/A
<ul> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well as a starting in the initial starting in the starti</li></ul>			N/A
4) Is well name or other identification marked clearly on or near the well?	Y Y Y	N	N/A
5) Is well cap in place and in good condition?	Y	N	N/A
<ul><li>6) Is measuring point marked or readily recognized?</li></ul>	Y	$\sim$	N/A
7) Does well opening/stickup show signs of damage or deterioration?	Y	N	N/A
PHYSICAL INSPECTION			
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y	N	N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y	N	N/A
Does bailer/pump travel freely to and from bottom of well?	Y N	N	'A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N	N/A	)
Does the bailer contain excessive amounts of silt or rust?	Y N	N/	A
Does water appear discolored or have an unusual odor or appearance?	Y N	N/	Â
Is the lock on the well cover/cap clean and fully functional?	Ŋ N	N/.	A
NOTES AND			
OBSERVATIONS:			

Well Ingreation Cherklink and Device T	
Site Name/ Location Checklist and Reporting For CCCPCY JCU Chevron Fuller Project Number	
Well Identification <u>Mw-3</u> Inspection Date <u>OWII3/19</u> Insp	pector LB
Measured Well Depth 171.93 Measuring Point TOC Depth	to water 132,24
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A
PHYSICAL INSPECTION	Ŭ
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

		ection Checklist and Report	ing Form		
Site Name/ Location	Chevron Fuller	Project Number	80047270.0007		
Well Identification_	nw·4	Inspection Date OLE 113/19	Inspector	ß	
Measured Well Depth	141.21	Measuring Point TOL	Depth to water	135.21	_
		VISUAL INSPECTION			
<ol> <li>Are hinges, latche</li> <li>Is concrete pad in</li> <li>Is well name or ot</li> <li>Is well cap in plac</li> <li>Is measuring point</li> </ol>	s, or locks function satisfactory condi- her identification re- e and in good condi- t marked or readily	nd secure? nal and in good condition? tion? marked clearly on or near the we dition? y recognized? ns of damage or deterioration? PHYSICAL INSPECTION	ell?	Y Y Y Y Y Y Y Y Y Y Y Y	N/A N/A N/A N/A N/A
Does water-level indic (Enter depth to water i	ator/measuring de in the space provided abo	vice travel freely down well casi	ing?	Y N	N/A
(Total depth may be fe	ator/measuring der bund on drilling logs, wel ater total depth in the space	vice travel to bottom of well? Il completion diagrams, or previous well re provided above.)		Y N	N/A
Does bailer/pump trave	el freely to and fro	m bottom of well?	Y	N N/A	>
Upon removal from we cuts, scrapes) su the well?	ell, does bailer sho aggestive of well d	w evidence of damage (gouges, lamage from foreign objects in	Y	N N/A	
Does the bailer contain	excessive amount	ts of silt or rust?	Y	N N/A	>
Does water appear disc	olored or have an	unusual odor or appearance?	Y	N N/A	)
Is the lock on the well of	cover/cap clean an	d fully functional?	Y	) N N/A	
NOTES AND OBSERVATIONS:					-
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Well Inspection Checklist and Reporting Form	
Leeper Jul	
Well Identification MW - 414 Inspection Date 413/19 Inspector	LB
Measured Well Depth 145,55 Measuring Point ToL Depth to wat	ter 134,98
VISUAL INSPECTION	
1) Is protective sleeve/cover in place and secure?	. (Y N N/A
2) Are hinges, latches, or locks functional and in good condition?	. Y N N/A
<ul><li>3) Is concrete pad in satisfactory condition?</li><li>4) Is well name or other identification marked clearly on or near the well?</li></ul>	
<ul><li>4) Is well name or other identification marked clearly on or near the well?</li><li>5) Is well cap in place and in good condition?</li></ul>	. Y N N/A . Y N N/A
<ul><li>6) Is measuring point marked or readily recognized?</li></ul>	. Y N N/A . Y N N/A
7) Does well opening/stickup show signs of damage or deterioration?	$\dot{\mathbf{Y}}$ $\dot{\mathbf{N}}$ $\dot{\mathbf{N}}$ $\dot{\mathbf{N}}$
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

Well Inspection Checklist and Reporting Form
Site Name/Location Chevron FullerProject Number
Well Identification <u>mw - 5</u> Inspection Date <u>using</u> Inspector <u>UB</u>
Measured Well Depth 173, 72 Measuring Point TU Depth to water 134.65
VISUAL INSPECTION
1) Is protective sleeve/cover in place and secure?
2) Are hinges, latches, or locks functional and in good condition?
3) Is concrete pad in satisfactory condition?
4) Is well name or other identification marked clearly on or near the well?
5) Is well cap in place and in good condition?
7) Does well opening/stickup show signs of damage or deterioration?
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? Y N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges,
cuts, scrapes) suggestive of well damage from foreign objects in
the well? Y N N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional?
NOTES AND
OBSERVATIONS:

	Ceeper Jus	tion Checklist and Report				
Site Name/ Location	Chevron Fuller	Project Number <u>Project</u>	30047270.0007			
Well Identification In	ILU-UTA	Inspection Date un MS 14	Inspector	B	_	_
Measured Well Depth	144.05	Measuring Point Tu	Depth to water	170	.711	_
		VISUAL INSPECTION				
		d secure?		Y	N	N/A
2) Are hinges, latches	s, or locks function	al and in good condition?	••••••	Y	Ν	N/A
3) Is concrete pad in	satisfactory conditi	ion?	44.5	\Y/	N	N/A
4) Is well name or oth	her identification m	harked clearly on or near the wo	ell?	Y	N	N/A
<ul><li>5) Is well cap in place</li><li>6) Is measuring point</li></ul>	e and in good cond	ition? recognized?	•••••••	Y	N	N/A
		s of damage or deterioration?		Y	N	N/A N/A
/) Does wen opening	gatterrup show sign	s of damage of deterioration?	*****	I	N	IN/A
		PHYSICAL INSPECTION		1		
Does water-level indica (Enter depth to water i	ator/measuring dev in the space provided abov	rice travel freely down well cas	sing?	Y	N	N/A
(Total depth may be for	ator/measuring devo ound on drilling logs, well ner total depth in the space	completion diagrams, or previous well provided above.)		V	N	N/A
Does bailer/pump trave	el freely to and fror	n bottom of well?	Y	N	N/A	4
		w evidence of damage (gouges,				
	uggestive of well da	amage from foreign objects in			$\bigcirc$	
the well?			Y	N	N/A	
Does the bailer contain	excessive amounts	s of silt or rust?	Y	N	N/A	4
Does water appear disc	olored or have an u	inusual odor or appearance?	Y	N	N/A	¥
Is the lock on the well of	cover/cap clean and	I fully functional?	Y	) N	N/A	A
NOTES AND						
OBSERVATIONS:				_	_	-
				-		_
					_	_
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Well Inspection Checklist and Reporting Form	
Site Name/Location Chevron Fuller Project Number B0047270.0	<u>007</u>
Well Identification <u>Mw-+</u> Inspection Date <u>OUII3114</u> Inspect	or LB
Measured Well Depth 162.60 Measuring Point TOC Depth to	water 135,46
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           Y         N         N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Ŷ N N/A
NOTES AND OBSERVATIONS: streething in well when getting careat	

Well Inspection Checklist and Reporting Form	
Couper Jaci	
Site Name/ Location Chevron Fuller Project Number B0047270.0	0007
ae 113/19	
Well Identification MW-8 Inspection Date The Inspec	tor_LB
Measured Well Depth 146.85 Measuring Point Toc Depth to	water 133.87
VISUAL INSPECTION	
1) Is protective sleeve/cover in place and secure?	
<ul><li>2) Are hinges, latches, or locks functional and in good condition?</li></ul>	
3) Is concrete pad in satisfactory condition?	
4) Is well name or other identification marked clearly on or near the well?	
5) Is well cap in place and in good condition?	(Y) N N/A
6) Is measuring point marked or readily recognized?	
7) Does well opening/stickup show signs of damage or deterioration?	Y N/A
PHYSICAL INSPECTION	$\sim$
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in	
the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N NA
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS: contruction @ 1361, 0101 Hydrawleeve wa	U WILLERI
art orther to call inter.	- particip

Well Inspection Checklist and Reporting Form	
Site Name/ Location <u>Cuper Jal</u> <u>Chevron Fuller</u> Project Number <u>B0047270.0007</u>	
Well Identification MW -9 Inspection Date Cell2/19 Inspector	
Measured Well Depth 101.46 Measuring Point TOC Depth to water_	131,95
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A
7) Does well opening/stickup show signs of damage or deterioration?	Y N N/A
PHYSICAL INSPECTION	-
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well? Y	N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N N/A
Does the bailer contain excessive amounts of silt or rust? Y	N N/A
Does water appear discolored or have an unusual odor or appearance? Y	N N/A
Is the lock on the well cover/cap clean and fully functional?	N N/A
NOTES AND OBSERVATIONS:	

Well Inspection Checklist and Reporting Form
Site Name/ Location Chevron Fuller Project Number <u>B0047270.0007</u>
Well Identification Mw-AA Inspection Date Ole 112 119 Inspector LB
Measured Well Depth 141,72 Measuring Point TOC Depth to water 131,44
VISUAL INSPECTION
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>N/A</li> </ol>
7) Does well opening/stickup show signs of damage or deterioration?
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? Y N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A
NOTES AND OBSERVATIONS:

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Wall Ingraction Charlelist and Departing France
Site Name/ Location Chevron Fuller Project Number <u>B0047270.0007</u>
Well Identification <u>Mw-10</u> Inspection Date <u>Okclis /19</u> Inspector <u>LR</u>
Measured Well Depth 160.12 Measuring Point TOL Depth to water 136, 28
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li></ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.) Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A
NOTES AND OBSERVATIONS: sumething in well can't set mychasteeve.

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Well Inspection Checklist and Reporting	Form
Site Name/ Location - Chevron Fuller Project Number	
Well Identification <u>mw - 11</u> Inspection Date <u>our 113 119</u>	Inspector LR
Measured Well Depth 105.71 Measuring Point TOC D	epth to water 136 113
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A Y N N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

Site Name/ Location Chevron Fuller Project Number B0047270	.0007
Well Identification MW - 12 Inspection Date Le 113 / 14 Inspec	ector_LB
Measured Well Depth 171.02 Measuring Point Toc Depth t	to water 139, 72
VISUAL INSPECTION	
1) Is protective sleeve/cover in place and secure?	
2) Are hinges, latches, or locks functional and in good condition?	
<ul><li>3) Is concrete pad in satisfactory condition?</li><li>4) Is well name or other identification marked clearly on or near the well?</li></ul>	
<ul><li>4) Is well name or other identification marked clearly on or near the well?</li><li>5) Is well cap in place and in good condition?</li></ul>	<u>Y</u> <u>N</u> N/A
<ul><li>6) Is measuring point marked or readily recognized?</li></ul>	
<ol> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	$\frac{1}{N} = \frac{1}{N} = \frac{1}{N/F}$
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges,	
cuts, scrapes) suggestive of well damage from foreign objects in	
the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N NA
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND	<u> </u>
OBSERVATIONS:	

	Well Insp	ection Checklist and Report	ting Form		
Site Name/ Location	Couper Juli Chevron Fuller	Project Number			
Well Identification M	nw-14	Inspection Date au 113/19	Inspector	ß	_
Measured Well Depth	173,74	Measuring Point TUC	Depth to water	134.34	ð
		VISUAL INSPECTION			
<ol> <li>Are hinges, latche</li> <li>Is concrete pad in</li> <li>Is well name or ot</li> <li>Is well cap in plac</li> <li>Is measuring point</li> </ol>	es, or locks function satisfactory condi- ther identification are and in good con- t marked or readil	nd secure? onal and in good condition? ition? marked clearly on or near the w idition? y recognized? ons of damage or deterioration?	ell?	Y N Y N Y N Y N Y N Y N Y N	N/A N/A N/A N/A N/A
/) Does wen opening	g/stickup show sig	PHYSICAL INSPECTION		Y (N	() N/A
(Enter depth to water i Does water-level indic. (Total depth may be for	in the space provided abator/measuring de	evice travel freely down well cas ove.) evice travel to bottom of well? ell completion diagrams, or previous well	sing?	Y N Y N	
Does bailer/pump trave	el freely to and fro	om bottom of well?	Y	N	J/A
		ow evidence of damage (gouges, damage from foreign objects in		N N/A	
Does the bailer contain	excessive amoun	ts of silt or rust?	Y	NN	//A
Does water appear disc	colored or have an	unusual odor or appearance?	Y	NN	/A
Is the lock on the well of	cover/cap clean ar	nd fully functional?	Y	N N	/A
NOTES AND OBSERVATIONS:					

Site Name/Location       Chevron Fuller       Project Number       B0047270.0007         Well Identification       RW - 1       Inspection Date       Inspector       Inspector         Measured Well Depth       104.02       Measuring Point       Toc       Depth to water       133.024         VISUAL INSPECTION         1)       Is protective sleeve/cover in place and secure?       Y       N       N/A         2)       Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3)       Is concrete pad in satisfactory condition?       Y       N       N/A         4)       Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5)       Is well cap in place and in good condition?       Y       N       N/A         6)       Is measuring point marked or readily recognized?       Y       N       N/A		Well Inspect	tion Checklist and Report	ting Form			
Well Identification       RW -1       Inspection Date (LA [13]19]       Inspector       Inspector         Measured Well Depth       10.4.0.2       Measuring Point       Toc       Depth to water 133, 16.4         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         9) Does bailer/pump travel freely to and from bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         9) Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         10 pon removal from well, does bailer show evidence of damage (gouges	Site Name/ Location	Leeper Jal					
Measured Well Depth 16 4.03       Measuring Point Toc       Depth to water 133, 164         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (g	Site Mulle, Booulon	Chevron i uner		D0041270.0007			
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         4) Is well cap in place and in good condition?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         Cload epth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N	Well Identification 👖	_W - I	Inspection Date us 113/19	Inspector	R		_
1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         PHYSICAL INSPECTION       N       N/A         Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Ioes water appear discolored or have an unusual odor o	Measured Well Depth	164.03 M	leasuring Point Toc	_ Depth to water	133	Le Y	_
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>			VISUAL INSPECTION				
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	1) Is protective sleeve	e/cover in place and	secure?		Y	N	N/A
3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       PHYSICAL INSPECTION       Y       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N	2) Are hinges, latches	s, or locks functiona	and in good condition?	*****			
<ul> <li>5) Is well cap in place and in good condition?</li></ul>	3) Is concrete pad in s	satisfactory condition	on?	•••••	Y		N/A
<ul> <li>6) Is measuring point marked or readily recognized?</li></ul>	4) Is well name or oth	er identification ma	arked clearly on or near the w	/ell?	Y	N	
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>	5) Is well cap in place	and in good condit	tion?		Ŷ		
PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       M       M/A       M/A	<ul><li>o) Is measuring point</li><li>7) Doos well energing</li></ul>	marked or readily r	ecognized?				
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)YNN/ADoes water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)YNN/ADoes bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?YNN/ADoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/ANOTES ANDNYNN/A	7) Does wen opening	/suckup show signs	of damage or deterioration?.		Y	N	N/A
(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND         Y       N       N/A		P	HYSICAL INSPECTION		20		
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Here and the space of the	Does water-level indica (Enter depth to water in	ator/measuring devie n the space provided above.	ce travel freely down well cas	sing?	Y	N	N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A Does the bailer contain excessive amounts of silt or rust? Y N N/A Does water appear discolored or have an unusual odor or appearance? Y N N/A Is the lock on the well cover/cap clean and fully functional? Y N N/A NOTES AND	(Total depth may be fo	ound on drilling logs, well c	ompletion diagrams, or previous well		Y	N	N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       X       X       X	Does bailer/pump trave	I freely to and from	bottom of well?	Y	N	N/#	$\mathbf{A}$
Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Y       N       N/A	cuts, scrapes) su	ll, does bailer show ggestive of well dar	evidence of damage (gouges, nage from foreign objects in	-	n 💽	J/A)	
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A NOTES AND	Does the bailer contain	excessive amounts	of silt or rust?	Y	N	N/A	6
NOTES AND	Does water appear disco	olored or have an ur	nusual odor or appearance?	Y	N (	N/A	
	Is the lock on the well c	over/cap clean and	fully functional?	Y	) <sub>N</sub>	N/A	
						_	2
						_	_
						-	

Site Name/Location Chevron Fuller Project Number -B0047270.0007
Well Identification NW - 2 Inspection Date UL 112 /19 Inspector LB
Measured Well Depth 150,50 Measuring Point TUC Depth to water 135,23
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li></ul>
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional? (Y N N/A
NOTES AND OBSERVATIONS:

Well Inspection Checklist and Reporting Form           Site Name/ Location         Chevron Fuller         Project Number	<u>007</u>
Well Identification RW-2R Inspection Date 4911119 Inspect	or LB
Measured Well Depth 174.82 Measuring Point TOC Depth to	water 136.79
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           Y         N         N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

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Site Name: Cupu	rjul	Date: (19/19
Well Identification:	$m\omega - 1$	Personnel: JL/LB
Static Water Level:	134.56	Total Depth: 1+1 + 1+
Stop Time:		Start Time:

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
134	1.120	A
130	1.115	20,13
136	i .	19.80
140	1.113	19:25
142	1.113	19.71
144	1.115	19.24
146	1,116	19.25
146	1,122	19.25
150		19,25
150	Lillet	19,26
	1.812	19,21
154	3,536	19.27
	4,100	19,20
178	11,07+	19,29
160	4,20	19,80
102	4,221	19.81
164	4,268	19.81
100	4,004	19,91
148	4,827	19,95
	-	

Site Name:	er jai	Date:	ar113/19
Well Identification:	MW-L	Personnel:	JLILB
Static Water Level:	134.27	Total Depth:	108.39
Stop Time: 1058		Start Time:	1041

(recor	<b>Depth</b> d in two feet ntervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
134		0,312	20.51
136	·	0:310	20,30
136		0.316	20.16
140		0,348	20.13
142		0,289	20113
144		0.415	20113
140		01452	20,13
148		01447	20114
150		01474	20114
152		61480	20.15
154		0,488	20,16
150		01490	20117
158		0,444	20117
160		0,507	20,18
102		0,575	20,19
164		1,110	20,00
160		1,794	10121
LLEGI	3		
-			
-			
-			

Site Name: Cce i	rjul	Date:	cie/13/19
Well Identification:	MW-LH	Personnel:	JLILB
Static Water Level:	134.43	Total Depth:	142.47
Stop Time: 1036		Start Time:	1030

<b>Depth</b> (record in two feet intervals)	ntervals) recording)	
134	01773	20141
136	01762	20,3
136	0,7102	10.18 20.12
140	0 1768	20,12
-		
	1	
		-
		-
	-	

Site Name: Coop	er Jai	Date:	04/13/19
Well Identification:	111W - 3	Personnel:	JLILB
Static Water Level:	132,24	Total Depth:	+32.171.93
Stop Time: 1107		Start Time:	1100

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
132	01635	20.25
134	01632	20107
130	0,024	19.91
138	0,1018	19.83
tHD	01627	19.82
142	0,10210	19.81
144	6,626	19.61
146	0,627	19.81
148	0,1027	19.81
ICD	0,627	19.81
152	01627	19.82
154	Orle29	19.82
150	01627	19.80
155	01624	19.83
100	0,624	19,83
162	01027	19.84
164	01427	19.84
العلم	OILOZLO	19,85
168	01625	19.85
1+0	0+1024	19.87
172	01048	

Site Name: Caper	Jal	Date:	OLe/13/19
Well Identification:	MED-4	Personnel:	JLILB
Static Water Level:	135,21	Total Depth:	171.81
Stop Time: 3: 21 pm		Start Time:	31.15 pm

DepthConductivity(record in two feet intervals)(Denote Us/cm or MS/cm for each recording)		(Denote Us/cm or MS/cm for each			
146	6.353	20.101			
136	LO: 343	20:42			
140	10,310	20,10			
142	10.326	20.09			
144	6,424	20.00			
146	6.999	20:07			
146	7,910	20,00			
(JD)	9,034	20,00			
152	10:03	20:04			
154	10,00	20:00			
156	11,100	20,00			
155	13,31	20,127			
100	15.37	20:07			
162	19,49	20:07			
LLe H	2-420 24,20	20:07			
1 Lele	35.20	20:08			
168	36.93	20:08			
140	39.50	20:08			
170	39.82	2011			
	1				

Time:	vel: 134,0 3 1.10 pm	IS         Total Depth:           Start Time:         Start Time:	31.00 HN
[	<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
1	134	1.500	20,70
L	136	1.502	20103
	136	1.502	20,24
	140	1.519	2011
¥.	142	1,762	20.08
- E			
- F			
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1.0			

Site Name: Cooper	Jal	Date:	cul 13/19
Well Identification:	mu -5	Personnel:	JLILD
Static Water Level:	136.65	Total Depth:	178.174
Stop Time: 0817		Start Time:	0756

Depth (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
130	5,315	20145
136	5,301	20,711
140	5,362	20,20
142	5, 302	20118
144	5 303	20117
(40	5, 361	20.17
148	5,301	20117
160	5.42	20117
152	5, 303	20,10
154	5, 300	20115
156	5. 34	20,19
156	5.3	20,18
100	5, 31+	20119
162	533	20119
164	5-341	20,20
166	5 375	20,20
168	5. 375	20,20
170	6 375	20,20
172	10.32	20.24
		-

		0832
Depth (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
	0,922	20,20
	01997	20.24
40	01941	20:20
42	0,170	20.18
4463		
	3V 30 40 40 44463	31 0,422 30 0,417 40 0,1171 42 0,1970

Site Name:	er Jul	Date:	04/13/19
Well Identification:	MW-7	Personnel:	JLJLG
Static Water Level:	135,48	Total Depth:	142,40
Stop Time: OIIS pm		Start Time: 👩	104 pm

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
136	5.234	20,79
138	5.227	20,100
140	5.230	20.48
142	5. 184	20.24
144	5.731	20.17
140	6.167	20.15
148	Le . 876	20.15
120	7,709	20,14
152	8.415	20,14
154	9,779	20114
156	11.09	20,14
159	11.42	20,14
Something in total deprin	well preventing pube t	in cuirg
Something in tetul dipth	well preventing prube t	non cycing
Something in tatul depth	well preventing probe t	ion avang
Something in tatul depth	wert preventing prube t	ion guing
Something in tatul depth	wert preventing prube t	ion cycling
Something in tatul depth	wert preventing prube t	ion cycing

Site Name: Caper	1101	Date:	04113/19
Well Identification:	mw-8	Personnel:	JLILB
Static Water Level:	133.67	Total Depth:	144.85
Stop Time: 1128		Start Time:	1126

Depth (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
134	01452	20162
136	0.448	0,23
136	AL/H	
140		1
141		
(44	XV	
146	V	
	Laura not 10 aut	
	Isit' w conductivity	
	pube clue to	
	blocker	
		1

Site Name:	Jui	Date:	01113/19
Well Identification:	ww-c1	Personnel:	JUILB
Static Water Level:	131.95	Total Depth:	161,46
Stop Time: 1240		Start Time:	1275

<b>Depth</b> (record in two feet intervals)	(record in two feet (Denote Us/cm or MS/cm for each		t (Denote Us/cm or MS/cm for each	
132	1.430	20.00		
131	1.433	214124		
134	1.475	20121		
130	1:560	20,19		
14D	1,952	20,18		
146	2,110	20117		
144	2,416	20117		
46	2,599	20,16		
149	2,674	20116		
190	2,754	20,16		
152	2.236	20116		
154	2.857	20,14		
154	2.854	20116		
158	2.849	20,14		
160	2,460	20.16		

	1232	Start Time:	1228
	<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
- [	130	0.095	20.35
	132	1,209	20,24
	134	1.750	20,20
*	136	2,254	20:20
F			
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E			
t			
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F			
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ter Level: 131	Total Depth: Start Time:	140,70 2:34 pm	
Depth (record in two fee intervals)	et (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)	
136	1.190	20.07	
136	1.201	20,55	
ILAD	1.255	20.27	
142	1,279	20.20	
* block-upe	m well; can't out inycira	leeve	
10.0			
1.1.			
-			
	P		
		(	

Site Name:	er Jal	Date:	04/13/19
Well Identification:	11-11-11	Personnel:	JLILB
Static Water Level:	130.13	Total Depth:	165171
Stop Time: 115 Le		Start Time:	1150

	Depth (record in two feet intervals)Conductivity (Denote Us/cm or MS/cm for each recording)		<b>Temperature</b> (Fahrenheit or Celsius	
T I	30	0,000	20,52	
13		0.597	20.31	
13		0.597	20,20	
13		6,596	20,19	
13		61596	20,18	
(4		0.596	20,18	
-	12	0.594	20,17	
14		0,596	20,17	
-	+10	6.596	20,16	
14		01598	20,17	
	50	0,600	20,17	
-	52	01403	20,16	
-	54	0,007	20117	
	slø	6,61	20,16	
	54	0:017	20117	
_	10	01622	20,17	
-	2	01626	20,17	
_	ец	0.630	20,17	
	elo	0:032	20,18	
1				
-		-		
-				
-				
-				
-				
-			1	
-				
-				

Site Name:	Jai	Date:	04/13/19
Well Identification:	mu - 12	Personnel:	JLILB
Static Water Level:	139.92	Total Depth:	171.02
Stop Time: 1047		Start Time:	1040

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius)
140	1.078	20,107
142	1.069	20.36
144	1.044	20.27
140	11129	20,23
148	1,178	20,21
150	1,276	20,20
152	1,274	20.19
154	1,355	20.19
156	1,289	20.18
158	1.426	20,18
lud	1.495	20,18
162	1.514	20.18
(104	1.514	20,18
166	1.519	20.16
168	1,521	20.12
170	1:350	20,23

Site Name:	- er Jul	Date:	06/13/19
Well Identification:	WY160-14	Personnel:	JLILB
Static Water Level:	134.30	Total Depth:	173.74
Stop Time: 1:33 jii	m	Start Time:	1:22 JM

DepthConductivity(record in two feet intervals)(Denote Us/cm or MS/cm for each recording)		<b>Temperature</b> (Fahrenheit or Celsius	
134	0,440	20.240	
136	0,426	20119	
1:350	0.1023	20119	
140	0.1023	20.07	
142	01623	20:07	
144	UILOUS	20.07	
146	0.424	20:07	
146	0,624	20:07	
150	01424	20:07	
152	0.623	20:07	
154	0.1023	20:07	
ماكا	0.1023	20.07	
159	0,1022	20.07	
(100)	01623	LUIDT	
162	0,1026	20.08	
144	0.045	20,00	
1 Lole	0.10460	20.09	
168	0 1 664	20.10	
170	0.044	20.10	
172	0,044	20.11	
		-	

Site Name:	er Jul	Date:	06/13/19
Well Identification:	RW-1	Personnel:	JLILR
Static Water Level:	133.04	Total Depth:	164.03
Stop Time: 3'45 m		Start Time:	31.35 pm

	<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
1	134	1.3360	20,36
I	1360	1.336	20111
I	130	1.3260	20.00
I	140	1.330	20,05
ſ	142	1,307	20,05
ĺ	144	1,087	10:04
I	146	1,991	20.04
I	140	2,997	20:04
ľ	150	1,996	20:04
ľ	152	15,70	20.05
t	154	23,100	20,05
Ī	156	27.52	20:06
t	158	27.87	20:06
t	160	27.94	20:07
t	162	27,95	20.07-
t	ILOU	27.95	20:07

tic Water Le			
p Time:	1:51 pm	Start Time:	1:45 pm
	<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
	130	1.1024	20.37
	136	1. LOLOF	20,20
	140	1,997	20,116
	142	2,336	20117
	144	2,423	20,16
	146	2.439	20,110
	146	3,957	20,110
	150	10.50	20,16
1.1	152	14,20	20,16
*	154	16.16	20,14
	166	14,53	20119
1.1.9	158	14.52	20,20
	160	14.52	20,20

Site Name:	purjal	Date:	04/13/19
Well Identification:	rw-lr	Personnel:	JLILB
Static Water Level:	136,79	Total Depth:	170,82
Stop Time: 2121	pm	Start Time:	2:15 pm

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
136	1,479	70.42
136	1.483	20.33
140	1,747	20,22
142	5.598	20,21
144	13,41	20117
146	14:19	20,18
146	18,95	20,10
150	20113	20,10
152	20,34	20,10
154	20140	20,10
150	20144	20118
150	20,47	20,12
160	20,49	20,10
162	20,50	20.18
164	20,52	20119
166	20,101	20,19
168	20180	20,19
110	20,92	20119
172	20,99	20,20
174	21.01	20120
176	20,54	20121

4

Site Name: Citye	rijai	Date:	66/17/19
Well Identification:	MW-6R	Personnel:	CRIJL
Static Water Level:	176.15	Total Depth:	171.02
Stop Time:		Start Time:	0936

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
1314	0,707	20:00
136	OITOT	20101
140	01704	20105
142	01903	20104
144	0,703	20,03
1410	0.7W	20103
148	01713	20.03
150	0,700	20103
152	UITOLI	20103
154	01704	20:03
156	GI TOLE	20.04
156	0,707	20104
160	0,708	20105
162	01708	20:05
164	01707	20:05
JUELA.	DA JUIC	20.05
1.1440	DITUH	20105
110	01703	20,06
172	01723	20107
174	41769	20:08
176	0:847	20,09
HADLA	-0,047LB	
1.1.5		

Project:	CVX	oling Log Hes Tru	nuter			Project No.	_			Page <u>1</u> _	of <u>1</u>	
Site Location:	LELPE	rdal		_						Date Le 2	1110	
Site/Well No.	mw-	-1		-		Replicate No.		and the second se	Co	ode No.		
Weather:	1-14	sunny		1		Sampling Time:	Begin	9:35 0	m	End 9:38	an	
Evacuation D	ata						Field Paramet	ters				
Sounded Well	Depth (ft bmp)	141.14				_	Color	LIEW	ano	1 not		
Depth to Wate	ਖ਼ਾ (ft bmp)	134.54	)			_	Odor					
Gallons Pump Prior to Sampl		FUL H	yanu	leeve			Appearance	0	ent-c	botton .	Clu	
Sample Pump		~					*IRON, ferrou	s NIA		_	_	
Depth (ft bmp)		1	ATH	-		-	*SULFIDES				_	
	nple Pump controller tings (cpm/psi) ge Time Begin						Data Frame	-	_		_	
Purge Time				End			Remarks	-W	-		_	
Pumping Rate	(gpm)			~				÷	í.	11.0	-	
Evacuation Me	thod	Myara	steer				Sampling Personnel			LILB		
Time min	Water Level	Volume Purged	DO /mg/L1	ORP	pH (su)	Temp ©	COND	Turbidity NTU				
7:30 mm			2:20	173.0	7.32	20.49	3,941	-				
-							_	-			_	
			-				1	-		-	_	
		1		-					-	-	-	
_	1									-	-	
				the second se						_	-	
						3			_			
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative	_	
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative		
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative		
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative		
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative		
Constituents	Sampled		Cont	ainer Descrip	tion		Number		P	reservative		
	Sampled	point			tion			standard units	P	reservative		

Project:	CVX	HES TRU	nuter	100		Project No.		Pa	ge <u>1</u> of 1	
Site Location:	_	r Jal								te <u>Le 120 1</u>
Site/Well No.	mw-z					Replicate No.		Managements (		
Weather:		sunny		10		Sampling Time:	Begin	9:47	Code N	nd 9.47-
				-						
Evacuation Da		116 0	~				Field Paramet			
	Depth (ft bmp)	_				-	Color	Clear	(1 taux	
Depth to Water	r (ft bmp)	134.	27			201	Odor			_
Gallons Pumpe Prior to Sampli		FULL HI	Acrus	Leve			Appearance	cuite	1	
Sample Pump	Intake	5					*IRON, ferrou:	s NIA	-	
Depth (ft bmp)			H H	h		-		-+-		
Sample Pump ( Settings (cpm/p			1				Data Frame	-	_	
Purge Time	,	Begin End					Remarks	X		_
Pumping Rate	(apm)	Ů					_	V		
Evacuation Met		Hyara	shere	2			Sampling Perso	onnel	JLIL	R
Time (min)	Water Level	Volume Purged	DO (mu L)	ORP (mv)	pH /su	Temp	COND	Turbidity		1
	1.2.4		(index)	1 0001	1	1	[ ]	(NTO)		-
9:49an	$\sim$		2.81.	LINIA T	12 26	21.21	1.121	-		
9:49an	<u></u>		2.16	146.7	7 36	21.21	1.121	-		
9:49an	(		2.16	146.7	736	21.21	1.121			
9:49an			2.10	146.3	7 30	21.21	1.121			
9:49an			2.16	146.3	7 30	21.21	1.121			
9:49an			2.16	146.3	7 30	21.21	1.121			
9:49an			2.16	146.3	7 36	21:21	1.12_1			
9:49an			2.16	146.3	7 30	21.21				
9:41an Constituents	Sampled			146.3		21.21	Number		Prese	Prvative
	Sampled					21:21			Prese	ervative
	Sampled					21.21			Prese	ervative
	Sampled					21:21			Prese	ervative
	Sampled					21.21			Prese	ervative
	Sampled					21.21			Prese	ervative
	Sampled					21.21			Prese	ervative
Constituents	Sampled	point		tainer Descri				standard units	Prese	Prvative

Project:	(VX	HEU TINU	nuter			Project No.			Pa	age <u>1</u> of <u>1</u>	
Site Location:	CLORE	rJal							D	ate 04/201	
Site/Well No.	mw-	- 2A		_		Replicate No.			Code	No.	
Weather:	1101	allning				Sampling Time:	Begin	9 44		End 9:44	
Evacuation D	ata						Field Paramete	ers			
Sounded Well	Depth (ft bmp)	14214	1				Color	cleau	1 tun		
Depth to Wate	r (ft bmp)	134.4	5			Odor			-		
Gallons Pumpe Prior to Sampli		FULLH	mara	ul-ecve			Appearance	claud	4		
Sample Pump		1	Let			-	*IRON, ferrous	s MIA-	-		
Depth (ft bmp)			NIM	1		-	*SULFIDES Data Frame	-			
Sample Pump			/					- 1.	_		
Settings (cpm/	psiy			End		-	Remarks	N/		_	
Purge Time		Begin		End		·		V	_		
Pumping Rate		Hydruo	terve				Sampling Perso	nnel	JLIL	B	
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP	pH (su)	Temp ©	COND	Turbidity (NTU)			
9:44am			2.42	1471	7.71	20.68	6,743	-	-	1	
						· · · · · · · · · · · · · · · · · · ·		1			
	1										
							1		1		
	2										
			1					-			
					1			-		-	
Constituents	Sampled		Con	tainer Descrip	otion		Number		Pre	servative	
	_		_			5.1.1		2			
						2			-		
						S			_		
	_		-								
						<					
	below measuring				mililiter		8.U.	standard units			
C	below measuring degrees Celsius feet mililiters per mint			mS/cm mS	mililiter milisiemens p microsiemens not applicable	er centimeter	s.u. mv NTU umhos/cm	standard units milivolts Nephetometric T: Micromhos per c			

Project:	CVX	HEU TR	unister	-		Project No.			Page	e <u>1</u> of <u>1</u>	
Site Location:		Jai		_					Date	120/14	
Site/Well No.	mw -					Replicate No.					
Weather:	HOT, 5					Sampling Time:	Begin	9:32 an		9.32.01	
Evacuation D	ata						Field Paramet	ers		-	
Sounded Weil	Depth (ft bmp)	171.0	13				Color				
Depth to Wate	er (ft bmp)	132	. 24			-	Odor	-			
Galions Pump		510 W	111115	1.0.10			Appearance	citar			
Prior to Sampl	ling	FLU H	ILLIVAO	TLEVE		-	*IRON, ferrous	s N(H-			
Sample Pump Depth (ft bmp)		1					*SULFIDES				
		/	W.L.				Data Frame				
	nple Pump controller tings (cpm/psi) ge Time		1			S. (	Remarks				
Purge Time		Begin	_	End		-		Y			
Pumping Rate	(gpm)	-	ر م ال			-	Sampling Pers	onnei	JLIL	ß	
Evacuation Me	ethod	Hyava	ULEVI	£		-		-			
Time (min)	Water Level (feet)	Volume Purgeo	DO (mg/L)	ORP	pH (su)	Temp ©	COND	Turbidity (NTU)	-		
9:32am			2.43	108.0	1.69	20.00	0-1033				
-	L	÷	1							1	
		1 m			· · · · ·	/					
			12 3			1					
					+	-					
				1		11 11				-	
Constituents	s Sampled		Con	tainer Descri	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descri	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descri	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descrip	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descri	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descri	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	tainer Descrip	ption		Number		Prese	rvative	
Constituent	s Sampled		Con	ml mS/cm	mililiter	er centimeter	Number	standard units	Prese	rvative	

Project:	CVX	HEU TRU	noter			Dut					
Site Location		er sal				Project No.	-		Page	1 of	
Site/Well No.									Date	04/201	
Weather:		niny		-		Replicate No.			Code No.		
				-		Sampling Time:	Begin	10:22 am	End	10:22	
Evacuation [	Data						Field Param	eters		-	
Sounded Wel	l Depth (ft bmp)	171.8				_	Color	tan			
Depth to Wate	er (ft bmp)	135.2	1			_	Odor	and the second sec			
Gallons Pump Prior to Samp		FULL H	udraus	Leve			Appearance	cibude	0	-	
Sample Pump		<u></u>	-		-	-	*IRON, ferrous				
Depth (ft bmp)			Curr	1		-	*SULFIDES	1			
Sample Pump Settings (cpm/			Sugar	6			Data Frame				
Purge Time	F 7	Begin	1.00	End	-	-	Remarks				
umping Rate	(apm)	Degin		Eno		-		N			
vacuation Me		Hydra	Steve				Sampling Pers	sonnel <u>Jt</u>	ILB		
Time	Water Level	Volume Purged	DO	ORP	pH	Temp	COND	Turbidity		_	
6:22am	1		1.13	(mv)	15U	21.57	9.462	(NTU)			
					1.10	E YT	-1.400		-		
			1	-							
	1			1	-				-		
							-				
				-					-		
					-						
Constituents	Sampled	1			-		+				
	Bampieu		Cont	ainer Descrip	otion	1.1.2	Number		Preserva	tive	
				-	-	213	_				
_						8					
				_					-		
		-	-								
								-			
	elow measuring p	oint		ni r	nilliter		.u.	standard units			
	egrees Celsius				nilisiemens per			milivolts			

Project:	CVX	HEU True	noter			Project No.		Page 1 c	of <u>1</u>		
Site Location	carpe	( Jai							Date OLe (	20	
Site/Well No.	mw-1	AF				Replicate No.	and the first second		Code No.		
Weather:	HUTI	unn		2		Sampling Time:	Begin	10:24	End ID: 1	4	
Evacuation [	Data						Field Paramet	ters			
Sounded Wel	ll Depth (ft bmp)	145.50	5				Color	Fan			
Depth to Wat	er (ft bmp)	134.9	6				Odor	and the second second			
Gallons Pump		FULL ML	narun	1draviere			Appearance	clandy	1		
Prior to Samp		1000(100	1			-	*IRON, ferrous	s N/n			
Sample Pump Depth (ft bmp		1	VIN		_		*SULFIDES				
Sample Pump	mple Pump controller ttings (cpm/psi)		1			D	Data Frame			_	
Settings (cpm			1	_	-	-	Remarks	110			
Purge Time		Begin		End		-		V			
Pumping Rate	e (gpm)			-			Sampling Pers	annel d	LILB		
Evacuation M	ethod	Hijan	WELVY	٩	_	_	Samping Pers		- 1 - 3		
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP	pH (su)	Temp	COND	Turbidity			
10:24	-		1.45	134.5	1	21.64	1.822				
				1		1					
	1										
										-	
-										-	
-	1 1				l	Ļ		l l		_	
Constituent	ts Sampled		Cont	tainer Descri	ption		Number		Preservative		
			-					5 E		_	
						1 3		2 E			
								2 2			
						<					
		1				5 8		2 =		-	
			-	_	_	2		9 A			
mp	below measuring	point		mi	mililiter		\$.U.	standard units			
a subs											
0	degrees Celsius feet			mS/cm mS	milisiemens p microsiemens		mv NTU	milivolts Nephelometric Turb	idity Linits		

Project:	CVX	HES TRU	nster	1		Project No.			Page	1 of _1
Site Location:	Cape	y Jal								10/20/1
Site/Well No.	mw-	5				Replicate No.			Code No.	
Weather:		sunny		2		Sampling Time:	Begin	10 USAM		10:05a
Evacuation D	ata						Field Parame	ters	_	
Sounded Well	Depth (ft bmp)	173,93	r				Color	cles		
Depth to Wate	r (ft bmp)	134.10	5				Odor			_
Gallons Pumpe		FULL H		HALLA			Appearance			
Prior to Sampli	1	<u>ruu n</u>	Victoria	1 Sev C		-	*IRON, ferrou	AIN a		
Sample Pump Depth (ft bmp)		1					*SULFIDES			
Sample Pump	controller		Cur 1	,			Data Frame			
Settings (cpm/			1			-	Remarks			
Purge Time		Begin		End			Remaine	V		
Pumping Rate	(gpm)		_	1	-				JUIL	20-
Evacuation Met	thod	Hyclina	sterve	_		_	Sampling Pers	onnel	0010	1
Time (min)	Water Level (feet	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity		
10:05 am	-		1.03	161.3	1.00	2149	5.174			
		1.								
						1				
									-	
					-					
	1		-	1		1				
		-								-
Constituents	Sampled		Cont	ainer Descrip	otion	-	Number	1	Preserv	vative
								3 3		-
										-
								2 1 2		
	1					2 3		5 E		
								standard units	_	
mp	below measuring	point		m	miniter					
C	below measuring degrees Celsius feet	point		mS/cm	mililiter milisiemens p microsiemens	per centimeter	s.u. mv NTU	standard units milivolts Nephelometric Tur		

Project: 📢	X HEU -	Trunsfer		-		Project No.			Page	1 of 1
site Location:	Carev	dal							Date	4/20/14
ite/Well No.	mw	AL				Replicate No.		····	Code No.	_
/eather:	Hot ,	sunnig				Sampling Time:	Begin	101.00	End	10:08
vacuation D	ata						Field Parame	ters		
unded Well	Depth (ft bmp)	144.0	5			-	Color	rust , c	lear	
pth to Wate	r (ft bmp)	176.71	1				Odor			
Ilons Pumpe		FULL HU	obauth	a cre			Appearance	Linde	1	
or to Sampli		runny	araon	eve		-2	*IRON, ferrou	IS MIA	(	
mple Pump pth (ft bmp)		1			_		*SULFIDES	1		
imple Pump	controller	1	PIN	-			Data Frame	1		
ettings (cpm/	psi)					-	Remarks	-		
irge Time		Begin		End		-		V		
imping Rate		Hudrau	Here	-	_	-	Sampling Pers	onnel	JLL	13
Time	Water Level	Volume Purged	DO	ORP	pН	Temp	COND	Turbidity		
min D: 08 cuth	feet		(mg/L)	(mv) 146.7	(su)	0	0.811	NTU		
call	-		2.37	THURT	4.51	21,54	orall	1		
				·		-	-	-		
						-				
-	-							-		
_						-		-		
Constituents	Enmiled		Cont	ainer Descri	1	1	Number	<u>l</u> l	Braca	rvative
Jonsutuents	o ampieu		Cont	amer Descri	puon	-	Number		Fitat	I VOUVO
		2			_	2		3 9		
_								2 9		
		2 3				2		3 9		
		<				- D				
		8						3 3		
q	below measuring degrees Celsius	) point		ml mS/cm	mililiter	ner centimeter	8.U.	standard units milivolts		
	feet			mS	microsiemer		mv NTU	Nephelometric Tu		
min	miliiters per mina miligrams per lite			N/A NR	not applicab not recorde		umhos/cm VOC	Micromhos per ce Volatile Organic C		

Project:	CUR	HES TWO	un rev	-		Project No.			Page 1 of	
Site Location:	Coble	er lal							Date Lo 1 2 0	
Site/Well No.	mw-	7				Replicate No.			Code No.	
Weather:	Hut,	vunny				Sampling Time:	Begin	11:20	End 11 20	
Evacuation [	Data						Field Parame	ters		
Sounded Well	Depth (ft bmp)	162.0	U				Color	tan		
Depth to Wate	er (ft bmp)	135,0	-18				Odor			
Gallons Pump Prior to Samp		Full	navu	SHEWR			Appearance	cloud	4	
Sample Pump		K					*IRON, ferrou	IS NIH	1	
Depth (ft bmp)			0114				*SULFIDES			
Sample Pump Settings (cpm/		-	<				Data Frame	_		
	ipsi)		1				Remarks	N-		
Purge Time		Begin		End			_			
Pumping Rate	,	Hijdru	SILEVE			-	Sampling Perso	onnel	LILB	
Time	Water Level	Volume Purged	DO	ORP	рН	Temp	COND	Turbidity	-	
(min)	(feet)		(mg/L)	(mv)	SU	0	1	(NTU)		
11.20 201			0.96	189.5	6.98	21.70	11.41			
-						-				
			-							
	-									
Constituents	s Sampled		Cont	alner Descrip	otion		Number		Preservative	
Constituents	s Sampled		Cont	ainer Descrip	ption		Number		Preservative	
Constituents	s Sampled		Cont	alner Descrip	otion		Number		Preservative	
Constituents	s Sampled		Cont	ainer Descrip	ption		Number		Preservative	
Constituents	s Sampled		Cont	alner Descrip	otion		Number		Preservative	
Constituents	s Sampled		Cont	alner Descrip	ption		Number		Preservative	
Constituents	s Sampled		Cont	ainer Descrip	ption		Number		Preservative	
mp	below measuring	point		mi	mililiter		s.u.	standard units	Preservative	
mp				mi mS/cm		r centimeter		standard units milivotts Nephelometric Turt		
Project:	CVX	HEU TH	inuter			Project No.			Pag	e <u>1</u> of <u>1</u>
-------------------------------	------------------------------------	---------------	--------------	----------------	----------------------------	----------------	---------------------	-----------------------------	-------------	------------------------
Site Location:	Lievel	Jal							Dat	e 010/201
Site/Well No.	1110-8					Replicate No.	<del></del>		Code No	
Weather:		chang				Sampling Time:	Begin	Off the second second	Er	
Evacuation D	ata						Field Parameter	rs		
Sounded Well	Depth (ft bmp)	144.8	5				Color	telli	_	
Depth to Wate	er (ft bmp)	133,0	+			100	Odor	1		
Gallons Pump							Appearance			
Prior to Sampl	ing	NIA	_	-			*IRON, ferrous			
Sample Pump Depth (ft bmp)		1					*SULFIDES	-	-	
Sample Pump		1					Data Frame			
Settings (cpm/			1		_	-	Remarks	al.		
Purge Time		Begin		End				1		
Pumping Rate	(gpm)		_	1-		-	Sampling Persor	nel	JL/LB	
Evacuation Me	ethod		-	- 26			e ann panag r ereer		Star 1 Star	
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)	B	1.000
			1.1.2.2						1.0	
no	ample	Collect	el u	able	to la	er 401	the n	block	NO.1-	
11		Con	~				10		per e	
					/					
	-									
						1				1
-				-				-	-	
	1							-		
Constituent	s Sampled		Con	tainer Descrij	ption		Number		Pres	ervative
			-							
							_			
							=			
bmp *C	below measuring degrees Celsius	point		ml mS/cm	millitter milisiemens p	ar continuetor		standard units milivoits		

ARCADIS Micropur	ge Samp	lina Loa								- anneg
roject:	-	ITU JTUM	ister			Project No.	_		Page	1 of
te Location:	COUPLY	Jai							Date	6/20/19
te/Well No.	mw-					Replicate No.			Code No.	
leather:	1-101 1	man-1		-		Sampling Time:	Begin	11 30 am	End	11:30
vacuation Da	ta						Field Paramet	ers		
unded Well D	Depth (ft bmp)	161.41	0	_			Color	tan		
pth to Water	(ft bmp)	131.9	5				Odor			
lions Pumpe or to Samplin		Fun M	yavau	teeve			Appearance	cloude	1	
mple Pump l	ntake	~					*IRON, ferrou	s MIN		
epth (ft bmp)	up controller						*SULFIDES	-		
ample Pump c attings (cpm/p			1				Data Frame	-1	_	
urge Time		Begin	1	End			Remarks			
Imping Rate (	(gpm)			1					JLIL	0
racuation Met	hod	Hydra	steeve	1			Sampling Perso	lannci –	ULIL	
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp ©	COND	Turbidity	1	1
30am			1.73	169.4	7.26	22.48	2.247	]		
			0	-						
						1				1
_										1
									Con-refe	
Constituents	Sampled		Cont	tainer Descrip	otion		Number		Prese	vative
		2 3			-			5 I S		
					-		_	5 5	_	
		2						1 1	-	
					-					
								2 3		
1p	below measuring	g point		mł	mililiter		s.u.	standard units		_
	degrees Celsius feet			mS/cm mS	milisiemens per microsiemens		mv NTU	milivolts Nephelometric Tu	urbidity Units	
	mililiters per min	ute		N/A	not applicable		umhos/cm	Micromhos per c		

ARCADIS Micropur	ge Samp	ling Log								
Project:	CVX	HIV Trun	uter	_		Project No.	_		Page	1 of
Site Location:	L. Dur	al	_						Date	0 20/19
Site/Well No.	mw-	9.4				Replicate No.		_	Code No.	
Veather:	Hut,	Junn	_			Sampling Time:	Begin	11:34	End	11:34
Evacuation Da	ta				-		Field Paramet			
iounded Well (	Depth (ft bmp)	141.7			-		Color	tan		
epth to Water	(ft bmp)	131.100	9				Odor			
allons Pumpe rior to Sampli		FUIL H	ydru	sterve			Appearance	Clarch	-	
ample Pump   epth (ft bmp)	ntake	~					*IRON, ferrou *SULFIDES	IS MIA		
ample Pump of			M.	t						
Purge Time		Begin		End			Remarks			
Pumping Rate (		Hydra	steve			-	Sampling Perse	onnel	JL/LA	5
Time	Water Level	Volume Purged	DO	ORP	pH	Temp	COND	Turbidity (NTU)		1
(min)	(feet)		(mg/L)	(mv)	(su) 7.33	2274	1. 297			
			1.00			L'L'				
-									- 1	1
							-			
-				-			-			
									-	
				-	-				_	
Constituents	Sampled		Соп	tainer Descri	ption		Number	<u> </u>	Preser	vative
		2	_	_			=	81.8		
			_				_	3118		
_			_					8118		
np	below measuring			mi	mililiter		S.U.	standard units	_	
0	degrees Celsius feet			mS/cm mS	microsiemen		mv NTU	milivolts Nephelometric Tur		
nt/min bg/L	mililiters per min miligrams per lite			N/A NR	not applicable not recorded		umhos/cm VOC	Micromhos per cer Volatile Organic Co		

ARCADIS Nicropur	ge Samp	ling Log								
oject:	CVX	HEJ THURN	ster			Project No.			Page	1 of
te Location:	C	Jac	_	-					Date	010/20/10
e/Well No.	mw-	10	-			Replicate No.	-		Code No.	
eather:	HOF.	cioude	-			Sampling Time:	Begin	<u> </u>	End	
acuation Da	ta						Field Paramete	ers		
unded Well [	Depth (ft bmp)	140,72	_			2	Color	NIA		
pth to Water	(ft bmp)	1310,28					Odor	-1		
llons Pumpe or to Samplir		NIA					Appearance	+-		
mple Pump I pth (ft bmp)	ntake	1					*IRON, ferrous			
imple Pump o ittings (cpm/p		1					Data Frame	X	_	_
urge Time		Begin	N.	End			Remarks	-	-	
Imping Rate (				~		-	Sampling Perso	nnel	ILILB	
Time (min)	Water Level	Volume Purged	DO (m)/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)		1
						1				
no sc	mple	lettertin	un	ible	the theo	W 451	due te	block	even	1
		-			-					
_								-		
			-	-				-		
-	1	-								
Constituents	Sampled		Cont	tainer Desc	ription		Number		Prese	rvative
		2 3								
		2 2		-		: 11			_	
		2 2						2		
		-		_				-		
		5 5					-			
p	below measurin degrees Celsius		_	ml mS/cm	mililiter milisiemens r	per centimeter	s.u. mv	standard units milivolts		
imin	feet			mS N/A	microsiemen not applicable	8	NTU umhos/cm	Nephelometric Micromhos per		
imin /L	mililiters per min miligrams per lit			NR	not recorded		VOC	Volatile Organic		

Project:	CVX	HEU TR	unut			Project No.			Page	1 of 1
ite Location:		Jai	-				-			06 120/1
ite/Well No.	mw-	- 11				Replicate No.	Carpenter		Code No.	
leather:	HUt	sunn-y				Sampling Time:	Begin	11241	End	11:41
vacuation Da	ita						Field Paramete	ers		
ounded Well [	Depth (ft bmp)	165.7	1		_		Color	clear		
epth to Water	(ft bmp)	130112					Odor	The state of the s		
allons Pumpe ior to Samplir		FULL H	ULIPAC	12207			Appearance			
ample Pump I		1 cert II				-	*IRON, ferrous	NIA		
epth (ft bmp)	паке	1	el lia				*SULFIDES	-10-		
	le Pump controller gs (cpm/psi)						Data Frame	W.		
	e Time Begin End					-	Remarks	EB-1		
	ping Rate (gpm)						at 11	ise pr	).	
acuation Meti		rujaru	GHEVE				Sampling Perso	nnel 🔄	IL/LB	
Time min	Water Level	Volume Purged	DO mo/L	ORP	pH su	Temp	COND	Turbidity (NTU)		
L. CHAIN		-	2.13	172.2	1.68	21.51	0.1025			-
-				6-C1		-	1			
				1				1		
	-								100.000	
	-	-								
Constituents	Sampled		Cont	ainer Descrip	otion		Number		Preser	vative
_					_	2 3		5 - C		
				_		2 3	_	( E		
			_	_	_	2	_	2 2		
_								-		
			-			200				
								_		
	below measuring degrees Celsius	l point			mililiter milisiemens p	er centimeter	s.u. mv	standard units milivolts		

Project:	CVX	HES Tra	nutur	-		Project No.		_	Page 1 of 1
Site Location:	Coure	r Jai							Date 06/20/14
Site/Well No.	nw -	12				Replicate No.			Code No.
Weather:	H4 . M	macy				Sampling Time:	Begin	8:52 am	End 8:520
Evacuation Da	مريح المرو						Field Paramete	ərs	
Sounded Well [	ITILOD						Color		
Depth to Water	r (ft bmp)	119,7	L				Odor		
Gallons Pumpe	d/Bailed			Leine			Appearance	clear	
Prior to Samplii	ng	FULL M	yuu	iteve		-	*IRON, ferrous	NIA	
Sample Pump I Depth (ft bmp)	Intake	1					*SULFIDES		
	ump controller					-	Data Frame	1	
Settings (cpm/p			1						
Purge Time						_	Remarks	N.	
Pumping Rate (	mping Rate (gpm)							10	
Evacuation Met	thod	Hydraw	leeve			_	Sampling Perso	nnel <u> </u>	ILILA
Time min	Water Level	Volume Purged	DÔ (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)	
8:5 Liur		-	2.35	192.1	8.23	20 58	1.226		
		1							
			1						
-									
	Complet		Cont	ainer Descrij	otion		Number		Preservative
Constituents	Sampled					< - >		-	
Constituents						-			
Constituents								8 3	
Constituents	s sampieo								
Constituents	- Sambied								
Constituents	. Sambiea								
mp	below measuring degrees Celsius			ml mS/cm	milliter	er centimeter	\$.u. mv	standard units milivots	

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Project:	CVXY	IEU Think	ter			Project No.			Page	1 of
Site Location:	Courte	jal								10/20/19
Site/Well No.	mw -	4				Replicate No.	<u> </u>	- Jamon ( - a	Code No.	
Veather:	HUTIU	LINNL				Sampling Time:	Begin	11:05	End	11:05 00
vacuation Da	ata						Field Paramet	ers		
ounded Well I	Depth (ft bmp)	178,74					Color	leau	(	
epth to Water	(ft bmp)	134,75	_				Odor			
allons Pumpe			drug	1-to elip			Appearance			
rior to Sampli		Juli h	14140	ILEVE			*IRON, ferrou	s NIA		
ample Pump epth (ft bmp)	Intake				~	*SULFIDES	1			
	Ile Pump controller Igs (cpm/psi)						Data Frame			
							Remarks	-V/-		
								V		
	nping Rate (gpm) cuation Method אומט אונטינ					-	Sampling Perso	innei	JLILR	
Time min	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity	1	
1:05 am			1.40	140 2	8,21	20.24	6.714			
			-	-						
									-	-
-	l					1				1
								<u>p</u>		
					-		1.		-	
Constituents	Sampled		Con	tainer Descrip	otion		Number		Preser	vative
_			_					1112		
			-			. 3				
						S 3		5 3		
			-	_						
				_	_	2				
			_							
	below measuring	point		ml	mililiter		s.u.	standard units		
	degrees Celsius feet	•		mS/cm mS	milisiemens pe	er centimeter	mv NTU	milivotts		

dt.

Project:	IVX	Hts Tru	nster			Droject Ma				
Site Location	Sec. 1			-		Project No.	_		Page 1	
Site/Well No	14								Date 4	12011
		sunny		-		Replicate No.	Dup-1		Code No.	
Weather:	1.001	ronning	_	×		Sampling Time:	Begin	10:14 a.M	End 10	man
Evacuation	Data						Field Parame	eters		
Sounded We	ll Depth (ft bmp)	164.0	8			-	Color	Ling		
Depth to Wat	ter (ft bmp)	133.64	1	_			Odor	_		
Gallons Pum Prior to Samp		FUIL H	1/18/2017	LEVE			Appearance			
		<u>-iun n</u>				-	*IRON, ferro	us NIA		
Sample Pum Depth (ft bmp		1					*SULFIDES	1		
Sample Pum		)	MUH		-		Data Frame	312		
Settings (cprr	ı/psi)		1			-	Remarks	1-1-2	taken at	,
Purge Time		Begin		End		-		llam		
Pumping Rate	e (gpm)			-	_		Sampling Per		JLILB	
Evacuation M	ethod	Hydra	Ullevi			100	ounping rea	somer	JELES	
Time (min)	Water Level (feet)	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)		-
10:1400	) —		0.83	193,0	6.57	21.31	24.20			
			_				1	1		-
			1	1.000	1					
	1		1							
-										
1.00							Y			
							1			
Constituent	s Sampled		Cont	ainer Descrip	tion		Number	1l	Preservative	
					-					_
	_			_		8. B		1 2		
	-					213		1 C		
_			_		_	8 9	_	2		
		-			_			- C		
						E 13				_
										_
np ;	below measuring degrees Celsius	point			mililiter milisiemens pe		8.u. mv	standard units milivoits		
/min	feet milliters per minur	te		mS	microsiemens not applicable		NTU	Nephelometric Turbi		
Æ	miligrams per liter				not recorded		umhos/cm VOC	Micromhos per centi Volatile Organic Con		

.

Project:	CVX	HEC Tru	unster			Project No.			Page 1 of _1
Site Location:		r Jal	_					_	Date 6 120 / 1
Site/Well No.	140-2	,				Replicate No.			Code No.
Weather:	HUT ,	MAYER				Sampling Time:	Begin	10.07	End 10:51
Evacuation D	Data						Field Paramet	ers	
Sounded Well	Depth (ft bmp)	156.5	0		_		Color	eleer	
Depth to Wate	ər (ft bmp)	138.23					Odor		
Gallons Pump		FULLA	Uden	( ente			Appearance	ciliade	
Prior to Sampl		runn	yarac			-	*IRON, ferrou	s N/A	
Sample Pump Depth (ft bmp)		1					*SULFIDES		
Sample Pump			10m				Data Frame		_
Settings (cpm/	/psi)		1	-		-	Remarks	SV.	
Purge Time		Begin		End		-		W.	
Pumping Rate		Hildran	Slewe				Sampling Perso	onnel <u>-</u> d	LILA
Time (min)	Water Level (feet)	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp ©	COND	Turbidity (NTU)	
10: STam			0.99	1865	9.16	21.99	9.319		
					A		1		
	1							1	
			-						
		1							
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
Constituents	s Sampled		Cont	ainer Descrij	ption		Number		Preservative
mp	s Sampled below measuring degrees Celsius	point	Cont	mi mis/cm	milititer		Number Number	standard units milivolts	Preservative

ge Samp	ling Log									
CVX+	HUCKA-HE	is trun	uter		Project No.			- P	age <u>1</u> of <u>1</u>	
COUL	Jai				_				ate (120/1	
mw-	LeR				Replicate No.	Sup-1		Code	No	
HUT IS	unny		-		Sampling Time:	Begin	9:53 a	-m	End 97.53	
ta						Field Paramet	ers			
Depth (ft bmp)						Color	clean	(		
(ft bmp)						Odor		_		
		- MALT	12000			Appearance				
ng	<u>- mu m</u>	LICEVAC	reve			*IRON, ferrou	IS MLA			
p Intake						*SULFIDES	1			
controller					-	Data Frame	N			
om/psi)					-	Remarks	Dup-	1 colle	uted e	
ne Begin End										
ng Rate (gpm)								ILI	LB	
hod	Mydra	Sleeve		_		Samping Fera	onne			
Water Level	Volume Purged		ORP	pH (su)	Temp	COND	Turbidity		1	
-			141.2		21,16	0.695				
	· · · · · · · · · · · · · · · · · · ·			1	-			1		
				1.1					-	
				1				1		
	-	-	-			-				
	1	1	-				-		-	
			-	1		1			-	
			-			1	-	-	-	
Sampled		Con	tainer Descri	ption		Number	-	Pn	servative	
				-			-			
					-		-			
						-	2			
		-				-				
			_				-			
	-			-		-	-			
below measurin	g point		ml	mililiter		\$.U.	standard units			
-	3		mS/cm mS			mv NTU	milivolts Nephelometric	Turbidity Units		
mililiters per min			N/A	not applicable	3	umhos/cm	Micromhos per	centimeter		
			NR	not recorded	ł	VOC	Volatile Organi	c Compounds		
	CVX + CCOPL MW - HUT M (ft bmp) d(Bailed ng intake controller osi) (gpm) thod Water Level (feet) (gpm) thod Sampled sampled below measurin degrees Celsius feet milliters per mir	Ccopy John         MW - Le R         Hut Muning         Intake         opth (ft bmp)         (ft bmp)         d/Balled         ng         Intake         controller         si)         Begin         (gpm)         thod         Multiple         Vater Level         Volume Purged         feet         sampled         sampled         below measuring point         degrees Celsius	CVX       Hycl/A-HES Train         Ccoper_Jan         mw - la R         Hut rank         c(thmp)         d/Bailed         ng         full         ad/Bailed         ng         full         begin         (gpm)         thed         Multicleve         Vater Level         Volume Purged       DO (mg/L)	CVX       Hup differentiation trainister         Ccorption       mw - left         Hut       filled         ng       filled         Intake       mw - left         controller       mm         sol       filled         (gpm)       Hut         thod       Hut         Water Level       Volume Purged       DO         Vater Level       Volume Purged       DO         iffeet       initiation       initiation         s Sampled       Container Description       initiation         is Sampled       Container Description       milliters per minute	CVX       Hutcl/Actites Twunster         Capped San         mw - Lak         Hut rauna         ita         Depth (ft bmp)         (ft bmp)         d/Bailed         ad/Bailed         full         ad/Bailed         full         ad/Bailed         full         ad/Bailed         full         ad/Bailed         full         ad/Bailed         full         full         ad/Bailed         full         full         ad/Bailed         full         full	CVX +Hyck/AHES Truch/fe/       Project No.         Casper Jan       mw - LeR       Replicate No.         Mw - LeR       Replicate No.       Sampling Time:         ta       Sampling Time:       Sampling Time:         ta       Depth (ft bmp)	CVX Http:///////////////////////////////////	CVX +H4CLAA+165 Truth(144'       Project No.         Ccoppendent       Replicate No.         MW - UR       Replicate No.         Hut ruth(1444)       Sampling Time:         Begin       Color         (ft bmp)       Odor         (ft bmp)       End         (ft bmp)       Bagin         (ft ft code         (ft ft code	CVX +H4ckbeHES TVUNITEY     Project No.     Project No.       Cccpro_1(c)     mwo - LeR     Replicate No.     Cutp - 1     Code       Mwo - LeR     Replicate No.     Cutp - 1     Code       Hut (cuture)     Sampling Time:     Bagin     9:03 cuto     Code       disaled     Field Parameters     Color     Clear       odisaled     Full     High Parameters     Color     Color       odisaled     Mill     Field Parameters     Color     Color       odisaled     Mill     Mill     Appearance	

ARCADIS Micropur	ge Sampl	ling Log								
Project:	LVX	HEU TRU	nster			Project No.	_		Page	1 of
ite Location:	Cole	cal	_						Date	66/20/14
ite/Well No.	RW-	Lor				Replicate No.	Annual provide the control of the first of the		Code No.	
Veather:	Hot , UU	IANA		_		Sampling Time:	Begin	IC' HA CLM	End	o ug an
vacuation Da	nta						Field Paramet	975		
ounded Well i	Depth (ft bmp)					_	Color	clear	_	_
epth to Water	(ft bmp)					_	Odor			-
ailons Pumpe ior to Sampli		FULL		heve			Appearance	<u>crand</u>	+	
ample Pump		~					*IRON, ferrou	s MIA		
epth (ft bmp)			NIP	-	_	-	*SULFIDES			
ample Pump		Lu				Data Frame		-		
ettings (cpm/p	osi)		1			-	Remarks	-1-		
Purge Time						-		V	_	
	Inclustion Method						Sampling Perso	onnel	dL/LI	3
vacuation Me	thod	MILINA	UNEVE			-		_		
Time (min)	Water Level	Volume Purged	DO m=/L	ORP (mv)	pH (su)	Temp ©	COND	Turbidity NTU	100 C	1
10:119 cm		<u></u>	0.94	185.4	6.68	23,91	20.24	-	11.11	
		1	1						1.11	+1
		-		1	1				1	1
									1	11
	1				1					
-						1				1
	1									
Constituents	s Sampled		Cont	tainer Descri	iption	-	Number	1	Prese	rvative
				-	_	-		2 I 2		
		2 3				2		2 2		
_		2	_			2				
		<				-				
		-			-	2		5 2		
	_					-				
mp	below measuring	g point		ml	mililiter	-	s.u.	standard units	-	
	degrees Celsius			mS/cm	milisiemens	per centimeter	mv NTU	milivolts Nephelometric Tul	hidity 1 Inite	
	feet			mS	microsiemer	10	INFILI		MINING CINCO	

Design & Consultancy for natural and built assets
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onitoring Well	Monitoring Well Date Cauged	DTW (ft btoc)	Total Dep n (ft btoc)	Notes
MW-1	11/20/19	134.45	174.Z	
MW-2	11/20/19	12.72	168.57	
MW-2A	11/20/19	134.24	142.23	
MW-3	P 11/19/14	132.50		
MW-4	11/19/19	Aller Market	HOTEL + SALANDA	the the
MW-4A	11/19/19	134.95		
MW-5	NAMES .	136.91	05 TH	
MW-5A	HONOR AND	146.46	139.18	
9-MM	}		1	No las r exists lo de la Ier L.
MW-6R	11/19 19	136,04	[21.FO	
7-WM	11/20/19	35.5	62.58	
MW-8	11/20/13	133,-4	26.0	
6-MM	11/20	151.50	162.0	
MW-9A	11201	131.63	145.66	
MW-10	11/20/1	136.36	60.	
MW-11	11/20/19	1 0.04	£.24	
MW-12	11/20/9	139.65	1=4.57	
MW-14	1 20/19	12.00	1-8-1	
RW-1	11/20 9	133.63	95.2	
RW-2	11 19	1.5.08	172.60	
RW-2R	11 19 01	1210.71	TP. 221	

MW-3 132.5

10

Site Name: Level: Well Identification: Static Water Level: Stop Time:

Date:	11/17/19	
Personnel:	CF.CH.	-
Total Depth:	175.90	
Start Time:	333	

Depth (record in two feet	Conductivity (Denote Us/cm of MS/cm for each	Temperature
intervals)	recording)	(Familenneit of Ceisius
33	0.709	20,67
135	6.693	0.53
137	681	10.4
19	0. 79	10-40
141	0,678	20.38
143	0,678	47.38
45	6170	0.38
147	Duba 9	20.38
14	0.479	10.11
191	Q.6HS	0.31
153	678	20.39
155	10-6-18	10.40
157	0.679	10.40
154	0,678	20,41
- IBL	0.977	20,41
115	Gust 1	20.42
Jut -	0.679	20.13
167	.679	20.43
161	0.671	1. sult
171	0, = 80	20.15
192	0.679	20.4
		*

Site Name/ Location	
	tor
Measured Well Depth Measuring Point Depth to	water <u>32.5</u>
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ý N N/A
Does bailer/pump travel freely to and from bottom of well?	(Y) N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y N/A
Does water appear discolored or have an unusual odor or appearance?	Y N/A
s the lock on the well cover/cap clean and fully functional?	Ŷ N N/A
NOTES AND OBSERVATIONS: Name to see a print pro-	

MW-GR

Site Name: Well Identification: Static Water Level: Stop Time:

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (F <del>ahrenheit</del> rr Celsiu
137	0 60	202.69
1351	0.358	20 63
41	F. 25 40	10.02
143	2,153	61
45	17	u u
147	4	u
144	4	11
131	3, 759	0
153	D.758	II.
155	0.759	20 62
181	0.71	10.62
154	0,360	20.62
184	0.162	2013
63	121761	11
165	OJARO.	11
167	0.759	12
169	0.754	20-64
171	D-354	20.64
173	0.75	20.65
175	CV 789	20.65
177	0.861	20-67
139	0.961	20. 67
181	D. BB4	20.07
183	0/9944	20.67
195	0.685	20.67

Date:

Personnel:

11/19/19

CF

Well Inspection Checklist and Reporting Form	
Site Name/ Location Project Number	
Well Identification MW-CR Inspection Date 11/19/19 Inspector	r de lem
00	rater 136.04
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	X N N/A X N N/A X N N/A X N N/A X N N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	$\begin{pmatrix} Y \\ Y \end{pmatrix}$ N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

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Site Name: Well Identification: Static Water Stop Time:

vel:136,	) - 5A Personnel: .46 Total Depth: Start Time:	<u>CF,CM</u> 139.98 143-
<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/em or MS/cm for each recording)	Temperature
134		20 3

Well Insuection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification MW-5A Inspection Date 11/19/19 Inspector CF CM
Measured Well Depth 139.98 Measuring Point 137 Depth to water 136.46
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>Y N N/A</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.) N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? $(Y)$ N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance?
Is the lock on the well cover/cap clean and fully functional? Y $(N)$ N/A
NOTES AND OBSERVATIONS: Did not deploy hydroxyleous clue to lock of Work your and the provide the state of th

2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semijannaal\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name: Well Identification: Static Water Level: Stop Time:

2004	al	
n: 🕔	MW-5	
l:	136:91	
	1501	

Date:	11/19/1-2	
Personnel:	CE EM	
Total Depth:	177.50	
Start Time:	1440	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
13B	5.40	20,83
14157	5-431	20.77
142	5.402	30.76
144	5.403	20.35
166	5.404	20 75
14B	5,404	20.75
· SO	5. WDW	20.5
52	5.403	20.75
154	5. 02	0.76
156	5.402	20.76
EE	5.400	20.76
60	5.319	20.77
165	5.311	20.13
164	5.490	20 77
166	5,399	0.77
168	5.400	20.78
174C	5.401	20.78
32	7.438	20.79
174	5.535	JQ.71
116	3.678	20.79

Well Inspection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification MW-5 Inspection Date 11/191 Inspector CM
Measured Well Depth 177.50 Measuring Point 174 Depth to water 136.91
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>8) N N/A</li> <li>9) N N/A</li> <li>9</li></ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing?
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y (N) N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional? $\begin{pmatrix} Y \\ Y \end{pmatrix} N N/A$
NOTES AND OBSERVATIONS:
Раве:
Page: 2:\Houston-TX\EN\\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Sammanual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name:	C
Well Identificat	tion:
Static Water Le	evel:
Stop Time:	

C	es	Tal	
ation:		MW-4A	
evel:		1-4.95	
_	_	1522	

Date:	11/1 1	
Personnel:	CFCI	
Total Depth:	147.60	
Start Time:	1516	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
Cie	1.6	20.63
0	1. 0	.63
140	1.626	20.63
2	1.760	20.62
144	27	22.63
146	.953	20
		-
-		

Site Name/ Location       Project Number         Well Identification       MW-4A       Inspection Date       Inspector       M         Measured Well Depth       147.60       Measuring Point       145       Depth to water       13.95         VISUAL INSPECTION         1)       Is protective sleeve/cover in place and secure?       N       N       N         2)       Are hinges, latches, or locks functional and in good condition?       N       N         3)       Is concrete pad in satisfactory condition?       N       N       N         4)       Is well ame or other identification marked clearly on or near the well?       N       N       N         5)       Is well ame or other identification marked clearly on or near the well?       N       N       N         7)       Does well opening/stickup show signs of damage or deterioration?       Y       N       N         7)       Does water-level indicator/measuring device travel to bottom of well?       N       N       N         Cleat depth may be found on dilling logs, well completion diagrams, or previous well inspection forms. Enter total depth may be found on dilling logs, well completion diagrams, or previous well inspection forms. Enter total depth may be found on dilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N </th <th>Well Inspection Checklist and Reporting Form</th> <th></th>	Well Inspection Checklist and Reporting Form	
Measured Well Depth 147.60       Measuring Point 145       Depth to water 13.95         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Cotal depth may be found on afiling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N         Does bailer/pump travel freely to and from bottom of well?       IV       N       N         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y	Site Name/ Location e Project Number	_
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing?       N       N/A         Chart depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel to bottom of well?       N       N/A         (Enter depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel to bottom of well?       N       N/A         (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon rem	Well Identification MW-4A Inspection Date 1/19/19 Inspector	M
1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N         7) Does well opening/stickup show signs of damage or deterioration?       Y       N         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         9) Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         10 cos bailer/pump travel freely to and from bottom of well?       Y       N       N/A         10 poes the bailer contain excessive amounts of silt or rust?       Y       N       N/A         10 poes the bailer contain excessive amounts of silt or rust?       Y       N       N/A         10 poes water appear discolored or have an unusual odor o	Measured Well Depth 147.60 Measuring Point 145 Depth to wa	ater 13 . 95
2) Are hinges, latches, or locks functional and in good condition?       Image: Solution of the second	VISUAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Image: Construction of the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Construction of the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Construction of the space provided above.)         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Image: Construction of the space provided above.)         Does the bailer contain excessive amounts of silt or rust?       Image: Construction of the space and fully functional?       Image: Construction of the space and fully functional?         Is the lock on the well cover/cap clean and fully functional?       Image: Construction of the space and fully functional?       Image: Construction of the space and the space and the space be space and the space of the space be space and the space be space and the space be space and the space of the space be space and the space be space and the space be space and the space and the space and the space be space and the space be space and the space be space and th	<ol> <li>Are hinges, latches, or locks functional and in good condition?</li></ol>	Ô N N/A Ô N N/A Ô N N/A Ô N N/A Ô N N/A
(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?         Does the bailer contain excessive amounts of silt or rust?         Y       N         N/A         Does water appear discolored or have an unusual odor or appearance?         Y       N         N/A         NOTES AND OBSERVATIONS:	PHYSICAL INSPECTION	
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Image: Completion diagrams, or previous well         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Image: Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Image: Y       N       N/A         NOTES AND       Image: Sliph diagrams, or previous well         NOTES AND       OBSERVATIONS:       Sliph diagrams, or previous well amount is of some diagrams, or previous well amount is		🔊 n n/a
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND OBSERVATIONS:       Still discussion to small amount solution to smallamount solution to small amount solution to s	(Total depth may be found on drilling logs, well completion diagrams, or previous well	Ý n n/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Ý       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Ý       N       N/A         NOTES AND OBSERVATIONS:       Study       July	Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Does water appear discolored or have an unusual odor or appearance? Is the lock on the well cover/cap clean and fully functional? NOTES AND OBSERVATIONS: Slith discussion to small a Mount $s$ t	cuts, scrapes) suggestive of well damage from foreign objects in	Y N N/A
Is the lock on the well cover/cap clean and fully functional? NOTES AND OBSERVATIONS: Slith distant to small a Mount st	Does the bailer contain excessive amounts of silt or rust?	Y N N/A
NOTES AND OBSERVATIONS: Slith distant to small amount 5 4	Does water appear discolored or have an unusual odor or appearance?	Ŷ N N/A
OBSERVATIONS: Slith distance to small amount 5 4	Is the lock on the well cover/cap clean and fully functional?	ÎY) N N/A
	OBSERVATIONS: Slip distance to small amount	ist

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al -4 135.06

Site Name:	Coors
Well Identifica	
Static Water Le	evel:
Stop Time:	54

Date:	11.19.00
Personnel:	CF CI
Total Depth:	77.64
Start Time:	50

Depth (record in two feet intervals)	Conductivity (Denote-Us/cm or (MS/cm) for each recording)	<b>Temperature</b> (F <del>ahrenheit o</del> r Celsius
136	6-616	20.52
1- 9	- 618	20.58
1-D	6.624	20160
1.2		0.62
144	7.020	10.61
146	1.4X	20:12
148	2 = 74	Stork 8
156	3	20.63
152	.0.04	0.63
154	0.	and
156	1.57	20.64
158	.30	20.6-
1.0	17:32	20.63
162	11.38	20.6
164	2.5	20.65
156	30	20.66
1.8	41.7	0.66
130	42.3	20 %
172	38757	
174	36.2=	20.7
176	3.15	20 /2

Well Identification       Imspection Date       Inspector       CM         Measured Well Depth       Imspection Date       Imspector       CM         Measured Well Depth       Measuring Point       Imspector       CM         VISUAL INSPECTION       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well can in place and in good condition?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing?       N       N/A         9) Does water-level indicator/measuring device travel to bottom of well?       N       N       N         10 Cost depth may be fund on dtilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N       N         Does bailer/pump travel freely to and from bottom of well?       (N       N       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y <th>Site Name/ Location</th> <th>Project Number</th> <th></th>	Site Name/ Location	Project Number	
Measured Well Depth       Measuring Point       P       Depth to water       5.06         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       N       N       N         2) Are hinges, latches, or locks functional and in good condition?       N       N       N         2) Are hinges, latches, or locks functional and in good condition?       N       N       N         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing?       N       N/A         Cleater depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel to bottom of well?       N       N/A         (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?			The CM
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Image: Note of Note Note of Note Note Note Note Note of Note of Note of Note of Note	Well Identification (100° If		NT N
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>N N/A</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>N N/A</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>N N/A</li> <li>1) Is well name or other identification marked clearly on or near the well?</li> <li>N N/A</li> <li>N N/A&lt;</li></ul>	Measured Well Depth	easuring Point 170	Depth to water 9.06
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>8) N/A</li> <li>9) Does water-level indicator/measuring device travel freely down well casing?</li> <li>9) N N/A</li> <li>9) Does water-level indicator/measuring device travel to bottom of well?</li> <li>10) (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>10) Does bailer/pump travel freely to and from bottom of well?</li> <li>10) N N/A</li> <li>11) Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>11) N/A</li> <li>12) Does water appear discolored or have an unusual odor or appearance?</li> <li>13) N/A</li> <li>14) Is the lock on the well cover/cap clean and fully functional?</li> <li>15) N/A</li> <li>16) N/A</li> </ul>		/ISUAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? $\widehat{V}$ NN/ADoes water level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) $\widehat{V}$ NN/ADoes bailer/pump travel freely to and from bottom of well? (upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? $\widehat{V}$ NN/ADoes the bailer contain excessive amounts of silt or rust?Y $\widehat{V}$ N/ADoes water appear discolored or have an unusual odor or appearance?Y $\widehat{V}$ N/AIs the lock on the well cover/cap clean and fully functional? $\widehat{V}$ NN/ANOTES ANDHorizonal $\widehat{V}$ NN/A	<ol> <li>Are hinges, latches, or locks functional</li> <li>Is concrete pad in satisfactory condition</li> <li>Is well name or other identification man</li> <li>Is well cap in place and in good conditi</li> <li>Is measuring point marked or readily rea</li></ol>	and in good condition? n? rked clearly on or near the v on? cognized?	Vell?Y (N N/A Vell?Y (N N/A Vell?Y (N N/A Vell?Y (N N/A VE N N/A
(Enter depth to water in the space provided above.)       Image: Constant of the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Constant of the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)         Does the bailer contain excessive amounts of silt or rust?       Image: Constant of the space provided above of the space and the space provided above of the space and the space and the space provided above.)       Image: Constant of the space provided above.)         Does water appear discolored or have an unusual odor or appearance?       Image: Constant of the space provided above.)       Image: Constant of the space provided above.)         Is the lock on the well cover/cap clean and fully functional?       Image: Constant	PH	IYSICAL INSPECTION	
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Completion diagrams, or previous well inspection diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Completion diagrams, or previous well inspection diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Image: N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N/A         Is the lock on the well cover/cap clean and fully functional?       Y <td></td> <td></td> <td>asing? (Y N N/A</td>			asing? (Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A Does the bailer contain excessive amounts of silt or rust? Y N/A Does water appear discolored or have an unusual odor or appearance? Y N/A Is the lock on the well cover/cap clean and fully functional? (Y N N/A NOTES AND	(Total depth may be found on drilling logs, well co	mpletion diagrams, or previous well	(Y) N N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       Y       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       Y       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       H       H       H       H       H       H	Does bailer/pump travel freely to and from	bottom of well?	Ý N N/A
Does water appear discolored or have an unusual odor or appearance?Y $N/A$ Is the lock on the well cover/cap clean and fully functional? $Y$ $N/A$ NOTES AND	cuts, scrapes) suggestive of well dan		1
Is the lock on the well cover/cap clean and fully functional? $(Y \ N \ N/A$ NOTES AND	Does the bailer contain excessive amounts of	of silt or rust?	Y N/A
NOTES AND	Does water appear discolored or have an un	usual odor or appearance?	Y (N) N/A
	Is the lock on the well cover/cap clean and f	fully functional?	Y N N/A

Site Name: Well Identification Static Water Level: Stop Time:

C e	er Jal
ion:	1.1-2R
vel:	136.71
6	2-11

Date:	11 19	
Personnel:	L.A. DW	
Total Depth:	188.97	
Start Time:	161	

Depth (record in two feet	Conductivity (Denote <del>Us/cm</del> or MS/cm for each	Temperature
intervals)	recording)	(* entrent of cersios
137	1.578	20.72
139	. 58	21.73
141	.735	135.7×
43	=21	.74
45	5-81	0.74
47	16	2.75
14	.03	1/
151	2) - 55	11
15	. 99	11
125	12.00	11
157	2:03	20.76
159	2.5	4
61	.06	{1
63	-2.07	11
65	22.09	200
1.00	1	11
169	217	U
17	.20	Ð
13	- 2	11
145	22.63	20. 8
1=7	μ.	11
(70	10	11
181	]1	11
3	22.45	207
192	22-44	Se 76
19	E 43	20,78
1	22.43	C275
		1

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Site Name: Well Identification: Static Water Level: Stop Time:

Allen	A. A.
n:	EW-2
1:	135.08
	-53

Date:	1111363	
Personnel:	CHILRY	
Total Depth:	172.60	
Start Time:	126	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
13	1.8.2	7
0	7 001	2?
0		
12	- 3	70
14	54	5.7
4-	2,553	2.5.72
108	2-31	20.73
150	- 0	20.73
52	36	
100	. 1	
1=6	=.27	201.74
15	.52	201.74
-0	15.66	74
-1-2	5-8	274
1.94	16.11	20,-

Well Inspection Checklist and Reporting Form	
Site Name/ Location Project Number	-
Well Identification	r cf/
Measured Well Depth 172.460 Measuring Point 64 Depth to w	water 135.08
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	X N/A X N N/A X N N/A X N N/A X N N/A X N N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	🗇 n n/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y (ŋ) n/a
Does the bailer contain excessive amounts of silt or rust?	Y N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
OBSERVATIONS: Mar on porto	

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Mu-

Site Name:	ner
Well Identifica	tion:
Static Water Le	evel:
Stop Time:	De

0821	<u>45</u> Total Depth: Start Time:	74.2
0.000		DIBLE
Depth (record in two feet intervals)	Conductivity (Denote Us/em or MS/cm for each recording)	Temperature (Fahrenheit or Celsiu
135	1.277	2.4-
137	.264	7.46
171	:263	7.42
14	2	7.4
143	.266	739
.45	1.2.61	5.8F
147	1.275	21
49	1-6	D.
131	28-	7.47
53	332	7.+6
15	55	Fult
157	8	7.83
15	1.246	7.33
4	요망해	7.3+
-3	4,335	7.3
5	4,349	7.35
107	4,0	7.34
WE I	1. 29	21724
71	4.8	20.39
175	4, 73	20.38

Date:

Personnel:

1120 .0

CM

CE

Well Inspection Checklist and Reporting For	m
Site Name/Location er er Jal Project Number	
Well Identification W-1 Inspection Date 11/1/19 Inspec	ector CFIM
	to water 31,45
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	
PHYSICAL INSPECTION	v
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Ý) N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	(Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y(N) N/A
Does water appear discolored or have an unusual odor or appearance?	Ŷ N N/A
Is the lock on the well cover/cap clean and fully functional?	Ý N N/A
NOTES AND OBSERVATIONS: TILL is a start of the start of o	Usmall and and

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Site Name: Well Identification: Static Water Level: Stop Time:

ation:	1-12	-
	- Will	_
Level:	1-7.6	

Date:	1120 9
Personnel:	CF CH
Total Depth:	174.57
Start Time:	0833

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
141	1.201	20.49
43	201	20.57
4	.260	Tele be
47	213	1, 32
11-11	1.248	20 3
15	,29	20.75
123	.383	61
-105	.442	L (
1-7	1.511	10
59	1.534	11
16	1.620	11
13	1-651	10
165	.663	le
6	664	11
161	- Leige	11
131	1.671	0.75
73	- 409	20.72

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification NW-12 Inspection Date 11/20/19 Inspector CF, CM
Measured Well Depth 4.57 Measuring Point 17 Depth to water 139.65
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>8) N/A</li> <li>9) N/A</li> <li>9) N/A</li> <li>9) N/A</li> <li>9) N/A</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? $(Y)$ N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? $Y (N) N/A$
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional? $(Y) N N/A$
NOTES AND OBSERVATIONS:

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-24

M

Site Name: Well Identification: Static Water Level: Stop Time:

0921	Start Time:	7
Depth (record in two feet intervals)	Conductivity (Denote-Us/em or MS/cm for each recording)	Temperature
135	. 817	20.3
157	. 809	2.51
129	. 813	.63
141	, 325	70.64
	4	1

Date:

Personnel:

1120/19

DA.

CE

Well Inspection Checklist and Reporting Form	
Site Name/ Location Project Number	
Well Identification MW-2A Inspection Date 11(20/19 Inspector	M
Measured Well Depth 12.23 Measuring Point 139 Depth to water O	21
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	N N/A N N/A N N/A N N/A N N/A N N/A N N/A
PHYSICAL INSPECTION	<u> </u>
Does water-level indicator/measuring device travel freely down well casing?	N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	N N/A
Does bailer/pump travel freely to and from bottom of well?	N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N/A
Does the bailer contain excessive amounts of silt or rust? Y	) <sub>N/A</sub>
Does water appear discolored or have an unusual odor or appearance? $Y$	) N/A
Is the lock on the well cover/cap clean and fully functional? $\begin{pmatrix} Y \\ Y \end{pmatrix}$ N	N/A
NOTES AND OBSERVATIONS:	
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#### Well Conductivity Profile Field data Sheet

Site Name: Some TA Well Identification Static Water Lev Stop Time:

ion: vel:4 0947		Personnel: F M Total Depth: 68, 7	
<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Eahrenheit or Celsi	
135	0.415	19.53	
7	2.41-	2.63	
134	1.00	20.66	
181	5.431	20,69	
143	2 455	0.70	
145	12,437	20.7	
7	0.2+91	20,72	
149	2,50	0.73	
101			

intervals)	recording)	(Eahrenheit or Celsius)
135	0,415	10.53
7	2.41-	.63
134	1,020	5.0.66
181	5.431	202.69
143	10 AST	0.70
145	12.417	20,7
17	0. 2i91	20,72
149	2,50	0.73
15		4
153		
123		
157		
159		J
16.1		
3		
165	1	
167		

Site Name/ Location Project Number	
Well Identification MW-2 Inspection Date 11/20/19 Inspec	etor AFGM
Measured Well Depth 168.57 Measuring Point 14 Depth to	water 134.21
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	
PHYSICAL INSPECTION	_
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y (n) n/a
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	y N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS: C2	
Site Name: Well Identification: Static Water Level: Stop Time:

1.73	is al	
ion:	MW-10	_
vel:	136.36	
	1004	

Date:	20 4	
Personnel:	CF. M	
Total Depth:	166-31	
Start Time:	0 - 6	

Depth (record in two feet	Conductivity (Denote <del>Us/cm</del> of MS/cm for each	Temperature
intervals)	recording)	(Fahrenheit or Celsius
138	. 310	20.02
140	1.321	20.07
142	1.356	2268
144	1.383	20.7
146	. 4(1	20.71
48	1.450	20.72
150	1.400	11
152	1.548	4
154	1-615	11
156	10 656	l (
158	1-4-12	17
Res 16C	1-015	4
		-

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification MW-10 Inspection Date 11/20/19 Inspector 12 M
Measured Well Depth 60.71 Measuring Point 156 Depth to water 136.36
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>Y N N/A</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y N/A
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional? $(Y N N/A)$
NOTES AND OBSERVATIONS:

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Site Name:	er Jal
Well Identification:	MW-14
Static Water Level:	130.48
Stop Time:	03

Date:	11/20/19	
Personnel:	CF CM	
Total Depth:	178.92	
Start Time:	01	

Depth (record in two feet	Conductivity (Denote-Us/cm or MS/cm for each	Temperature
intervals)	recording)	(Fahrenheit or Celsiu
132	0.05	20.56
134	D-654	20.60
136	0.664	20.61
133	61	20.62
140	11	20.63
142	11	il
144	0.665	20.64
146	0.664	u
148	11	20.65
150		4
152	11	(I
154	0.663	11
150	11	20.66
159	01662	20.66
10	Jethiz	20.66
12	0-03	20,67
165	4	L(
60		ti -
168	(1	4
170	1	4
472		11
山下		41
174		4
1.712		

Well Inspection Checklist and Reporting Form	
Site Name/ Location Project Number	
Well Identification Mark Inspection Date 1/20/14 Inspec	tor CM
Measured Well Depth 190.92 Measuring Point 194 Depth to	water 1.0.48
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ŷ N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	
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13-.5

Site Name: Well Identification: Static Water Level: Stop Time: 1101

 Date:	11/20/19
 Personnel:	CF M
 Total Depth:	1-2.58
Start Time:	1050

Depth (record in two feet intervals)	Conductivity (Denote Us/em or MS/cm for each recording)	Temperature (Fahrenheit of Celsius)
136	5.295	20.76
133	5-13	20.72
140	5.03	30.71
142	212	20.20
144	6.720	د(
146	7.269	Ji
148	3.01	и
150	9 : 092	21
152	91	71
154	14.7	Lj.
156	12.51	4
158	12.50	11
160	12.61	15
167	12,67	i (

Site Name/ Location Project Number	
1	ctor CF CM
	tata a
Measured Well Depth $162.58$ Measuring Point $160$ Depth t	o water 1990
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	
7) Does well opening/stickup show signs of damage or deterioration?	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ý N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y (N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y (N) N/A
Is the lock on the well cover/cap clean and fully functional?	(Y) N N/A
NOTES AND	U
OBSERVATIONS:	

Mui-B

Site Name: Well Identification: Static Water Stop Time:

65

		- 117
Depth (record in two feet intervals)	Conductivity (Denoteds/cm of S/cm for each recording)	Temperature
34	Oa 516	0.99
136	.500	20.75
138	9 483	20.7
140	- 48	20.66
142	11	20.64
144	LL	61
146	.481	к

Date:

Personnel:

11/20/2019

Site Name/ Location	
	pector CM
Measured Well Depth 146.92 Measuring Point 136 Depth	h to water 133,84
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Ø N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	(y) n n/A
Does bailer/pump travel freely to and from bottom of well?	Ý n n/a
Jpon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y N/A
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y (N) N/A
s the lock on the well cover/cap clean and fully functional?	IN N/A
NOTES AND DESERVATIONS: MANY CALLER OF SC	Curring

Site Name: Well Identification: Static Water Level: Stop Time:

	( a
ation:	MW-9
.evel:	131.,86
2.	No.

Date:	11/20,20	
Personnel:	CF M	
Total Depth:	162.0	
Start Time:	1145	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
132	10	20.82
134	7	20.
136	* 5-8	2000
B	1. 22	20.75
40	. 3	30.75
122	2,2	20.75
4	672	35.75
146	.849	0.76
148	2-178	
150	34677	20.76
152	20-	20.75
154	. 0	20.75
156	3.280	20.75
158	3- 1=6	20.75
160	.245	20:76
1:2	3.058	76

Site Name/ Location	
Well Identification March Inspection Date 11/20/2019 In	nspector F CM
Measured Well Depth 162 Measuring Point 3-86 Dep	oth to water 3.86
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	YNN/A YNN/A YNN/A YNN/A YNN/A YNN/A YNN/A
7) Does well opening/stickup show signs of damage or deterioration?	Y 🔊 N/A
PHYSICAL INSPECTION	<i>,</i>
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	A N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	<i>(</i> ¥) N N/A
Does bailer/pump travel freely to and from bottom of well?	ØN N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N/A
Does water appear discolored or have an unusual odor or appearance?	Y N/A
is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND DBSERVATIONS:	A cuting .
	0

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Site Name: Well Identification: Static Water Level: Stop Time:

ie:	r Ja
ntification:	MW-9A
ater Level:	13.63
e: 12	20

Date:11/20/2019Personnel:6 CMTotal Depth:1.5.66Start Time: $121^{2}$ 

Depth (record in two feet	Conductivity (Denote Us/cm or MS/cm for each	Temperature
intervals)	recording)	Pahrenheit or Celsius
1.2	. 966	20-86
134	5-6	20.78
136	.221	· 0, 7
	1,772	- 76
140	2.253	0.77
142	2.27	26.73
146	2.2	20.7
	1	

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification MW-44 Inspection Date 12019 Inspector CF
Measured Well Depth 145,66 Measuring Point 142 Depth to water 3,63
VISUAL INSPECTION
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> <li>N/A</li> </ol>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? $Y \xrightarrow{N} N/A$
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional?
NOTES AND OBSERVATIONS: Mills on the of
Paper

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Site Name: Well Identification: Static Water Level: Stop Time:

172

$\frac{1}{10}$	Date: Personnel: OL Total Depth: Start Time:	11/20/19 ?F 172. 12-6
Depth (record in two feet intervals	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
(30	0-6-2	20.85
32	0.6-0	20,79
134		20.76
136	(add)	20.75
1729	0.639	20.75
140	-63	10
142	.63	85
44		с(
44	.6 1	(
148	5.641	(1
150	0-642	(1
152	0.646	(I
154	,650	(i
56	-415-	¢1
158	0.00	دا
160	0,00	(1
162	+ 17	11
64	7	11
166	2,673	[[
68	. 6	(1
170	11	11

20.76

11

lite Name/ Location Jal Project Number	
Vell Identification	tor Cray
Measured Well Depth $172_{\mu}$ Measuring Point 8 Depth to	1
VISUAL INSPECTION	
<ul> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ul>	
PHYSICAL INSPECTION	
Oces water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Ooes water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
oes bailer/pump travel freely to and from bottom of well?	Ý N N/A
pon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y N/A
oes the bailer contain excessive amounts of silt or rust?	Y N/A
oes water appear discolored or have an unusual odor or appearance?	Y N N/A
the lock on the well cover/cap clean and fully functional?	Ý N N/A
OTES AND BSERVATIONS: A Sign -	6

Site Name: Well Identificatio Static Water Leve Stop Time:

BE-L
.63

Date:	11/2011
Personnel:	F, CI-V
Total Depth:	9
Start Time:	1403

Depth (record in two feet intervals)	Conductivity (Denote Us/am or MS/cm for each recording)	Temperature
134	. 450	20.0
136	18	20.8
8	1.420	- 18
140		2.13
-2	.43-	20-2
144	.615	20.62
146	2.0-8	20.62
148	2.0-8	0.62
150		20.62
1-2	4 8	20.62
		70.72
156	11.0	20.63
	26.53	2:.63
[5]	27.00	20.00
62 62	235	20.64

Well Inspection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification W-1 Inspection Date 11 20 / Inspector CM
Measured Well Depth 63.79 Measuring Point 68 Depth to water 133.63
VISUAL INSPECTION
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> <li>N N/A</li> <li>N/A</li> </ol>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y $(N)$ N/A
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional? $(Y)N$ N/A
NOTES AND OBSERVATIONS: added sell marting one well shall

Page: Z:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

# **APPENDIX C**

**Cumulative Summary of Groundwater Analytical Results** 



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-1	9/16/97			280.00	8,500.00			1,100.00	520.00	630.00	50.00	4,300.00	15,000.00
	2/25/98 2/14/01	 <1.00	306.00	280.00 306.00	5,600.00 11,000.00	 4.40	7.70	570.00 1,000.00	285.00 374.00	520.00 780.00	116.00	2,900.00	9,300.00
	5/17/02	<1.00	208.00	208.00	237.00	5.83	3.28	86.90	45.70	20.10	236.00 11.90	5,236.00 184.00	20,000.00 784.00
	10/23/02				168.00			96.80					696.00
	5/21/03	<1.00	290.00	290.00	6,600.00	<8.00	10.90	875.00	238.00	475.00	96.50	3,410.00	13,200.00
	11/25/03	<1.00	250.00	250.00	402.00	7.03	2.72	125.00	19.20	22.00	18.50	294.00	1,158.00
	5/12/04	<1.00	264.00	264.00	504.00	7.31	2.70	136.00	17.20	23.10	22.40	355.00	1,328.00
	11/16/04	<1.00	232.00	232.00	384.00	4.94	3.30	103.00	29.20	22.70	25.40	373.00	952.00
	11/16/05	<10.00	262.00	262.00	1,210.00	3.00	2.40	215 D1	85.40	92.60	23.00	847.00	2,640.00
	11/14/06 11/16/07	<10.00 <10.00	200.00 255.00	200.00 255.00	96.00 4,250.00	4.20 3.70	2.00 3.90 D1	76.00 602 D1	13.20 154.00	6.49 187.00	15.60 54.00	172.00 2.100 D1	624.00 10,900.00
	11/4/08	<5.00	190.00	190.00	110.00	6.30	1.60	83.00	10.00	5.80	7.90	180.00	590.00
	11/3/09	<10.00	270.00	270.00	4,100.00	4.10	2.80	640.00	190.00	250.00	61.00	2,300.00	8,000.00
	11/10/10	<10.00	223.00	223.00	2,670.00	1.92	2.62	373.00	138.00	196.00	21.50	1,480.00	5,020.00
	11/10/11	<5.00	209.00	209.00	3,220.00	1.02	2.37	275.00	169.00	176.00	22.50	1,340.00	5,250.00
Dup	11/10/11	<5.00	213.00	213.00	2,930.00	1.05	2.35	240.00	183.00	197.00	22.60	1,480.00	4,640.00
	10/11/12	<5.00	190.00	190.00	2,190.00	6.74	4.52	301.00	132.00	145.00	17.90	1,140.00	1,880.00
	10/8/13	<6.00	211.00	211.00	1,890.00	1.46	2.39	247.00	131.00	114.00	15.30	914.00	2,380.00
	10/7/14 10/21/15	<4.00	205.00	205.00	1,700.00 182.00	0.46	2.37	277.00 78.10	118.00	126.00	14.90	860.00	<b>3,690.00</b> 559.00
	10/21/15				1,320.00	0.83		221.00					2.700.00
	10/24/17				148.00	2.57		79.40					594.00
	10/18/18				1,290.00	0.79		215.00					2,360.00
	6/20/19				1,110.00								2,510.00
[	11/24/19				1,110.00			222.00					2,190.00
MW-2	2/25/98			210.00	5,900.00			760.00	840.00	380.00	30.00	2,650.00	9,400.00
	4/9/98			290.00	8,200.00			990.00	1,100.00	490.00	29.00	3,430.00	15,000.00
	2/14/01	<1.00	184.00	184.00	7,400.00	2.30	4.10	870.00	1,025.00	488.00	48.50	3,189.00	15,000.00
	5/17/02	<1.00	160.00	160.00	3,200.00	1.72	3.18	483.00	587.00	239.00	35.60	1,160.00	6,040.00
	10/23/02				2,920.00			451.00					6,770.00
	5/22/03	<1.00	158.00	158.00	2,550.00	2.04	3.87	386.00	448.00	176.00	20.00	1,020.00	5,880.00
	11/25/03	<1.00	160.00	160.00	3,330.00	<4.00	5.63	446.00	555.00	227.00	32.00	1,120.00	6,760.00 3.965.00
	5/12/04 11/16/04	<1.00 <1.00	146.00 120.00	146.00 120.00	1,750.00 430.00	<2.00 <1.00	2.78 2.13	246.00 56.90	308.00 104.00	112.00 29.40	29.70 22.40	549.00 158.00	3,965.00 832.00
	11/16/05	<10.00	171.00	171.00	4,720.00	0.72	2.60	645 D1	594.00	209.00	20.80	3,290.00	10,000.00
	11/14/06	<10.00	160.00	160.00	3,500.00	0.78 N	2.10	470.00	535.00	212.00	21.00	15,400.00	8,260.00
	11/14/07	<10.00	178.00	178.00	3,280.00	0.76	1.93	462 D1	449.00	152.00	16.20	1310 D1	9,110.00
	11/4/08	<5.00	150.00	150.00	2,900.00	<1.0	1.10	430.00	380.00	160.00	26.00	1,200.00	5,600.00
	11/16/09	<10.00	150.00	150.00	2,000.00	1.10	1.60	340.00	290.00	120.00	20.00	750.00	4,300.00
	11/12/10	<10.00	186.00	186.00	1,890.00	0.73	1.86	327.00	326.00	120.00	9.80	795.00	3,680.00
	11/10/11 10/11/12	<5.00	175.00 149.00	175.00 149.00	1,480.00 524.00	0.81 0.55	1.31	150.00	227.00 119.00	83.20 31.70	9.75 8.78	668.00	2,860.00
	10/11/12	<5.00 <6.00	269.00	269.00	1,180.00	1.20	1.92 <0.10	231.00 169.00	178.00	64.70	8.16	286.00 505.00	2,520.00
	10/7/14	<4.00	196.00	196.00	695.00	0.52	<0.023	147.00	143.00	47.50	7.30	343.00	1,310.00
	10/21/15				27.10	<2.00		58.60					388.00
	10/18/16				26.70	<0.50		34.40					352.00
	10/25/17				35.80	1.00		36.30					331.00
	10/18/18				65.90	0.66		48.50					384.00
	6/20/19				283.00								960.00
	11/23/19				27.70			42.00					274.00
MW-2A	2/26/98			190.00	280.00			330.00	144.00	36.00	5.70	215.00	1,200.00
	2/14/01	<1.00	162.00	162.00	44.00	1.30	2.30	76.00	64.40	16.70	7.02	45.50	390.00
	5/15/02	<1.00	176.00	176.00	36.60	<1.00	2.34	79.10	57.60	13.90	4.35	43.80	435.00
	10/23/02 5/22/03	<1.00	168.00	168.00	44.30 40.50	<1.00	2.18	97.00 75.50	67.20	14.30	3.76	 47.90	425.00 418.00
	11/25/03	<1.00	166.00	166.00	40.50	1.00	2.10	75.50	51.70	14.30	3.98	47.90	418.00
	5/12/04	<1.00	176.00	176.00	44.80	<1.00	2.23	76.50	62.90	15.00	3.66	43.60	440.00
	11/16/04	<1.00	164.00	164.00	52.50	1.22	2.78	75.40	68.80	15.30	3.98	49.10	428.00
	11/16/05	<10.00	151.00	151.00	56.80	0.60	2.30	75.1 D1	157.00	18.00	4.20	49.80	630 N
	11/14/06	<10.00	180.00	180.00	49.00	0.55	1.60	76.00	69.80	15.60	3.47	49.90	488.00
	11/14/07	<10.00	170.00	170.00	74.60	0.58	1.51	66.8 D1	666.00	15.30	<5.00	45.40	504.00
	11/4/08	<5.00	220.00	220.00	68.00	0.49	1.40	74.00	67.00	15.00	3.20	42.00	470.00
	11/3/09 11/11/10	<10.00 <10.00	230.00 158.00	230.00 158.00	62.00 86.10	0.59 0.45	1.60 1.73	81.00 74.00	66.00 53.90	15.00 14.90	3.40 2.86	50.00	480.00 474.00
	11/11/10	<10.00	175.00	175.00	129.00	0.45	1.73	101.00	92.50	23.30	4.17	42.80 64.70	474.00 614.00
	10/11/12	<5.00	173.00	173.00	76.50	0.20	1.60	79.40	69.20	15.70	3.62	45.30	500.00
	10/8/13	< 6.00	248.00	248.00	78.60	0.40	0.62	75.40	92.60	18.70	4.06	51.20	496.00
	10/7/14	<4.00	188.00	188.00	72.50	0.20	1.55	79.40	77.10	17.20	3.00	44.30	496.00
	10/21/15				76.70	<4.00		77.50					441.00
	10/18/16				84.60	<0.50		83.40					455.00
	10/25/17				83.10	1.23		77.30					512.00
	10/18/18				103.00	0.67		88.30					491.00
	6/20/19 11/23/19				86.50 88.00			 76.50					554.00 414.00
	11/20/18				00.00			10.00			-		



NMWQCC Groundwater Standard         250         1.60         10         600.00           MW-3         2/27/98           190.00         452.00           406.00         200.00         50.00           2/14/01         <1.00         158.00         158.00         30.60         1.60         2.40         100.00         54.50         19.00           5/17/02         <1.00         158.00         158.00         30.60         1.66         2.35         102.00         55.60         18.40           10/23/02            35.40           104.00             5/22/03         <1.00         166.00         186.00         32.30         1.20         2.38         101.00         52.20         16.80           11/12/04         <1.00         166.00         186.00         35.10         1.53         2.77         95.40         56.30         23.60           11/17/05         <10.0         170.00         170.00         30.00         0.97         2.20         108.D1         89.20         22.10           11/15/06         <10.00         160.00         36.00         1.10	11.00 7.61 5.04  5.39 5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40    48.00	237.00 48.60 50.00  54.60 51.70 47.50 58.90 93.40 57.20 50.60 48.00 56.00 48.00 55.20 50.60 45.10 53.00 51.00 54.90 38.80  	1,000 1,500.00 440.00 433.00 440.00 440.00 440.00 440.00 505.00 570.00 570.00 505.00 505.00 505.00 505.00 380.00 404.00 438.00 445.000 332.00 307.00 464.00
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7.61 5.04  5.39 5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 4.20 3.42 3.79 4.11 4.08 22.40    	48.60 50.00  54.60 51.70 47.50 58.90 93.40 57.20 50.60 48.00 45.10 56.00 45.10 53.00 54.90 38.80  	440.00 433.00 419.00 435.00 440.00 448.00 424.00 840.00 505.00 570.00 430.00 410.00 380.00 404.00 433.00 450.00 332.00 307.00 464.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5.04  5.39 5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40    	50.00  54.60 51.70 47.50 58.90 93.40 57.20 50.60 48.00 55.00 45.10 55.00 45.10 51.00 51.00 54.90 38.80   	433.00 419.00 445.00 440.00 440.00 424.00 424.00 424.00 430.00 410.00 380.00 430.00 438.00 438.00 438.00 438.00 432.00 332.00 337.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	 5.39 5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.79 4.11 4.08 22.40    	 54.60 51.70 47.50 58.90 93.40 57.20 50.60 48.00 56.00 48.00 56.00 48.00 56.00 48.00 56.00 48.00 56.00 48.00 56.00 48.00 57.00 50.60 48.00 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.60 50.00	419.00 435.00 440.00 448.00 424.00 840.00 505.00 5570.00 430.00 430.00 430.00 438.00 438.00 450.00 332.00 332.00 307.00 464.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5.39 5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40    	54.60 51.70 47.50 58.90 93.40 57.20 50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80 	435.00 440.00 448.00 424.00 840.00 505.00 570.00 430.00 410.00 380.00 404.00 450.00 332.00 307.00 464.00
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	5.19 4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40     	51.70 47.50 58.90 93.40 93.40 57.20 50.60 48.00 45.10 56.00 45.10 51.00 51.00 54.90 38.80 	440.00 448.00 424.00 505.00 570.00 430.00 410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.77 12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40     	47.50 58.90 93.40 57.20 50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80  	448.00 424.00 840.00 505.00 570.00 430.00 410.00 380.00 404.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12.70 8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40    	58.90 93.40 57.20 50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80 	424.00 840.00 505.00 570.00 430.00 438.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8.87 4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40     	93.40 57.20 50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80  	840.00 505.00 570.00 430.00 410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.30 <5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40     	57.20 50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80  	505.00 570.00 430.00 410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<5.00 4.00 4.20 3.42 3.79 4.11 4.08 22.40      	50.60 48.00 56.00 45.10 53.00 51.00 54.90 38.80  	570.00 430.00 410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	4.00 4.20 3.42 3.79 4.11 4.08 22.40     	48.00 56.00 45.10 53.00 51.00 54.90 38.80  	430.00 410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.20 3.42 3.79 4.11 4.08 22.40     	56.00 45.10 53.00 51.00 54.90 38.80   	410.00 380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3.42 3.79 4.11 4.08 22.40     	45.10 53.00 51.00 54.90 38.80   	380.00 404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3.79 4.11 4.08 22.40      	53.00 51.00 54.90 38.80  	404.00 438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.11 4.08 22.40     	51.00 54.90 38.80   	438.00 450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.08 22.40     	54.90 38.80   	450.00 332.00 307.00 464.00
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22.40     	38.80  	332.00 307.00 464.00
10/21/15         25.60       <2.00	    	  	307.00 464.00
10/18/16           37.10         0.66          109.00             10/24/17           35.90         1.50          98.70             10/18/18           209.00 <b>5.35</b> 567.00             6/20/19           40.00	  		
10/24/17           35.90         1.50          98.70             10/18/18           209.00 <b>5.35</b> 567.00             6/20/19           40.00			
10/18/18           209.00 <b>5.35</b> 567.00             6/20/19           40.00 <t< td=""><td></td><td></td><td></td></t<>			
6/20/19 40.00			415.00
			448.00
11/23/19 60.00 96.60	40.00		352.00
MW-4 2/27/98 230.00 12,000.00 1,300.00 1,700.00 880.00	48.00	5,300.00	22.000.00
<u>222/750</u> <u>230.00</u> 12,000,00 - 1,500.00 1,700.00 840.00	40.00	5,400.00	23,000.00
2/14/01 <1.00 232.00 232.00 <b>15,000.00 1.80</b> 6.80 <b>1,500.00</b>			29,000.00
5/17/02 <1.00 232.00 232.00 <b>11,300.00 2.01</b> 6.09 <b>1,380.00</b> 1,610.00 814.00	60.90	4,310.00	22,600.00
10/23/02 11,300.00 1,320.00			23,200.00
5/22/03 <1.00 220.00 220.00 11,300.00 <10.00 12.30 1,370.00 1,450.00 659.00	47.30	4,140.00	62,500.00
11/26/03 <1.00 218.00 218.00 <b>12,100.00</b> <8.00 <b>12.30 1,400.00</b> 1,830.00 889.00	62.00	4,620.00	54,450.00
5/11/04 <1.00 214.00 214.00 <b>14,200.00</b> <8.00 8.97 <b>1,560.00</b> 1,800.00 829.00	60.70	4,850.00	65,450.00
11/17/04 <1.00 222.00 222.00 <b>13,600.00</b> <20.00 <b>31.50 1,410.00</b> 2,020.00 972.00	73.60	5,900.00	25,200.00
11/17/05 <10.00 181.00 181.00 <b>9,440.00</b> 0.82 0.20 45.8 D1 849.00 387.00	28.10	3,880.00	24,300.00
11/15/06 <10.00 260.00 260.00 <b>14,000.00</b> <5.00 C 5.20 <b>1,400.00</b> 897.00	58.80	6,150.00	28,700.00
<u>11/14/07</u> <10.00 255.00 255.00 <b>14,800.00</b> 0.54 7.15 D1 <b>1,410 D1</b> 1,170.00 382.00	48.00	4,760 D1	36,300.00
<u>11/12/08</u> <5.00 200.00 200.00 <b>12,000.00</b> 1.20 0.33 <b>1,300.00</b> 1,500.00 840.00	82.00	4,800.00	22,000.00
<u>11/4/09</u> <5.00 250.00 250.00 <b>15,000.00</b> 1.10 5.30 <b>1,600.00</b> 1,500.00 1,000.00	65.00	5,800.00	30,000.00
<u>11/11/10</u> <5.00 294.00 294.00 <15,500.00 <1.00 10.20 1,320.00 904.00	40.40	5,450.00	25,500.00
<u>11/10/11 &lt;5.00 277.00 277.00 16,900.00 0.11 6.16 1,060.00 1,680.00 1,110.00</u>	40.00	6,490.00	28,900.00
10/11/12 <5.00 256.00 256.00 <b>5,850.00 2.10</b> 4.58 <b>629.00</b> 434.00 334.00	21.20	2,620.00	12,000.00
10/8/13 < 6.00 294.00 294.00 <b>16,200.00</b> 0.72 6.79 <b>1,460.00</b> 1,600.00 1,180.00	40.80	7,370.00	36,300.00
10/7/14         <4.00         291.00         15,000.00         <100.00         7.15         1,740.00         1,350.00         1,060.00           10/20/15            3,200.00         <40.00	44.10	4,250.00	32,400.00
<u>10/20/15</u> <b>3,200.00</b> <40.00 402.00 10/18/16 <b>17,900.00</b> <1.00 <b>1,890.00</b>			35,300.00
10/25/17			12,300.00
10/18/18 14,800.00 <0.10 1,510.00			24,700.00
			7,830.00
<u></u>			5,960.00
MW-4A 2/27/98 180.00 1,600.00 410.00 470.00 130.00	11.00	620.00	3,300.00
2/14/01         <1.00         154.00         1,600.00         1.40         2.80         210.00             5/15/02         <1.00	10.30	125.00	4,000.00
5/15/02 <1.00 156.00 156.00 577.00 <1.00 2.23 121.00 200.00 49.50 10/23/02 114.00 114.00	10.30	125.00	1,610.00
5/22/03 <1.00 154.00 154.00 <b>844.00</b> <1.00 2.43 160.00 279.00 58.90	10.10	248.00	2,200.00
<u> </u>	15.20	329.00	2,200.00
1120100 \$1.00 156.00 156.00 <b>1984.00</b> <2.00 3.30 179.00 297.00 66.50	11.50	279.00	2,300.00
1/1/7/04 <1.00 164.00 164.00 1,110.00 <2.00 4.62 186.00 39.00 75.40	14.90	413.00	2,235.00
11/16/05 <10.0 181.00 181.00 827 D1 <0.50 2.20 160 D1 335.00 64.40	9.23	382.00	2,340 N
11/15/06 <10.00 620.00 620.00 <b>960.00</b> <0.50 2.60 170.00 227.00 53.50	8.10	406.00	2,870.00
11/14/07 <10.00 311.00 311.00 <b>845 D1</b> 0.35 3.60 D1 167 D1 205.00 44.90	7.33	334.00	2,650.00
<u>11/12/08</u> <5.00 640.00 640.00 <b>650.00</b> 0.32 2.20 170.00 160.00 37.00	9.90	290.00	1,700.00
<u>11/4/09</u> <5.00 670.00 670.00 <b>670.00</b> 0.56 2.60 150.00 110.00 27.00	7.40	300.00	1,600.00
<u>11/11/10</u> <5.00 217.00 217.00 <b>663.00</b> 0.51 2.58 125.00 65.90 15.60	4.42	317.00	1,760.00
11/10/11         <5.00         171.00         171.00         621.00         0.78         2.02         134.00         78.80         18.70	4.71	389.00	1,400.00
10/11/12         <5.00         169.00         516.00         1.12         2.60         100.00         48.70         11.30	4.45	359.00	1,200.00
10/8/13         <6.00         199.00         199.00         512.00         2.63         2.47         100.00         47.70         9.93	3.64	410.00	1,170.00
10/7/14 <4.00 186.00 186.00 <b>387.00 1.69</b> 2.54 102.00 37.10 7.78	3.17	276.00	962.00
<u>10/20/15</u> <b>328.00</b> <4.00 83.30			819.00
<u>10/18/16</u> <b>440.00</b> <u>1.49</u> <u>97.60</u>			1,150.00
10/25/17 <b>341.00 2.83</b> 93.40			960.00
10/18/18			901.00
<u>6/20/19</u>			1,040.00
<u>11/24/19</u> <b>321.00</b> 94.50			824.00



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa		d		250	1.60	10	600.00			1		1,000
MW-5	2/26/98			180.00	6,600.00	-		910.00	1,400.00	470.00	31.00	2,400.00	12,000.00
	2/14/01	<1.00	166.00	166.00	7,700.00	1.80	4.10	910.00					18,000.00
	5/17/02 10/23/02	<1.00	156.00	156.00	4,040.00 3,900.00	1.53	4.56	586.00 94.80	757.00	319.00	60.90	1,260.00	<b>8,340.00</b> 422.00
	5/22/03	<1.00	158.00	158.00	3,170.00	<4.00	6.52	550.00	644.00	215.00	49.90	1,240.00	7,860.00
	11/25/03	<1.00	168.00	168.00	5,120.00	<4.00	6.77	739.00	978.00	365.00	54.90	1,680.00	11,940.00
	5/11/04	<1.00	160.00	160.00	6,760.00	<3.00	4.65	1,030.00	1,180.00	417.00	40.30	2,120.00	20,380.00
	11/17/04	<1.00	172.00	172.00	6,750.00	<10.00	16.60	786.00	1,210.00	486.00	40.60	2,300.00	11,980.00
	11/17/05	<10.00	161.00	161.00	2,140 D1	0.79	0.16	334 D1	339.00	126.00	10.80	791.00	7,120 N
	11/14/06 11/14/07	<10.00 <10.00	160.00 161.00	160.00 161.00	2,000.00 5,790 D1	0.60	1.50 4.01 D1	300.00 668 D1	437.00 812.00	173.00 240.00	14.20 23.30	918.00 1,850 D1	4,420.00 16,300.00
	11/6/08	<5.00	160.00	160.00	4,900.00	0.78	0.32	540.00	660.00	310.00	35.00	1,600.00	9,700.00
	11/3/09	<10.00	160.00	160.00	5,100.00	0.51	2.30	710.00	860.00	320.00	<13.00	1,800.00	11,000.00
	11/11/10	<5.00	176.00	176.00	4,200.00	0.16	2.37	554.00	687.00	250.00	17.30	1,400.00	8,890.00
	11/10/11	<5.00	172.00	172.00	4,340.00	0.24	0.55	411.00	944.00	326.00	19.70	1,780.00	7,840.00
	10/11/12	<5.00	164.00	164.00	3,630.00	0.38	2.26	474.00	671.00	239.00	17.00	1,360.00	8,300.00
	10/8/13 10/7/14	<6.00 <4.00	176.00 172.00	176.00 172.00	3,730.00 2,830.00	0.37 <0.10	1.56 2.19	425.00 398.00	659.00 521.00	253.00 195.00	15.40 15.10	1,440.00 979.00	8,060.00 5,280.00
	10/21/15	<4.00	172.00	172.00	2,830.00	<40.00	2.19	362.00	521.00	195.00		979.00	5,280.00
	10/18/16				2,260.00	< 0.50		326.00					5,380.00
1	10/25/17				2,090.00	<5.00		318.00					3,780.00
Dup	10/25/17				2,010.00	<5.00		300.00					3,240.00
1	10/18/18				1,890.00	<0.10		323.00					3,420.00
1	6/20/19				1,700.00								4,280.00
L	11/23/19				1,530.00			250.00					3,900.00
MW-5A	2/26/98			170.00	190.00			180.00	107.00	23.00	3.50	117.00	740.00
1	2/15/01 5/15/02	<1.00 <1.00	164.00 182.00	164.00 182.00	140.00 53.50	1.20 <1.00	2.10 2.23	130.00 84.40	90.20 63.20	27.90 16.10	8.70 4.69	74.60 43.60	670.00 475.00
	10/23/02	<1.00	162.00	162.00	50.00	<1.00		616.00	03.20	16.10	4.09	43.00	<b>8,670.00</b>
	5/22/03	<1.00	158.00	158.00	32.50	<1.00	2.10	69.90	55.50	13.80	3.41	41.50	416.00
	11/25/03	<1.00	332.00	332.00	34.10	1.05	2.20	75.50	60.90	14.60	4.08	45.00	422.00
	5/11/04	<1.00	164.00	164.00	38.80	<1.00	2.25	75.80	60.90	15.00	3.40	43.20	484.00
	11/17/04	<1.00	152.00	152.00	39.60	1.37	2.66	74.30	58.10	13.60	3.83	48.50	430.00
	11/16/05	<10.00	191.00	191.00	40.20	0.82	2.10	75.2 D1	176.00	17.80	4.22	45.30	570 N
	11/14/06 11/14/07	<10.00 <10.00	240.00 227.00	240.00 227.00	47.00 54.40	0.64	1.50 1.45	79.00 68.7 D1	90.40 73.70	16.10 14.00	3.58 <5.00	51.40 44.20	588.00 528.00
	11/6/08	<5.00	350.00	350.00	53.00	0.00	1.45	72.00	76.00	15.00	3.40	43.00	450.00
	11/3/09	<10.00	710.00	710.00	47.00	0.72	1.50	79.00	65.00	14.00	3.30	50.00	440.00
	11/11/10	<5.00	182.00	182.00	49.60	0.57	1.61	73.60	55.70	12.90	2.79	42.00	606.00
	11/10/11	<5.00	170.00	170.00	131.00	0.49	1.15	116.00	83.80	29.90	5.16	85.70	594.00
	10/11/12	< 5.00	163.00	163.00	68.00	0.63	1.57	69.80	60.60	15.30	3.96	49.20	534.00
	10/8/13	<6.00 <4.00	182.00	182.00	80.20	0.57	1.60	67.50	69.30	16.20	3.29	53.40	462.00
	10/7/14 10/21/15	<4.00	168.00	168.00	73.60 84.90	0.29 <4.00	1.56	64.90 65.60	66.20	15.70	2.76	45.20	432.00 499.00
	10/18/16				101.00	< 0.50		65.40					466.00
	10/25/17				99.60	1.14		59.30					537.00
	10/18/18				132.00	0.79		67.50					477.00
	6/20/19				118.00								650.00
L	11/23/19				116.00			61.10					502.00
MW-6	2/26/98			200.00	260.00			400.00	180.00	44.00	6.20	205.00	1,200.00
1	2/14/01 5/17/02	<1.00 <1.00	158.00 162.00	158.00 162.00	59.00 37.80	1.70 1.62	2.20 2.14	99.00 99.30	67.50 63.10	22.10 19.60	7.67 5.12	52.30 48.60	470.00 427.00
1	10/23/02	<1.00			46.10	1.62	2.14	109.00			5.12	48.60	331.00
1	5/22/03	<1.00	162.00	162.00	40.10	1.24	2.13	94.40	61.70	17.40	4.23	51.90	464.00
1	11/25/03	<1.00	154.00	154.00	53.60	1.40	2.18	98.00	53.60	18.70	4.97	51.70	482.00
1	5/11/04	<1.00	156.00	156.00	54.40	1.23	2.19	97.00	59.00	18.10	4.22	47.80	506.00
1	11/16/04	<1.00	162.00	162.00	57.90	1.64	2.68	99.80	66.60	19.60	5.16	57.00	464.00
1	11/17/05	<10.00	201.00	201.00	101.00	0.97	0.35	97.8 D1	103.00	20.20	4.10	59.10	730.00
1	11/15/06 11/15/07	<10.00 <10.00	750.00 284.00	750.00 284.00	68.00 162.00	0.99 <b>51.00</b>	1.50 1.35	93.00 96.3 D1	64.60 84.10	20.40 25.20	4.23 <5.00	57.10 62.10	507.00 630.00
1	11/6/08	<5.00	284.00	284.00	84.00	1.20	1.35	96.3 DT 95.00	67.00	25.20	4.30	53.00	490.00
1	11/3/09	<10.00	190.00	190.00	81.00	1.20	1.40	100.00	66.00	20.00	4.50	59.00	550.00
1	11/8/10					N	S - Well Dama	aged	·		•		
1	11/10/11						S - Well Dama						
1	10/11/12						S - Well Dama						
MMA OD	9/30/13	-6.00	225.00	225.00	110.00		ugged and Ab		60.00	04.40	E 47	05.00	600.00
MW-6R	10/8/13 10/7/14	<6.00 <4.00	225.00 182.00	225.00 182.00	110.00 39.70	<b>1.91</b> 0.55	<0.10 0.68	102.00 93.00	69.90 59.20	24.40 18.20	5.17 3.10	85.60 48.20	600.00 402.00
1	10/21/15	<4.00			40.70	<2.00	0.00	98.60			3.10	46.20	390.00
1	10/18/16				42.30	0.63		105 J					442.00
1	10/25/17				49.30	1.46		93.80					465.00
1	10/18/18				69.10	1.05		107.00					442.00
Ι_	6/20/19				59.10								482.00
Dup	6/20/19				64.40								592.00
1	11/23/19				69.40			95.20					384.00



Network         51         0.00         100         00.00         100         00.00         100.00        <	Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
2/14/01         -1.00         150:00         -1.00         -	NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
Sribit2         -1.00         190.00         175.70         15.80         2.27         97.40         68.80         68.20         6.83         54.30         501.00           102203         -         -         -         -         -         800.00         -         -         -         -         400.00           102010         -1.00         100         100.00         100	MW-7	5/14/98			230.00	430.00			340.00	214.00	66.00	13.00	165.00	1,200.00
102202               4490.0           11/2603         -1.00         1360.0         189.00         1.17         2.14         88.95         82.00         61.8         64.60         631.00           61/2603         -1.00         136.00         189.00         11.17         2.23         93.01         64.70         12.00         63.60         70.01         63.60         70.01         63.60         70.01         63.60         70.01         63.60         70.01         63.60         70.00         7.40         100.00         14.00         11.00         14.00		2/14/01	<1.00	150.00	150.00	510.00	1.70	2.40	150.00					1,500.00
62203           1100         14000         117300         1177         214         8890         8570         3100         7181         6530         7141           51304          10300         13000         1200         123         223         9550         11000         4270         6591         4270         6591         4270         6591         4270         6591         6570         3100         7401         6593         6591         11000         2200         7401         1000         2000         7401         1000         2000         7401         1000         2000         7401         1000         2000         11000         10000         10000         10000         10000         10000         10000         10000         10000         10000         1200         1300         11000         10000         1200         1300         1200         1300         1200         1300         1200         1300         1200         1300         1200         1300         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         1200         12000         1200         12000		5/16/02	<1.00	150.00	150.00	75.70	1.59	2.27	97.40	68.60	23.20	6.63	54.30	501.00
11/2603         -11/2003         -11/2003         -11/2003         -12/200         -13/200		10/22/02				88.60			109.00					490.00
Str30d         21:00         130:00 </td <td></td>														
11/16/04         61.00         130.00         370.00         144.8         27.20         97.30         142.00         48.30         88.11         97.00           11/15/06         -10.00         240.00         240.00         550.00         1.03         1.00         1.21.00         0.000         1.44.00         38.3         1.61         1.40.00         38.0         4.80         1.48.00         1.88.0         1.64.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.84.00         1.80.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.90.00         1.84.00         1.80.00		11/26/03	<1.00	136.00	136.00	189.00	1.29	2.23	93.50	95.70	31.00	7.91	63.60	704.00
11/1705          121.00         121.00         122.00         125.00         10.23         128.00         10.20         17.448.00           11/1507         11.00         114.00         188.00         188.00         148.00         188.00         17.450.00         120.00		5/13/04	<1.00	130.00	130.00	267.00	1.11		94.70	107.00	34.70	6.59	62.90	914.00
11/15/06         101.00         240.00         240.00         550.00         6.83         150         110.00         72.00         73.0         74.0         102.00         21.00.00           11/12/08         55.00         110.00														
Intrisor           178 bit         178 bit <td></td>														
Intrace         intrace <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
114/09           11000         11000         11000         12000         12000         12000         12000         12000         13000         11000         11000         11000         11000         11000         11000         11000         11000         11000         11000         11000         12000         1300 </td <td></td>														
H110/101 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>														
IIII011         -5.00         106.00         1710.00         0.30         1.45         147.00         62.20         203.00         12.30         188.00         3.680.00           108/13         -6.00         142.00         142.00         2.840.00         0.44         1.71         281.00         610.00         225.00         13.30         286.00         7.890.00           107/14         -4.00         116.00         2.940.00         -0.00         -2.31.00         -0.01         -0.00         -0.07.7890.00           107/14         -1         -1         -1         -1.420.00         -0.02         -2.31.00         -0.01         -1         -1         -1         -1.420.00         -0.02         -2.31.00         -0.01         -1 <td></td>														
10111/12         -5:00         108:00         12000         2202:00         0.44         1.71         281:00         12:30         208:00         5,58:00           107714         44:00         1142:00         228:00         -0.10         233:00         916:00         238:00         12:20         27:00         7,58:00           100715														
108/13         -6.00         142.00         128.00         -0.10         2.31         331.00         82.00         13.30         285.00         7,892.00           10/2015         -         -         -         -         -         -         -         -         -         -         -         3,130.0         82.00         -         231.00         -         -         -         -         -         -         -         -         -         -         3,130.0         100         -         -         -         -         -         -         3,130.0         100         -         2,860.0         -         -         -         -         -         -         2,860.0         -         -         -         -         145.00         12.00         170.00         1,800.0         130.0         110.00         170.00         1,200.0         -         -         -         -         -         -         -         -         -         -<														
107/14           116.00         116.00         2000          2000         7          7														
1020/15         -         -         1420.00          220.00         -         220.00         -         -         -         -         -         7,160.00           10/24/17         -         -         -         1,570.00          20.00         -         -         -         -         -         7,160.00           10/18/16         -         -         -         -         -         -         -         -         -         -         -         6,460.00           6/2019         -         -         -         -         -         -         -         -         6,460.00           6/2019         -         -         -         -         -         -         -         6,400.00           6/2010         -         -         -         200.00         -         -         -         -         6,200.00         12.00         12.00         12.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00         12.00.00 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>														
1018/16           2200         -0.50          385.00            7.160.00           1018/18           4.000.00         <0.10	1													
ID22417         - </td <td></td>														
1018/18           4.00.00         <-0.10														
6/20/19         -        -         -         - <td>1</td> <td></td>	1													
11/24/19         -         -         -         272.00         -         -         -         -         6,300.00           MW-8         5/1308         -         -         200         100.00         60.00         12.20         170.00         1280.00         40.00         180.00         60.00         12.20         170.00         1280.00         40.00         52.00         44.00         432.00         100.00         56.60         19.20         52.00         44.00         432.00         40.00         52.00         44.00         44.00         44.00         12.00         52.00         44.00         44.00         14.00														
MW-8         5/1308         -         -         201401          1200         170.00         1200         170.00         1200         170.00         1200         170.00         1200         170.00         1200         170.00         1200         170.00         1200         150         2150         724         520         420.00         1200         150         2150         724         452.00         449.00         1200         150         2150         724         452.00         449.00         1200         150         223         101.00         56.00         120.00         140.00         132.00         140.00         132.00         140.00         132.00         140.00         132.00         140.00         150.00         132.00         140.00         150.00         132.00         130.00 <td></td>														
Dup         2/1401           15600         1600         15600         1200         5900         21.50         7.84         52.00         490.00           10/2202         -         -         40.80         -         -         104.00         -														
5/16/02           157         2.33         101.00         56.60         19.20         5.20         49.50         432.00           5/22/03         8.00         160.00         188.00         33.20         14.40         2.32         98.30         55.30         18.30         9.31         46.40         410.00           5/22/03         8.00         154.00         142.00         142.00         31.70         15.9         2.38         98.60         55.30         18.20         53.1         50.20         443.50           5/12/04         10.01         154.00         156.00         14.00         2.34         101.00         57.80         64.04         435.00           5/17/05         4.00         152.00         158.00         41.00         1.84         2.94         103.00         17.80         57.8         47.30         434.00           11/17/05         10.00         150.00         150.00         88.00         57.8         47.30         434.00           11/14/06	WW-8													
Image: 1022/02            104:00              322.00           52/203         8:00         16:00         142:00         31.70         159         2.32         95:00         18:30         53:1         50:20         44:30           51/204         <100														
5/22/03         8.00         160.00         168.00         33.20         1.40         2.32         98.30         53.80         18.30         9.31         46.40         410.0           5/12/04         <1.00														
I12803         <1.00         142.00         142.00         31.70         1.59         2.38         96.60         55.30         18.20         5.31         50.20         443.00           5/1204         <1.00														
5/12/04           139         2.38         10100         17.30         4.56         48.10         435.00           5/17/06         4.00         152.00         156.00         41.00         18.40         2.94         103.00         57.80         18.60         5.63         56.41         435.00           11/17/05         10.00         160.00         110.00         11.00         10.20         11.01         2.94         105.00         11.00         5.74         102.00         75.00 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>														
bit         11/16/04         <100         170.00 <td></td>														
5/17/05         4.00         152.00         156.00         11.01         -0.05         115.D1         83.40         21.70         5.78         47.30         434.00           11/17/05         <10.00														
11/17/05         <10.00         171.00         172.00         53.00         75.00         59.30         500.00         50.00         51.00         150.00         141.00         62.00         172.00         51.00         172.00         51.00         172.00         51.00         140.00         130.00         140.00         150.00         140.00         130.00         130.00         150.00         170.00         43.00         170.00         43.00         142.00         46.00         350.00           51/5/08         <150.00														
590/6         <10.00         160.00         210.00         0.89         1.40         200.00         72.70         33.30         7.12         125.00         896.00           11/14/06         <10.00														
Intrav06         <10.00         150.00         150.00         120.00         14.20         200.00         74.20         38.30         9.61         182.00         912.00           5/30/07         <10.00									-					
5/30/07         <10.00         141.00         141.00         62.00         1.20         1.74         120.00         54.10         19.10         <5.00         59.30         500.00           11/15/07         <10.00		11/14/06	<10.00	150.00	150.00	230.00	1.10	1.20	200.00	74.20	38.30	9.61	162.00	912.00
bit         5/15/08         <1.53         151.00         151.00         40.70         1.40         1.78         99.6 D1         51.70         16.80         4.10         54.8 D1         427.00           11/12/08         <5.00		5/30/07	<10.00	141.00	141.00	62.00	1.20	1.74	120.00	54.10		<5.00	59.30	500.00
Dup         11/12/08         <5.00         140.00         140.00         39.00         1.40         1.50         97.00         52.00         17.00         <2.6         46.00         350.00           5/20/09         <5.00		11/15/07	<10.00	159.00	159.00	43.10	1.33	1.56	94.2 D1	52.10	17.20	<5.000	49.80	540.00
bit         5/20/09         <5.00         140.00         140.00         39.00         1.30         1.60         110.00         50.00         17.00         4.30         49.00         430.00           11/14/09         <5.00         150.00         150.00         140.00         1.40         1.70         170.00         46.00         16.00         3.30         47.00         450.00           5/7/10         <5.00         <5.00         157.00         34.90         1.09         1.71         98.00         51.00         14.50         3.21         43.60         466.00           11/12/10         <5.00         172.00         172.00         38.70         1.10         1.76         98.30         50.50         15.70         3.40         45.40         410.00           11/12/10         <5.00         170.00         170.00         185.00         1.20         1.60         93.00         73.00         28.40         5.68         165.00         692.00           5/11/11         <5.00         161.00         36.90         1.20         1.60         93.00         73.00         28.40         5.68         165.00         692.00           5/11/11         <5.00         161.00         38.00         3.90		5/15/08	<1.53	151.00	151.00	40.70	1.40	1.78	99.6 D1	51.70	16.80	4.10	54.8 D1	427.00
Dup         11/4/09         <5.00         150.00         41.00         1.40         1.70         110.00         46.00         16.00         3.30         47.00         450.00           5/7/10         <5.00		11/12/08	<5.00	140.00	140.00	39.00	1.40	1.50	97.00	52.00	17.00	<2.6	46.00	350.00
Dup         5/7/10         <5.00         <5.00         172.00         34.90         1.09         1.70         97.80         49.50         15.70         3.52         45.50         426.00           Dup         5/7/10         <5.00		5/20/09	<5.00	140.00	140.00	39.00	1.30	1.60	110.00	50.00	17.00	4.30	49.00	430.00
Dup         5/7/10         < 5.00         < 5.00         157.00         34.90         1.09         1.71         98.00         51.00         14.50         3.21         43.60         466.00           Dup         11/12/10         < 5.00														
Dup         11/12/10         <5.00         172.00         182.00         187.00         157.0         3.40         45.40         410.00           11/12/10         <5.00														
Dup         11/12/10         <5.00         160.00         180.00         1.10         1.76         98.30         50.50         15.30         3.44         44.80         398.00           5/11/11         <5.00	Dup													
5/11/11         <5.00         170.00         185.00         1.20         1.60         93.00         73.00         28.40         5.68         165.00         692.00           11/10/11         <5.00														
11/10/11         <5.00         161.00         161.00         36.90         1.06         1.41         87.40         57.10         17.00         3.46         48.60         406.00           5/17/12         <5.00	Dup													
5/17/12         <5.00         173.00         173.00         37.90         1.09         1.59         92.90         53.30         16.40         3.83         56.70         440.00           10/11/12         <5.00	1													
Image: 10/11/12	1													
5/17/13         <5.00         167.00         167.00         38.30         1.37         1.70         106.00         55.30         17.50         3.67         45.90         416.00           10/8/13         <6.00	1													
10/8/13         <6.00         182.00         182.00         39.50         1.17         1.78         96.20         57.40         19.70         4.35         57.60         446.00           5/1/14         <10.00														
5/1/14         <10.00         165.00         165.00         40.60         1.12 J         1.81         106.00         55.10         19.90         3.82         52.90         436.00           10/7/14         <4.00	1													
10/7/14         <4.00         176.00         176.00         8.14         0.16         1.07         30.50         40.00         4.98         7.81         35.10         259.00           5/22/15            10.00         <2.00														
5/22/15           10.00         <2.00          30.10            252.00           10/20/15           8.03         <2.00														
10/20/15           8.03         <2.00          32.50            146.00           5/25/16           30.00         0.85          88.70            434.00           10/18/16            4.28         <0.50	1		~4.00	170.00	170.00							1.01		
5/25/16           30.00         0.85          88.70            434.00           10/18/16           4.28         <0.50	1													
10/18/16           4.28         <0.50          32.80            261.00           05/11/17           9.10         <0.02	1													
Dup         05/11/17           9.10         <0.02          32.20            214.00           05/11/17           8.62         <0.02	1													
Dup         05/11/17           8.62         <0.02          32.20            182.00           10/24/17           3.69         0.23          18.30            286.00           05/22/18           5.22         0.32          21.90            282.00           10/18/18           5.41         0.61          19.10           258.00           6/20/19           NS            258.00	1													
10/24/17         3.69       0.23        18.30          286.00         05/22/18         5.22       0.32        21.90          282.00         10/18/18         5.41       0.61        19.10         258.00         6/20/19         NS          NS	Dup													
10/18/18           5.41         0.61          19.10            258.00           6/20/19           NS             NS		10/24/17				3.69	0.23		18.30					286.00
6/20/19 NS NS	1	05/22/18					0.32							
11/24/19 12.90 27.60 239.00														
		11/24/19				12.90			27.60					239.00



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-9	5/14/98			190.00	350.00			470.00	207.00	61.00	12.00	200.00	1,300.00
	2/15/01 5/16/02	<1.00 <1.00	156.00 160.00	156.00 160.00	35.00 31.70	2.60 2.22	2.40 2.28	110.00 99.40	60.40 60.80	19.80 17.60	7.47 5.32	47.00 50.10	430.00 440.00
	10/23/02				39.00		2.20	102.00					436.00
	5/22/03	<1.00	160.00	160.00	31.00	1.75	2.19	93.30	52.20	15.80	4.75	50.20	455.00
	11/26/03	<1.00	150.00	150.00	31.80	1.99	2.34	99.80	57.70	16.60	4.69	46.30	452.00
	5/12/04	<1.00	164.00	164.00	33.60	1.79	2.29	99.20	54.80	16.00	4.27	43.50	467.00
	11/16/04	8.00	154.00	162.00	367.00	1.49	2.72	97.30	63.20	17.80	5.59	55.50	433.00
	5/17/05	4.00	154.00	154.00	44.20	2.43	3.05	117.00	58.80	16.70	5.94	44.10	434.00
	11/17/05	<10.00	161.00	161.00	83.50	1.30	0.14	111 D1	149.00	26.20	7.43	80.40	790 N
	5/9/06 11/15/06	<10.00 <10.00	170.00 150.00	170.00 150.00	37.00 210.00	1.80 1.10	1.80 1.20	99.00 190.00	52.70 70.50	15.00 35.80	3.21 8.64	45.50 152.00	428.00 905.00
	5/30/07	<10.00	153.00	153.00	35.00	2.10	1.69	110.00	52.20	15.80	<5.00	44.70	464.00
	11/14/07	<10.00	151.00	151.00	186.00	1.49	1.48	156 D1	74.10	39.40	8.73	141.00	808.00
	5/15/08	<1.53	174.00	174.00	42.50	2.38	1.72	105 D1	55.60	17.00	3.99	54.1 D1	467.00
	11/4/08	<5.00	160.00	160.00	39.00	2.10	1.40	98.00	54.00	16.00	3.70	47.00	440.00
	5/20/09	<5.00	320.00	320.00	69.00	2.10	1.50	120.00	58.00	19.00	4.60	58.00	520.00
	11/4/09	<5.00	160.00	160.00	42.00	2.20	1.60	110.00	50.00	15.00	3.00	43.00	460.00
	5/7/10	< 5.00	< 5.00	162.00	50.20	2.02	1.66	97.50	53.60	15.70	3.32	43.50	442.00
	11/9/10	<5.00	186.00	186.00	60.70	1.97 1.71	1.74	98.00	59.20	18.10	3.64	50.00	446.00
	5/11/11 11/10/11	<5.00 <5.00	160.00 151.00	160.00 151.00	80.30 138.00	1.66	1.72 1.38	75.70 107.00	73.90 82.70	25.80 26.90	4.61 4.34	67.90 65.40	518.00 582.00
	5/16/12	<5.00	162.00	162.00	138.00	1.00	1.61	93.50	83.80	23.20	4.34	60.30	582.00
	10/11/12	<5.00	147.00	147.00	148.00	1.90	1.71	98.70	80.50	25.80	4.94	59.80	644.00
	5/17/13	<5.00	144.00	144.00	246.00	1.86	1.61	99.30	107.00	30.20	4.43	60.20	1,010.00
	10/8/13	<6.00	164.00	164.00	150.00	1.88	1.81	99.80	90.00	25.20	4.62	60.80	620.00
	5/2/14	<10.00	143.00	143.00	382.00	1.56	1.77	103.00	132.00	35.70	5.74	73.70	906.00
	10/7/14	<4.00	151.00	151.00	292.00	0.89	1.33	98.10	136.00	41.00	4.65	67.40	1,110.00
	5/22/15				307.00	<8.00		87.70					1,170.00
	10/20/15 5/25/16				202.00 404.00	<4.00 1.61		93.70 108.00					593.00 1,430.00
Dup	5/26/16				404.00	1.60		111.00					1,430.00
Dup	10/18/16				445.00	1.34		115.00					1,490.00
	05/11/17				481.00	<0.22		118.00					1,090.00
	10/24/17				387.00	2.42		102.00					1,020.00
	05/22/18				460.00	1.28		119.00					1,010.00
	10/18/18				381.00	1.41		117.00					903.00
	6/20/19				621.00								2,930.00
MW-9A	11/24/19			280.00	337.00 600.00			80.60 770.00	338.00	96.00	12.00	334.00	1,170.00
WW-5A	5/14/98 2/15/01	<1.00	142.00	142.00	85.00	1.40	2.20	71.00	71.60	19.20	6.94	46.00	<b>2,200.00</b> 400.00
	5/15/02	<1.00	136.00	136.00	148.00	<1.00	2.18	65.30	62.90	16.10	4.62	46.80	445.00
	10/23/02				168.00			75.50					651.00
	5/22/03	<1.00	126.00	126.00	207.00	<1.00	2.09	62.10	102.00	25.20	4.80	55.70	672.00
	11/26/03	<1.00	118.00	118.00	216.00	1.14	2.26	62.70	107.00	25.10	5.31	53.20	648.00
	5/12/04	<1.00	122.00	122.00	242.00	<1.00	2.10	64.70	105.00	26.20	5.11	26.20	950.00
	11/16/04	<1.00	114.00	114.00	296.00	1.24	2.74	67.50	130.00	33.10	6.24	70.30	826.00
	5/17/05 11/17/05	<1.00 <10.00	112.00 121.00	112.00 121.00	354.00 310 D1	1.04 0.82	2.85 0.31	77.10 74.7 D1	131.00 337.00	31.70 41.40	6.39 8.08	60.50 74.50	828.00 1,520 N
	5/9/06	<10.00	670.00	670.00	270.00	0.62	1.60	78.00	111.00	27.10	3.88	58.70	992.00
	11/15/06	<10.00	1,600.00	1,600.00	290.00	0.62	1.60	72.00	126.00	33.40	4.74	68.40	1,280.00
	5/30/07	<10.00	586.00	586.00	400.00	0.70	1.69	83.00	153.00	36.90	<5.00	71.80	1,450.00
	11/14/07	<10.00	605.00	605.00	285 D1	0.62	1.52	64.7 D1	153.00	35.40	5.03	70.70	1,430.00
	5/15/08	<1.53	738.00	738.00	380 D1	0.45	1.62	86.8 D1	146.00	35.50	5.45	77.2 D1	1,390.00
	11/4/08	<5.00	370.00	370.00	330.00	<1.00	1.20	84.00	130.00	32.00	5.10	66.00	1,000.00
	5/20/09 11/4/09	<5.00 <5.00	600.00 110.00	600.00 110.00	480.00 430.00	0.49 0.49	1.50 1.60	86.00 82.00	170.00 160.00	43.00 41.00	6.40 5.30	76.00 71.00	1,600.00 1,500.00
	5/7/10	<5.00	<5.00	121.00	430.00 510.00	0.49	1.60	80.50	188.00	41.00	4.90	73.60	1,680.00
	11/9/10	<5.00	115.00	115.00	529.00	0.33	1.72	86.00	159.00	44.30	5.00	76.10	1,660.00
	5/11/11	<5.00	146.00	146.00	587.00	1.18	1.90	415.00	166.00	80.60	11.30	211.00	1,850.00
	11/10/11	<5.00	115.00	115.00	841.00	0.19	1.56	125.00	280.00	84.80	7.51	117.00	2,160.00
	5/16/12	<5.00	135.00	135.00	958.00	0.37	1.74	143.00	249.00	62.60	6.50	97.70	3,450.00
Dup	5/16/12	< 5.00	128.00	128.00	882.00	0.31	1.70	134.00	270.00	65.70	6.72	92.30	3,050.00
	10/11/12	<5.00	125.00	125.00	628.00	0.37	1.70	121.00	235.00	60.40	6.72	94.00	1,810.00
	5/17/13 10/8/13	<5.00 <6.00	137.00 153.00	137.00 153.00	754.00 534.00	0.34 0.37	1.67 1.69	145.00 118.00	224.00 185.00	53.90 43.10	5.49 5.23	86.80 81.30	1,930.00 1,210.00
	10/8/13	~0.00	133.00	155.00	554.00	0.37	Not Sampled		103.00	45.10	J.23	01.30	1,210.00
	10/20/2015				232.00	<4.00		95.40					599.00
	10/18/16				337.00	<0.50		113.00					1,250.00
	10/24/17				206.00	<0.50		96.60					681.00
	10/18/18				276.00	0.60		119.00					816.00
	06/20/19				268.00 231.00			 83.20					<b>1,220.00</b> 838.00

<sup>\</sup>ITX05FP01DatalENVChevronTexacoTX8HES Transferl04 Field Investigations!2019/6 - Annual GWMRiCcoper Jal/2019 GWM Report!2019 Report!Cumulative Tables\_appendix C and E\_reformatted\_02.6.20



Sample ID	Sample Date	Carbonate	Bicarbonate	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
	CC Groundwa	Alkalinity	Alkalinity	Aikaiiiiity	250	1.60	10	600.00	,		1		1,000
MW-10	5/14/98			240.00	360.00			450.00	211.00	62.00	11.00	190.00	1,400.00
	2/15/01	<1.00	140.00	140.00	190.00	2.00	2.30	97.00	108.00	32.30	8.20	61.00	660.00
	5/17/02	<1.00	152.00	152.00	204.00	1.93	2.19	99.10	109.00	31.70	7.60	62.40	713.00
	10/22/02				213.00			108.00			-		758.00
	5/22/03	<1.00	152.00	152.00	213.00	1.45	2.17	96.60	109.00	29.90	8.65	74.20	764.00
	11/26/03	<1.00	152.00	152.00	220.00	1.54	2.26	103.00	120.00	35.70	6.96	64.00	752.00
	5/13/04 11/17/04	<1.00 <1.00	158.00 170.00	158.00 170.00	232.00 245.00	1.39 1.73	2.23 2.78	102.00	114.00 121.00	31.60 35.70	5.95 7.07	57.20 70.30	802.00
	5/17/05	<1.00	150.00	150.00	245.00	1.73	2.78	104.00	113.00	32.30	6.83	60.20	764.00 776.00
	11/17/05	<10.00	151.00	151.00	205 D1	1.20	0.26	111 D1	482.00	47.40	13.10	82.40	970 N
	5/9/06	<10.00	190.00	190.00	180.00	1.40	1.60	98.00	93.30	27.10	4.31	60.40	724.00
	11/16/06	<10.00	320.00	320.00	190.00	1.20	1.60	92.00	101.00	30.00	4.75	64.10	900.00
	5/30/07	<10.00	340.00	340.00	200.00	1.40	1.68	110.00	101.00	28.60	<5.00	62.40	820.00
	11/15/07	<10.00	189.00	189.00	251 D1	1.44	1.44	152 D1	104.00	33.40	6.01	84.70	1,010.00
	5/15/08	<1.53	374.00 150.00	374.00	342 D1	1.47	1.28	257 D1	106.00	52.90	11.70 5.40	165 D1	<b>1,140.00</b> 730.00
	11/6/08 5/20/09	<5.00 <5.00	240.00	150.00 240.00	210.00 270.00	1.50 1.30	1.30 1.50	89.00 120.00	110.00	32.00 35.00	6.20	64.00 72.00	960.00
	11/4/09	<5.00	150.00	150.00	240.00	1.50	1.30	130.00	100.00	35.00	5.40	78.00	1,000.00
	5/7/10	<5.00	<5.00	157.00	236.00	1.18	1.62	106.00	111.00	30.70	4.59	60.30	940.00
	11/10/10	<5.00	166.00	166.00	280.00	1.16	1.61	112.00	98.40	36.90	5.63	81.00	812.00
1	5/11/11	<5.00	157.00	157.00	274.00	1.11	1.99	87.20	117.00	32.20	5.63	85.00	930.00
1	11/15/11	<5.00	150.00	150.00	266.00	1.03	6.93	94.90	128.00	32.30	4.58	62.80	1,450.00
1	5/16/12	< 5.00	163.00	163.00	284.00	1.12	1.58	99.90	132.00	36.80	5.22	72.90	1,120.00
1	10/11/12	<5.00	151.00	151.00	255.00	1.32	1.75	98.70	113.00	34.30	5.68	67.60	1,010.00
1	5/17/13 10/8/13	<5.00 <6.00	154.00 165.00	154.00 165.00	299.00 324.00	1.34 1.14	1.61 1.62	108.00 103.00	117.00 154.00	33.70 41.60	4.57 5.36	64.60 78.10	1,180.00 1,240.00
1	5/1/14	<10.00	156.00	156.00	298.00	1.14 1.05 J	1.58	111.00	135.00	41.60	5.30	75.50	1.050.00
Dup	5/1/14	<10.00	158.00	158.00	301.00	<0.10 J	1.66	112.00	134.00	42.50	5.29	79.50	1,080.00
	10/7/14	<4.00	163.00	163.00	249.00	0.71	1.64	108.00	127.00	36.80	4.91	67.20	1,050.00
	5/22/15				298.00	<8.00		102.00					975.00
	10/20/15				250.00	<4.00		108.00					823.00
	5/25/16				307.00	1.44		107.00					1,080.00
	10/18/16 05/11/17				330.00 353.00	0.86		103.00 112.00					1,350.00 1,080.00
	10/24/17				240.00	1.60		97.00					742.00
	05/22/18				346.00	0.97		113.00					1,070.00
	10/18/18				351.00	1.10		118.00					892.00
	6/20/19				NS								NS
	11/24/19				230.00			78.00					826.00
MW-11	1/22/99	30.00	<1.00	30.00	46.00	2.30	4.20	94.00	33.00	7.00	9.10	58.00	370.00
	2/15/01	<1.00	156.00	156.00	37.00	2.40	2.40	120.00	64.00	19.10	7.83	50.10	360.00
	5/16/02	<1.00	160.00	160.00	31.90	2.13	2.33	98.80	63.50	17.20	4.83	47.00	444.00
	10/23/02				37.20			102.00					447.00
	5/22/03	12.00	154.00 160.00	166.00 160.00	32.30 32.40	1.74	2.28 2.23	96.70	62.30 59.20	0.00	4.63 4.67	47.60	437.00 448.00
	11/26/03 5/12/04	<1.00 <1.00	164.00	160.00	32.40	1.83 1.71	2.23	96.40 97.70	59.20 54.80	16.60 15.70	4.07	48.60 46.20	448.00
	11/16/04	<1.00	160.00	160.00	39.00	2.17	2.81	100.00	65.20	16.80	5.14	54.30	454.00
	5/17/05	4.00	158.00	162.00	43.10	1.87	2.82	94.60	68.40	16.90	6.45	44.00	429.00
	11/17/05	<10.0	161.00	161.00	58.10	1.50	2.10	91.3 D1	75.00	17.70	4.55	64.70	700 N
1	5/9/06	<10.00	180.00	180.00	37.00	1.80	1.70	100.00	54.10	16.20	3.26	46.90	456.00
1	11/14/06	<10.00	170.00	170.00	34.00	1.80	1.80	110.00	58.00	18.20	4.13	53.40	532.00
1	5/30/07	<10.00	142.00	142.00	36.00	1.90	1.79	120.00	54.00	16.70	<5.00	50.80	456.00
1	11/14/07 5/15/08	<10.00 <1.53	189.00 177.00	189.00 177.00	42.30 72.4 D1	1.98 1.86	1.54 1.71	95.6 D1 141.00	57.20 58.00	17.40 19.40	<5.000 4.93	52.40 66.5 D1	452.00 544.00
1	11/4/08	<5.00	170.00	177.00	49.00	1.50	1.71	90.00	60.00	19.40	4.93 3.60	47.00	440.00
1	5/20/09	< 5.00	360.00	360.00	40.00	2.20	1.70	130.00	51.00	17.00	4.50	53.00	450.00
1	11/4/09	<5.00	150.00	150.00	43.00	1.60	1.60	100.00	52.00	15.00	2.90	42.00	470.00
1	5/7/10	<5.00	<5.00	167.00	36.50	1.97	1.78	117.00	49.70	14.90	3.42	44.70	494.00
1	11/9/10	<5.00	269.00	269.00	52.50	1.45	1.79	95.40	61.00	16.70	3.56	50.00	438.00
D	5/11/11	<5.00	161.00	161.00	133.00	1.43	2.08	140.00	78.10	37.00	6.32	103.00	664.00
Dup	5/11/11 11/10/11	<5.00 <5.00	161.00 162.00	161.00 162.00	130.00 38.80	1.44 1.86	2.01 1.49	137.00 97.10	77.40 66.20	37.00 17.90	6.29 3.62	104.00 52.30	706.00 420.00
1	5/17/12	<5.00	176.00	176.00	45.80	1.29	1.49	88.50	63.60	16.30	3.66	52.30	420.00
1	10/11/12	<5.00	166.00	166.00	44.60	1.49	1.74	95.10	55.80	15.80	3.80	49.30	440.00
1	5/17/13	<5.00	171.00	171.00	43.60	1.87	1.67	106.00	57.70	14.80	3.18	42.90	428.00
1	10/8/13	<6.00	178.00	178.00	45.20	1.55	1.74	95.50	60.90	16.10	3.33	52.00	450.00
1	5/1/14	<10.00	173.00	173.00	63.30	<0.10	2.06	93.30	64.40	17.60	3.38	51.50	434.00
1	10/7/14	<4.00	176.00	176.00	34.70	1.10	1.71	101.00	59.20	16.70	3.06	46.50	399.00
1	5/22/15				40.40	<4.00		87.20					428.00
1	10/20/15 5/25/16				37.60 34.30	<2.00 1.87		89.30 103.00					356.00 475.00
1	10/18/16				39.30	0.87		96.40					418.00
1	05/11/17				35.10	<0.11		110.00					416.00
1	10/24/17				35.10	1.87		95.30					438.00
1	05/22/18				34.60	1.58		110.00					421.00
Dup	05/22/18				34.50	1.64		110.00					415.00
1	10/18/18				36.90	1.69		114.00					413.00
1	06/20/19 11/24/19				34.40 45.80			 113.00					407.00 364.00
1	11/24/19		-		40.00			113.00					JU4.UU

\ITX05FP01DatalENVChevronTexacoTX8HES Transferl04 Field Investigations!2019/6 - Annual GWMRiCcoper Jal/2019 GWM Report!2019 Report!Cumulative Tables\_appendix C and E\_reformatted\_02.6.20



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-12*	5/15/02	<1.00	160.00	160.00	58.30	1.09	2.44	91.30	53.50	15.90	5.52	50.30	462.00
	10/23/02				65.00			102.00					477.00
	5/22/03	<1.00	148.00	148.00	91.10	1.04	2.30	87.70	74.20	21.00	4.89	57.60	516.00
	11/25/03	<1.00	142.00	142.00	93.10	1.18	2.36	90.90	74.70	20.90	5.41	52.50	548.00
	5/12/04	<1.00 <1.00	458.00 184.00	458.00 184.00	72.90 79.80	1.04	2.35	86.70	58.10 59.70	19.00 21.50	5.92 16.50	51.80 77.40	489.00
	11/15/04 11/17/05	<10.00	151.00	151.00	109.00	1.39 0.93	2.83 0.12	88.80 94.6 D1	193.00	26.60	13.40	87.50	512.00 700.00
	11/16/06	<10.00	270.00	270.00	120.00	0.33	1.70	84.00	82.30	27.00	4.82	62.20	620.00
	11/16/07	<10.00	170.00	170.00	258.00	1.21	1.55	191 D1	77.20	42.70	11.00	154.00	1,270.00
	11/6/08	<5.00	130.00	130.00	110.00	0.89	1.40	79.00	61.00	20.00	4.50	52.00	460.00
	11/3/09	<25.00	2,000.00	2,000.00	120.00	0.87	1.60	98.00	68.00	24.00	6.00	79.00	600.00
	11/9/10	<5.00	144.00	144.00	211.00	0.57	1.76	89.80	75.60	27.80	4.60	60.60	712.00
	11/10/11	<5.00	134.00	134.00	179.00	0.46	1.37	92.80	93.80	27.80	4.53	64.00	594.00
	10/11/12	<5.00	145.00	145.00	179.00	0.71	0.79	86.50	80.40	25.40	5.44	62.90	724.00
	10/8/13	<6.00	160.00	160.00	246.00	0.62	1.64	84.50	110.00	30.40	4.92	67.80	944.00
	10/7/14	<4.00	145.00	145.00	200.00	0.29	1.70	86.80	93.10	29.30	5.06	65.00	765.00
	10/21/15				165.00	<4.00		72.60					487.00
	10/18/16 10/24/17				270.00 150.00	<0.50 <0.50		95.00 64.90					888.00
Dum	10/24/17					< 0.50							579.00
Dup	10/24/17				149.00 290.00	0.74		64.80 106.00					565.00 790.00
	06/20/19				254.00								580.00
	11/23/19				337.00			140.00					1,010.00
MW-13*		<1.00	100.00	100.00	517.00	<1.00			116.00	76.00	19.40	269.00	1,596.00
10100-13"	5/13/02 10/23/02	<1.00	100.00	100.00	549.00	<1.00	1.61	437.00 370.00	116.00	76.00	19.40	209.00	1,596.00
	5/22/03	<1.00	186.00	186.00	944.00	<2.00	2.33	361.00	289.00	101.00	15.30	458.00	3,060.00
	11/25/03	<1.00	226.00	226.00	1,460.00	<2.00	2.33	372.00	369.00	117.00	20.00	478.00	3,445.00
	5/12/04	<1.00	234.00	234.00	1,550.00	<4.00	4.58	369.00	384.00	114.00	18.60	485.00	4,240.00
	11/15/04	<1.00	226.00	226.00	1,870.00	<2.00	4.92	384.00	510.00	164.00	16.50	627.00	3,600.00
	11/17/05	<10.00	201.00	201.00	722.00	1.00	2.50	206 D1	786.00	91.60	19.70	276.00	2,350.00
	11/16/06	<10.00	1,500.00	1,500.00	2,000.00	<0.50 N	2.70	500 N	529.00	176.00	14.20	493.00	5,060.00
	11/16/07	<10.00	236.00	236.00	2,000.00	0.33	3.05 D1	312 D1	361.00	105.00	11.40	553 D1	6,320.00
	11/6/08	<5.00	180.00	180.00	970.00	0.98	1.80	280.00	240.00	96.00	17.00	370.00	2,400.00
	11/3/09	<25.00	15,000.00	15,000.00	2,200.00	< 0.50	2.60	440.00	490.00	180.00	22.00	490.00	5,600.00
	11/9/10	< 5.00	267.00	267.00	1,680.00	0.22	2.82	405.00	400.00	120.00	10.40	540.00	4,270.00
	11/10/11 10/11/12	<5.00 <5.00	206.00 204.00	206.00 204.00	2,110.00 2,360.00	0.18	<0.50 2.70	273.00 422.00	690.00 706.00	223.00 228.00	13.20 14.40	472.00 423.00	4,870.00 6,290.00
	10/8/13	< 6.00	1,780.00	1,780.00	2,300.00	0.30	2.70	448.00	768.00	225.00	14.40	423.00	7,320.00
	10/7/14	<4.00	267.00	267.00	1,430.00	<0.10	1.91	379.00	355.00	109.00	11.30	612.00	3,940.00
	10/21/15				1,400.00	<40.0		353.00					3,260.00
	10/18/16				1,940.00	<0.50		440.00					5,310.00
					Well P	lugged and Al	pandoned on	7/11/2017					
MW-14	10/8/13	<6.00	267.00	267.00	162.00	3.69	<0.10	127.00	74.40	32.30	8.42	145.00	854.00
Dup	10/8/13	<6.00	271.00	271.00	166.00	3.74	<0.10	130.00	60.70	26.30	7.97	145.00	848.00
	5/1/14	<10.00	199.00	199.00	64.00	1.19 J	< 0.10	84.90	60.80	21.70	3.82	59.80	468.00
Dum	10/7/14	<4.00 <4.00	227.00	2,227.00	95.20	0.79	< 0.023	22.90	71.30 59.30	24.90	3.99	61.80 49.50	460.00
Dup	10/7/14 5/22/15	<u>\$4.00</u>	194.00	194.00	55.70 77.80	1.36 <4.00	<0.023	88.80 45.40	59.30	19.10	3.21	49.50	490.00 468.00
Dup	5/22/15				77.40	<4.00		49.00					408.00
Bup	10/20/15				29.1 J	<2.00		53.5 J					294.00
Dup	10/21/15				58.9 J	<2.00		101 J					407.00
	5/25/16				79.00	1.37		19.90					552.00
	10/18/16				51.80	1.07		104.00					422.00
Dup	10/18/16				61.20	1.25		108 J					459.00
	05/11/17				70.50	<0.11		17.70	-		-		412.00
	10/24/17				57.40	1.77		42.20					423.00
	05/22/18				54.90	1.20		47.80					390.00
	10/18/18				57.20	1.35		47.20					401.00
	06/20/19				42.10								481.00
Dun	11/24/19 11/24/19				37.10 40.40			94.50 95.90					328.00 324.00
Dup	11/24/19				40.40			90.90					324.00

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Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQQ	CC Groundwa	ter Standar	d		250	1.60	10	600.00					1,000
RW-1	5/27/99	0.00	224.00	224.00	8,700.00	2.70	7.00	840.00	679.00	521.00	34.00	3,290.00	14,000.00
	5/22/03	<1.00	190.00	190.00	2,410.00	2.46	4.23	345.00	162.00	145.00	25.40	1,180.00	5,260.00
	11/26/03	<1.00	184.00	184.00	1,990.00	<4.00	20.00	324.00	199.00	147.00	38.60	1,080.00	5,050.00
	5/11/04	<1.00	148.00	148.00	491.00	1.32	2.65	109.00	66.30	23.40	11.20	252.00	1,224.00
	11/17/04	<1.00	160.00	160.00	633.00	1.65	3.23	121.00	89.70	43.50	18.00	382.00	1,314.00
	11/17/05	<10.00	221.00	221.00	895.00	1.00	1.40	166 D1	122.00	70.90	8.40	493.00	2,380.00
	11/16/06	<10.00	380.00	380.00	11,000.00	<0.50	<20.00 HC	1,100.00	539.00	694.00	43.30	5,580.00	22,000.00
	11/15/07	<10.00	359.00	359.00	2,380.00	1.26	3.74 D1	252 D1	141.00	137.00	16.00	1,100 D1	5,280.00
Dup	11/15/07	<10.00	208.00	208.00	2,620.00	1.24	3.85 D1	316 D1	136.00	133.00	15.50	1,040 D1	5,360.00
	11/12/08	<5.00	210.00	210.00	370.00	0.82	1.90	97.00	66.00	34.00	5.00	190.00	920.00
	11/4/09	<5.00	170.00	170.00	1,700.00	1.10	2.60	250.00	110.00	120.00	22.00	750.00	3,800.00
	11/11/10	<5.00	192.00	192.00	1,340.00	0.72	2.72	204.00	95.50	104.00	12.60	792.00	2,830.00
	11/10/11	<5.00	396.00	396.00	14,000.00	3.32	9.16	1,540.00	942.00	1,260.00	44.60	8,720.00	32,200.00
	10/11/12	<5.00	263.00	263.00	6,530.00	2.19	4.75	625.00	314.00	445.00	28.00	3,490.00	10,100.00
Dup	10/11/12	<5.00	286.00	286.00	2,440.00	0.31	1.23	194.00	128.00	156.00	18.60	1,260.00	17000**
	10/8/13	<6.00	285.00	285.00	6,050.00	0.95	4.29	546.00	760.00	919.00	39.00	6,370.00	11,200.00
Dup	10/8/13	<6.00	216.00	216.00	10,500.00	1.27	5.98	926.00	490.00	581.00	31.40	4,170.00	1870**
	10/7/14	<4.00	207.00	207.00	2,240.00	1.36	3.62	338.00	69.60	106.00	24.00	1,130.00	2,760.00
Dup	10/7/14	<4.00	192.00	192.00	2,570.00	2.51	3.70	363.00	82.30	125.00	26.80	1,350.00	1970**
	10/21/15				9,110.00	<80.00		953 J					15,300.00
Dup	10/20/15		-		10,200.00	<200.00		1,120 J					21,600.00
1	12/15/15		-		1,130.00								2,290.00
	12/16/15				1,190.00								2,580.00
	12/17/15				1,030.00								2,260.00
1	12/18/15				988.00								2,350.00
	1/4/16				1,200.00			-				-	2,280.00
	1/5/16				1,080.00								2,190.00
	1/6/16		-		1,120.00								2,240.00
1	1/7/16		-		1,080.00								2,200.00
	1/8/16				1,310.00								2,370.00
	1/11/16		-		1,030.00								2,210.00
	1/12/16		-		1,520.00								2,850.00
	10/18/16				277.00	<0.50		87.50					715.00
Dup	10/18/16				316.00	<0.50		88.9 J					922.00
	10/25/17				254.00	1.02		75.50					2,040.00
	10/16/18***				304.00	0.61		93.40					757.00
	10/18/18		-		7,870.00	<0.10		807.00					15,400.00
Dup	10/18/18		-		7,830.00	<0.10		873.00		-		-	12,700.00
	6/20/19				9,290.00			-					22,100.00
Dup	6/20/19				9,200.00			-					22,800.00
	11/24/19				5,780.00			722.00					12,200.00
RW-2	5/22/03	324.00	<4.00	780.00	1,580.00	<2.00	2.43	23.90	1,060.00	<0.500	20.20	258.00	4,310.00
	11/26/03	64.00	<4.00	704.00	1,480.00	<5.00	5.81	38.30	988.00	<0.500	23.80	240.00	3,535.00
	11/17/04	104.00	<4.00	692.00	2,280.00	<10.00	<10.00	116.00	1,180.00	<0.500	18.50	415.00	3,915.00
	11/17/05	281.00	<10.00	422.00	1,770.00	0.89	0.60	175 D1	861.00	16.60	13.10	361.00	7,350.00
	11/16/06	49.00	150.00	199.00	2,500.00	0.57	1.90	370.00	978.00	48.80	18.00	437.00	5,270.00
	11/15/07	170.00	37.80	208.00	1,680.00	0.49	1.52	166 D1	586.00	<5.000	11.20	245.00	5,590.00
	11/12/08	150.00	<5.00	390.00	2,500.00	< 0.50	0.24	250.00	1,200.00	<0.38	6.00	400.00	4,800.00
	11/4/09	34.00	<5.00	220.00	2,200.00	< 0.50	1.70	240.00	940.00	0.18	16.00	420.00	6,300.00
	11/11/10	113.00	<5.00	172.00	2,100.00	< 0.50	2.03	233.00	967.00	4.06	8.86	426.00	4,550.00
	11/10/11	36.90	<5.00	384.00	4,330.00	<10.00	2.03	305.00	2,040.00	1.12	18.70	711.00	8,300.00
	10/11/12	27.10	<5.00	202.00	1.920.00	<0.50	1.93	223.00	842.00	0.46	9.30	385.00	6,680.00
Dup	10/11/12	31.90	<5.00	202.00	2,310.00	<0.50	1.95	228.00	1,090.00	2.42	10.50	430.00	5,250.00
Jup	10/11/12	66.30	<6.00	117.00	2,310.00	0.14	2.36	309.00	1,570.00	2.15	15.30	639.00	4,420.00
	10/7/14	35.20	<4.00	35.20	2,250.00	<0.10	2.52	378.00	995.00	21.60	10.30	408.00	3.090.00
	10/20/15				699.00	<20.00		118.00					2,190.00
	12/15/15				1,130.00								2,290.00
	12/16/15				1,190.00								2,580.00
	12/17/15				1,030.00								2,260.00
1	12/18/15				988.00								2,350.00
1	1/4/16				1,200.00								2,280.00
1	1/5/16				1,080.00								2,190.00
1	1/6/16				1,120.00								2,240.00
	1/7/16				1,080.00								2,200.00
	1/8/16				1,310.00								2,370.00
	1/11/16				1,030.00								2,210.00
	1/12/16				1,520.00								2,850.00
	10/18/16				1,450.00	< 0.50		270.00					3,910.00
1	10/10/10				1,760.00	<5.00		288.00					4,440.00
1	10/18/18				3,640.00	<0.10		534.00					6,890.00
1	6/20/19				3,180.00								10,200 H
1	11/24/19				3,510.00			464.00		-			9,880.00
L													
RW-2R	10/8/13	<6.00	146.00	146.00	6,550.00	0.45	1.79	762.00	1,850.00	616.00	25.50	1,350.00	14,600.00
1	10/7/14	<4.00	169.00	169.00	5,400.00	1.56	2.17	707.00	1,280.00	470.00	20.90	1,170.00	13,200.00
	10/20/15				5,990.00	<80.00		806.00					16,200.00
	10/18/16				6,390.00	< 0.50		797.00					15,200.00
	10/25/17				7,030.00	< 5.00		872.00					12,300.00
1	10/16/18*** 10/18/18				1,960.00	<0.10 <0.10		467.00					3,380.00
					7,920.00			891.00					13,700.00

\ITX05FP01DatalENVChevronTexacoTX8HES Transferl04 Field Investigations!2019/6 - Annual GWMRiCcoper Jal/2019 GWM Report!2019 Report!Cumulative Tables\_appendix C and E\_reformatted\_02.6.20

Appendix C

Cumulative Summary of Groundwater Analytical Results Cooper-Jal Unit Injection Station Lea County, New Mexico



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
Dup	10/18/18				8,060.00	<0.10		815.00					13,300.00
	6/20/19				7,860.00								29,400.00
	11/24/19				7,720.00			943.00					21,000.00

Notes:

1. Bold value indicates a laboratory detection and New Mexico Water Quality Control Commission (NMWQCC) exceedance.

Results shown in mg/L.
 NS - Not Sampled
 D1 - The analysis was performed at a dilution due to the high analyte concentration.
 H - The analysis was performed past holding time.

6. C - Elevated detection limit due to matrix effect.

7. J - Estimated Concentration

8. < - Analyte detected below quantitation limit

9. <sup>1</sup>Human Health Standards for Groundwater.

<sup>10</sup> Other Standards for Domestic Water Supply.
 <sup>11</sup> \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.
 <sup>12</sup> \*\* - Reported TDS concentration includes a low bias. Not used in trend comparison.

13. \*\*\* - Indicates groundwater monitor well that was sampled prior to semiannual groundwater event via low-flow purge for internal use.

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# **APPENDIX D**

**Analytical Reports** 

Received by OCD: 3/25/2020 9:15:51 AM

# 🔅 eurofins | E

# Environment Testing TestAmerica

# **ANALYTICAL REPORT**

#### Eurofins TestAmerica, Houston 6310 Rothway Street Houston, TX 77040 Tel: (713)690-4444

### Laboratory Job ID: 600-187419-1

Client Project/Site: Midland - Chevron Kegan Boyer

#### For:

ARCADIS U.S., Inc. 1004 North Big Spring Suite 121 Midland, Texas 79701

Attn: Mr. Brett Krehbiel

Hudchadker

Authorized for release by: 7/15/2019 1:40:31 PM Sachin Kudchadkar, Senior Project Manager (713)690-4444 sachin.kudchadkar@testamericainc.com

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

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

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

Links





Visit us at: www.testamericainc.com

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### Job ID: 600-187419-1

#### Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative 600-187419-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/21/2019 10:19 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 1.7° C.

#### All applicable analytical narratives can be found in the TRRP Checklist section of this report.

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#### Job ID: 600-187419-1

#### **Method Summary**

#### Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Job ID: 600-187419-1

Method Description	Protocol	Laboratory
Anions, Ion Chromatography	MCAWW	TAL HOU
Solids, Total Dissolved (TDS)	SM	TAL HOU
	Anions, Ion Chromatography	Anions, Ion Chromatography MCAWW

#### Protocol References:

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

SM = "Standard Methods For The Examination Of Water And Wastewater"

#### Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

### Sample Summary

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer Job ID: 600-187419-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-187419-1	MW - 12	Water	06/20/19 08:52	06/21/19 10:19	
600-187419-2	MW - 3	Water	06/20/19 09:32	06/21/19 10:19	
600-187419-3	MW - 1	Water	06/20/19 09:38	06/21/19 10:19	
600-187419-4	MW - 2A	Water	06/20/19 09:44	06/21/19 10:19	
600-187419-5	MW - 2	Water	06/20/19 09:47	06/21/19 10:19	
600-187419-6	MW - 6R	Water	06/20/19 09:53	06/21/19 10:19	
600-187419-7	DUP - 1	Water	06/20/19 00:00	06/21/19 10:19	
600-187419-8	MW - 5	Water	06/20/19 10:05	06/21/19 10:19	
600-187419-9	MW - 5A	Water	06/20/19 10:08	06/21/19 10:19	
600-187419-10	RW - 1	Water	06/20/19 10:14	06/21/19 10:19	
600-187419-11	DUP -2	Water	06/20/19 00:00	06/21/19 10:19	
600-187419-12	MW - 4	Water	06/20/19 10:22	06/21/19 10:19	
600-187419-13	MW - 4A	Water	06/20/19 10:24	06/21/19 10:19	
600-187419-14	RW - 6R	Water	06/20/19 10:49	06/21/19 10:19	
600-187419-15	RW - 2	Water	06/20/19 10:51	06/21/19 10:19	
600-187419-16	MW - 14	Water	06/20/19 11:05	06/21/19 10:19	
600-187419-17	MW - 7	Water	06/20/19 11:20	06/21/19 10:19	
600-187419-18	MW - 9	Water	06/20/19 11:30	06/21/19 10:19	
600-187419-19	MW - 9A	Water	06/20/19 11:34	06/21/19 10:19	
600-187419-20	MW - 11	Water	06/20/19 11:41	06/21/19 10:19	
600-187419-21	EB - 1	Water	06/20/19 12:50	06/21/19 10:19	

Received b	y OCD:	3/25/2020	9:15:51 AM
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### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: MW - 12						Lab Sam	ple ID: 600-18	
Date Collected: 06/20/19 08:52							Matri	x: Water
Date Received: 06/21/19 10:19								
Method: 300.0 - Anions, Ion Chromatography								
	It Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 2	<b>i4</b>	0.400	0.0534	mg/L			06/28/19 22:18	20
General Chemistry								
	It Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 5	0	10.0	10.0	mg/L			06/26/19 15:14	1
Client Sample ID: MW - 3						Lab Sam	ple ID: 600-18	7419-2
Date Collected: 06/20/19 09:32								x: Water
Date Received: 06/21/19 10:19								
<u></u>								
Method: 300.0 - Anions, Ion Chromatography							_	
·	It Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride 40	.0	0.400	0.0534	mg/L			06/28/19 22:38	5
General Chemistry								
-	It Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 4	8	10.0	10.0	mg/L			06/26/19 15:14	1
Client Sample ID: MW - 1						Lab Sam	ple ID: 600-18	
Date Collected: 06/20/19 09:38							Matri	x: Water
Date Received: 06/21/19 10:19								
Method: 300.0 - Anions, Ion Chromatography								
	It Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 11		0.400	0.0534				06/28/19 22:58	100
General Chemistry								
Analyte Rest	It Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 25	0	10.0	10.0	mg/L			06/26/19 15:14	1
Client Sample ID: MW - 2A						Lab Sam	ple ID: 600-18	7419-4
Date Collected: 06/20/19 09:44						Lub Oum		x: Water
Date Received: 06/21/19 10:19							Wath	A. Water
Method: 300.0 - Anions, Ion Chromatography								
Analyte Res	It Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride 86	.5	0.400	0.0534	mg/L			06/28/19 23:58	10
General Chemistry Analyte Resu	ılt Qualifier	MQL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 55		10.0		mg/L		Fiepareu	06/26/19 15:14	1
							00,20,10,10111	
Client Sample ID: MW - 2						Lab Sam	ple ID: 600-18	7419-5
Date Collected: 06/20/19 09:47							Matri	x: Water
Date Received: 06/21/19 10:19								
Mathedu 200.0 Aniana Ian Obramatana ta								
Method: 300.0 - Anions, Ion Chromatography Analyte Res	It Qualifier	MQL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 2		0.400	0.0534			i ispaisu	06/29/19 00:58	20
		0.400	0.0004	g, L			00,20,10 00.00	20
General Chemistry								
-	It Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 9	0	10.0	10.0	mg/L			06/26/19 15:14	1

Received l	by O	<b>CD: 3</b>	/25/2020	9:15:51 AM	1
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### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Semple ID: MW/ 6P						Lob Com		7440.6
Client Sample ID: MW - 6R Date Collected: 06/20/19 09:53						Lap Sam	ole ID: 600-18 Matri	7419-0 x: Water
Date Received: 06/20/19 09:53							watri	x: water
Method: 300.0 - Anions, Ion Chromatography								
	t Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride 59.	I	0.400	0.0534	mg/L			06/29/19 01:58	10
General Chemistry								
-	t Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 482	2	10.0	10.0	mg/L			06/26/19 15:14	1
Client Sample ID: DUP - 1						Lab Sami	ole ID: 600-18	7419-7
Date Collected: 06/20/19 00:00								x: Water
Date Received: 06/21/19 10:19								
Method: 300.0 - Anions, Ion Chromatography Analyte Resul	t Qualifier	MQL	МПІ	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 64.4		0.400	0.0534				06/29/19 02:18	2
General Chemistry								
	t Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 59	2	10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 5						Lab Sam	ole ID: 600-18	7419-8
Date Collected: 06/20/19 10:05							Matri	x: Water
Date Received: 06/21/19 10:19								
Method: 300.0 - Anions, Ion Chromatography Analyte Resul	t Qualifier	MQL	МОІ	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 170		0.400	0.0534			Ticparca	06/29/19 02:38	100
				0				
General Chemistry								
	t Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 4280	)	10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 5A						Lab Sam	ole ID: 600-18	7419-9
Date Collected: 06/20/19 10:08							Matri	x: Water
Date Received: 06/21/19 10:19								
Mathadi 200.0 Aniana Jan Chromotomenhu								
Method: 300.0 - Anions, Ion Chromatography Analyte Resul	t Qualifier	MQL	МОІ	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 11		0.400	0.0534			Toparou	06/29/19 02:58	5
	-			0				
General Chemistry								
	t Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 65	)	10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: RW - 1						Lab Sampl	e ID: 600-187	419-10
Date Collected: 06/20/19 10:14							Matri	x: Water
Date Received: 06/21/19 10:19								
Method: 300.0 - Anions, Ion Chromatography								
	t Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride 929		0.400	0.0534				06/29/19 03:18	500
General Chemistry				11	_	Deerst	A mat	
	t Qualifier	MQL 10.0		Unit mg/L	D	Prepared	Analyzed 06/27/19 12:49	Dil Fac
Total Dissolved Solids 2210	,	10.0	10.0	mg/L			00/27/19 12:49	1

<b>Received</b> by	OCD:	3/25/2020	9:15:51 AM
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### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: DUP -2 Date Collected: 06/20/19 00:00							Lab Samp	le ID: 600-1874 Matrix	419-11 <: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato	oranhy								
Analyte		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9200		0.400	0.0534	mg/L			06/29/19 03:38	500
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	22800		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 4							Lab Samp	le ID: 600-1874	419-12
Date Collected: 06/20/19 10:22								Matrix	c: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato	graphy								
Analyte		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2760		0.400	0.0534	mg/L			06/29/19 03:58	200
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7830		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 4A							Lab Samp	le ID: 600-1874	419-13
Date Collected: 06/20/19 10:24									c: Wate
Date Received: 06/21/19 10:19									. mate
Method: 300.0 - Anions, Ion Chromato									
Analyte		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	336		0.400	0.0534	mg/L			06/29/19 04:58	10
General Chemistry									
Analyte	Result	Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1040		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: RW - 6R							Lab Samp	le ID: 600-1874	419-14
Date Collected: 06/20/19 10:49								Matrix	c: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato	araphy								
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7860		0.400	0.0534	mg/L			06/29/19 05:18	500
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	29400		10.0		mg/L			06/27/19 12:49	1
Client Sample ID: RW - 2							Lah Samn	le ID: 600-1874	110_15
Date Collected: 06/20/19 10:51									c: Wate
Date Received: 06/21/19 10:19									
Method: 200.0 Anione Ion Chromete	aronhu								
Method: 300.0 - Anions, Ion Chromato Analyte		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3180		0.400	0.0534				06/29/19 06:18	200
					-				
General Chemistry		0 117		•·		_	<b>_</b> .	<b>.</b>	<b></b> -
Analyte		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10200	н	10.0	10.0	mg/L			07/01/19 11:28	1

Received by	OCD: 3/25/2020	9:15:51 AM
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### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: MW 14	-						Lab Sampl		110 16
Client Sample ID: MW - 14 Date Collected: 06/20/19 11:05							Lab Sampi	e ID: 600-187	
Date Collected: 06/20/19 11:05								watri	x: Water
Date Received. 00/21/19 10.19									
Method: 300.0 - Anions, Ion Chromato	graphy								
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.1		0.400	0.0534	mg/L			06/29/19 06:38	2
General Chemistry									
Analyte	Rosult	Qualifier	MQL	МПІ	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	481		10.0		mg/L		Toparoa	06/27/19 12:49	1
Client Sample ID: MW - 7							Lab Sampl	e ID: 600-187	419-17
Date Collected: 06/20/19 11:20								Matri	x: Water
Date Received: 06/21/19 10:19									
Γ									
Method: 300.0 - Anions, Ion Chromato		0	MO		11	-	Durant	Amelianad	D11 F
Analyte		Qualifier	MQL 0.400		Unit	D	Prepared	Analyzed	Dil Fac 200
Chloride	4210		0.400	0.0534	mg/L			06/29/19 06.56	200
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	15500		10.0	10.0	mg/L			06/27/19 12:49	1
L									
Client Sample ID: MW - 9							Lab Sampl	e ID: 600-187	419-18
Date Collected: 06/20/19 11:30								Matri	x: Water
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato		0.115				_	<u> </u>		
Analyte		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	621		0.400	0.0534	mg/L			06/29/19 07:18	50
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2930		10.0	10.0	mg/L		·	06/27/19 12:49	1
Client Sample ID: MW - 9A							Lab Sampl	e ID: 600-187	419-19
Date Collected: 06/20/19 11:34								Matri	x: Water
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato	• • •	Qualifian	MOI	MDI	11		Duonouod	Analyzad	
Analyte		Qualifier	MQL 0.400	0.0534	Unit	D	Prepared	Analyzed 06/29/19 07:38	Dil Fac 10
Chloride	268		0.400	0.0534	mg/L			06/29/19 07.38	10
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1220		10.0		mg/L		·	06/27/19 12:49	1
Client Sample ID: MW - 11							Lab Sampl	e ID: 600-187	
Date Collected: 06/20/19 11:41								Matri	x: Water
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromato	aranhy								
Analyte		Qualifier	MQL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.4		0.400	0.0534				06/29/19 07:58	2
	54.4		000	0.000 T					2
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	407		10.0	10.0	mg/L			06/27/19 12:49	1
# **Client Sample Results**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

## Client Sample ID: EB - 1 Date Collected: 06/20/19 12:50

Date	oonecteu.	00/20/13	12.50
Date	<b>Received:</b>	06/21/19	10:19

Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			07/01/19 16:21	1
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70.0		10.0	10.0	mg/L			06/27/19 12:49	1

Job ID: 600-187419-1

Lab Sample ID: 600-187419-21

Qualifiers		
HPLC/IC Qualifier	Qualifier Description	
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.	
U	Analyte was not detected at or above the SDL.	5
General Che	mistry	
Qualifier	Qualifier Description	
Н	Sample was prepped or analyzed beyond the specified holding time	
U	Analyte was not detected at or above the SDL.	7
Glossary		0
Abbreviation	These commonly used abbreviations may or may not be present in this report.	0
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	0
%R	Percent Recovery	9

¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 600-187419-1

Lab Sample ID: MB 600-268268/35

Lab Sample ID: MB 600-268268/4

Lab Sample ID: LCS 600-268268/36

Lab Sample ID: LCS 600-268268/5

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Analyte

Chloride

Analyte

Chloride

Analyte

Chloride

Analysis Batch: 268268

Analysis Batch: 268268

Analysis Batch: 268268

## **QC Sample Results**

MQL

0.400

MQL

0.400

Spike

Added

20.0

MDL Unit

0.0534 mg/L

MDL Unit

0.0534 mg/L

LCS LCS

19.05

Result Qualifier

D

D

D

Unit

mg/L

Prepared

Prepared

%Rec

95

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Method: 300.0 - Anions, Ion Chromatography

MB MB Result Qualifier

MB MB Result Qualifier

0.0534 U

0.0534 U

Job ID: 600-187419-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

Analyzed 06/28/19 23:18

**Client Sample ID: Method Blank** 

Analyzed

06/28/19 12:57

**Client Sample ID: Lab Control Sample** 

%Rec.

Limits

90 - 110

Dil Fac

Dil Fac

1

1

8	
9	

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

Analysis Batch: 268268								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	20.0	19.60		mg/L		98	90 - 110	

Lab Sample ID: 600-187419-5 M	S								Client Sam	ple ID: MW - 2
Matrix: Water									Prep 1	Type: Total/NA
Analysis Batch: 268268										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	283		200	439.7	N1	mg/L		79	80 - 120	

Lab Sample ID: 600-187419-5 Matrix: Water	MSD								Client Sam Prep T	ple ID: N ype: Tot	
Analysis Batch: 268268	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte Chloride		Qualifier	Added 200	Result 444.5	Qualifier	Unit mg/L	D	%Rec 81	Limits 80 - 120	1	Limit 20
								•		-	

	Lab Sample ID: 600-187419-14	MS							С	lient Samp	le ID: RW - 6R
	Matrix: Water									Prep 1	ype: Total/NA
	Analysis Batch: 268268										
		Sample	Sample	Spike	MS	MS				%Rec.	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
L	Chloride	7860		5000	11760	N1	mg/L		78	80 - 120	

Lab Sample ID: 600-187419-14 M Matrix: Water Analysis Batch: 268268	ISD							Client Sample ID: R Prep Type: To				
Analysis Batch. 200200	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	7860		5000	11760	N1	mg/L		78	80 - 120	0	20	

Eurofins TestAmerica, Houston

Released to Imaging: 9/13/2021 1:48:45 PM

Lab Sample ID: MB 600-268404/4

Lab Sample ID: LCS 600-268404/5

Lab Sample ID: MB 600-268092/1

Lab Sample ID: LCS 600-268092/2

Matrix: Water

Matrix: Water

Matrix: Water

Total Dissolved Solids

Matrix: Water

Matrix: Water

Analysis Batch: 268191

Analyte

Chloride

Analyte

Chloride

Analyte

Analysis Batch: 268404

Analysis Batch: 268404

Analysis Batch: 268092

## QC Sample Results

MQL

0.400

Spike

Added

20.0

MDL Unit

0.0534 mg/L

LCS LCS

19.30

**Result Qualifier** 

MDL Unit

10.0 mg/L

D

Unit

mg/L

Client: ARCADIS U.S., Inc.
Project/Site: Midland - Chevron Kegan Boyer

Method: 300.0 - Anions, Ion Chromatography

Method: SM 2540C - Solids, Total Dissolved (TDS)

MB MB Result Qualifier

MB MB

10.0 U

Result Qualifier

0.0534 U

Job ID: 600-187419-1

# **Client Sample ID: Method Blank** Prep Type: Total/NA

D	Prepared	Analyzed	Dil Fac	ï
_		07/01/19 14:01	1	
С	lient Sample	ID: Lab Control	Sample	
		Prep Type: 7	Fotal/NA	
		%Rec.		
	D %Rec	Limits		
	96	90 - 110		
	Client S	ample ID: Metho		
		Prep Type:	rotal/NA	
	Droporod	Analyzad		

8

р	Prepare	d Analyzed	Dil Fac
		a Analyzea	
		06/26/19 15:14	1

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

			Spike	LCS	LCS				%Rec.	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Dissolved Solids			1800	1789		mg/L		99	90 - 110	
Lab Sample ID: 600-187419-5 DU									Client Sample ID: M	/W - 2
Matrix: Water									Prep Type: To	tal/NA
Analysis Batch: 268092										
	Sample	Sample		DU	DU					RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D		RPD	Limit
Total Dissolved Solids	960			934.0		mg/L			3	10

MQL

10.0

# **Client Sample ID: Method Blank** Prep Type: Total/NA

	MB	МВ										
Analyte	Result	Qualifier	I	MQL	MDL	Unit		D	Prepared	Analy	zed	Dil Fac
Total Dissolved Solids	10.0	U		10.0	10.0	mg/L				06/27/19	12:49	1
Lab Sample ID: LCS 600-268191/2								Clier	nt Sample	e ID: Lab C	ontrol	Sample
Matrix: Water										Prep 1	Гуре: Т	otal/NA
Analysis Batch: 268191												
			Spike	LC	S LCS	;				%Rec.		
Analyte			Added	Res	ılt Qua	lifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1800	18	34		mg/L		102	90 - 110		

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer Page 149 of 399

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Job ID: 600-187419-1

# Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 600-187419-13 DU Matrix: Water											CI	ient Sample ID: M Prep Type: To	
Analysis Batch: 268191													
· ····· <b>,</b> ··· · ·····	Sample	Sam	ple			DU	DU						RPD
Analyte	Result	Qual	ifier			Result	Qua	lifier	Unit	D		RPD	Limit
Total Dissolved Solids	1040					1072			mg/L			3	10
Lab Sample ID: 600-187419-18 DU											(	Client Sample ID:	MW - 9
Matrix: Water												Prep Type: To	
Analysis Batch: 268191													
-	Sample	Sam	ple			DU	DU						RPD
Analyte	Result	Qual	ifier			Result	Qua	lifier	Unit	D		RPD	Limit
Total Dissolved Solids	2930					2976			mg/L			2	10
Lab Sample ID: MB 600-268421/1											Client S	ample ID: Method	Blank
Matrix: Water												Prep Type: To	otal/NA
Analysis Batch: 268421													
-		MB	МВ										
Analyte	Re	sult	Qualifier		MQL		MDL	Unit		DF	Prepared	Analyzed	Dil Fac
Total Dissolved Solids		10.0	U		10.0		10.0	mg/L				07/01/19 11:28	1
Lab Sample ID: LCS 600-268421/2										Clien	t Sample	ID: Lab Control S	ample
Matrix: Water												Prep Type: To	otal/NA
Analysis Batch: 268421													
-				Spike		LCS	LCS					%Rec.	
Analyte				Added		Result	Qua	lifier	Unit	D	%Rec	Limits	
Total Dissolved Solids				1800		1721			mg/L		96	90 - 110	

9

# **Default Detection Limits**

Client: ARCADIS U.S., Inc.
Project/Site: Midland - Chevron Kegan Boyer

Job ID: 600-187419-1

#### Method: 300.0 - Anions, Ion Chromatography MQL MDL Analyte Units Chloride 0.400 0.0534 mg/L 5 **General Chemistry** MQL MDL Analyte Units Total Dissolved Solids 10.0 10.0 mg/L

# **QC Association Summary**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Job ID: 600-187419-1

HPLC/IC

### Analysis Batch: 268268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-1	MW - 12	Total/NA	Water	300.0	
600-187419-2	MW - 3	Total/NA	Water	300.0	
600-187419-3	MW - 1	Total/NA	Water	300.0	
600-187419-4	MW - 2A	Total/NA	Water	300.0	
600-187419-5	MW - 2	Total/NA	Water	300.0	
600-187419-6	MW - 6R	Total/NA	Water	300.0	
600-187419-7	DUP - 1	Total/NA	Water	300.0	
600-187419-8	MW - 5	Total/NA	Water	300.0	
600-187419-9	MW - 5A	Total/NA	Water	300.0	
600-187419-10	RW - 1	Total/NA	Water	300.0	
600-187419-11	DUP -2	Total/NA	Water	300.0	
600-187419-12	MW - 4	Total/NA	Water	300.0	
600-187419-13	MW - 4A	Total/NA	Water	300.0	
600-187419-14	RW - 6R	Total/NA	Water	300.0	
600-187419-15	RW - 2	Total/NA	Water	300.0	
600-187419-16	MW - 14	Total/NA	Water	300.0	
600-187419-17	MW - 7	Total/NA	Water	300.0	
600-187419-18	MW - 9	Total/NA	Water	300.0	
600-187419-19	MW - 9A	Total/NA	Water	300.0	
600-187419-20	MW - 11	Total/NA	Water	300.0	
MB 600-268268/35	Method Blank	Total/NA	Water	300.0	
MB 600-268268/4	Method Blank	Total/NA	Water	300.0	
LCS 600-268268/36	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-268268/5	Lab Control Sample	Total/NA	Water	300.0	
600-187419-5 MS	MW - 2	Total/NA	Water	300.0	
600-187419-5 MSD	MW - 2	Total/NA	Water	300.0	
600-187419-14 MS	RW - 6R	Total/NA	Water	300.0	
600-187419-14 MSD	RW - 6R	Total/NA	Water	300.0	

#### Analysis Batch: 268404

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
600-187419-21	EB - 1	Total/NA	Water	300.0	
MB 600-268404/4	Method Blank	Total/NA	Water	300.0	
LCS 600-268404/5	Lab Control Sample	Total/NA	Water	300.0	

#### **General Chemistry**

#### Analysis Batch: 268092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-1	MW - 12	Total/NA	Water	SM 2540C	
600-187419-2	MW - 3	Total/NA	Water	SM 2540C	
600-187419-3	MW - 1	Total/NA	Water	SM 2540C	
600-187419-4	MW - 2A	Total/NA	Water	SM 2540C	
600-187419-5	MW - 2	Total/NA	Water	SM 2540C	
600-187419-6	MW - 6R	Total/NA	Water	SM 2540C	
MB 600-268092/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-268092/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-187419-5 DU	MW - 2	Total/NA	Water	SM 2540C	

# **QC** Association Summary

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Method Blank

Lab Control Sample

# **General Chemistry**

## Analysis Batch: 268191

MB 600-268421/1

LCS 600-268421/2

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
600-187419-7	DUP - 1	Total/NA	Water	SM 2540C	
600-187419-8	MW - 5	Total/NA	Water	SM 2540C	
600-187419-9	MW - 5A	Total/NA	Water	SM 2540C	
600-187419-10	RW - 1	Total/NA	Water	SM 2540C	
600-187419-11	DUP -2	Total/NA	Water	SM 2540C	
600-187419-12	MW - 4	Total/NA	Water	SM 2540C	
600-187419-13	MW - 4A	Total/NA	Water	SM 2540C	
600-187419-14	RW - 6R	Total/NA	Water	SM 2540C	
600-187419-16	MW - 14	Total/NA	Water	SM 2540C	
600-187419-17	MW - 7	Total/NA	Water	SM 2540C	
600-187419-18	MW - 9	Total/NA	Water	SM 2540C	
600-187419-19	MW - 9A	Total/NA	Water	SM 2540C	
600-187419-20	MW - 11	Total/NA	Water	SM 2540C	
600-187419-21	EB - 1	Total/NA	Water	SM 2540C	
VIB 600-268191/1	Method Blank	Total/NA	Water	SM 2540C	
_CS 600-268191/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-187419-13 DU	MW - 4A	Total/NA	Water	SM 2540C	
600-187419-18 DU	MW - 9	Total/NA	Water	SM 2540C	
nalysis Batch: 26842	21				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-15	RW - 2	Total/NA	Water	SM 2540C	

Total/NA

Total/NA

Water

Water

SM 2540C

SM 2540C

0

Job ID: 600-187419-1

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

# Lab Chronicle

Job ID: 600-187419-1

Lab Sample ID: 600-187419-1

Lab Sample ID: 600-187419-3

Lab Sample ID: 600-187419-4

Lab Sample ID: 600-187419-5

Lab Sample ID: 600-187419-6

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: MW - 12 Date Collected: 06/20/19 08:52 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			268268	06/28/19 22:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 3 Date Collected: 06/20/19 09:32 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			268268	06/28/19 22:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 1 Date Collected: 06/20/19 09:38

Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			268268	06/28/19 22:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

## Client Sample ID: MW - 2A

Date Collected: 06/20/19 09:44

#### Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/28/19 23:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

# Client Sample ID: MW - 2

Date Collected: 06/20/19 09:47

Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			268268	06/29/19 00:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 6R Date Collected: 06/20/19 09:53 Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 01:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Job ID: 600-187419-1

Lab Sample ID: 600-187419-7

Lab Sample ID: 600-187419-8

Lab Sample ID: 600-187419-9

Lab Sample ID: 600-187419-10

Lab Sample ID: 600-187419-11

Lab Sample ID: 600-187419-12

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

# Client Sample ID: DUP - 1 Date Collected: 06/20/19 00:00

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 02:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 5 Date Collected: 06/20/19 10:05 Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			268268	06/29/19 02:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

## Client Sample ID: MW - 5A

Date Collected: 06/20/19 10:08

#### Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	300.0		5			268268	06/29/19 02:58	SKR	TAL HOU	
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU	

# Client Sample ID: RW - 1

Date Collected: 06/20/19 10:14 Date Received: 06/21/19 10:19

Prep Type Total/NA	Batch Type Analysis	Batch Method 300.0	Run	Dil Factor 500	Initial Amount	Final Amount	Batch 	Prepared or Analyzed 06/29/19 03:18	Analyst SKR	– Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

## Client Sample ID: DUP -2

Date Collected: 06/20/19 00:00

Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			268268	06/29/19 03:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 4 Date Collected: 06/20/19 10:22 Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 03:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

# Lab Chronicle

Job ID: 600-187419-1

Lab Sample ID: 600-187419-13

Lab Sample ID: 600-187419-14

Lab Sample ID: 600-187419-15

Lab Sample ID: 600-187419-16

Lab Sample ID: 600-187419-17

Lab Sample ID: 600-187419-18

Prepared

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

## Client Sample ID: MW - 4A Date Collected: 06/20/19 10:24

Date Received	: 06/21/19 10:1	19				
	Batch	Batch		Dil	Initial	Final
Pron Type	Tuno	Method	Pun	Factor	Amount	Amour

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 04:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: RW - 6R Date Collected: 06/20/19 10:49 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			268268	06/29/19 05:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: RW - 2 Date Collected: 06/20/19 10:51

Date Received: 06/21/19 10:19

<b>[</b>	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 06:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268421	07/01/19 11:28	DTN	TAL HOU

# Client Sample ID: MW - 14

Date Collected: 06/20/19 11:05

Date Received: 06/21/19 10	:19		
Batch	Batch	Dil	Initial

								•		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 06:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

Final

Batch

# Client Sample ID: MW - 7

Date Collected: 06/20/19 11:20 Date Received: 06/21/19 10:19

		-								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 06:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

### Client Sample ID: MW - 9 Date Collected: 06/20/19 11:30 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			268268	06/29/19 07:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

# Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: MW - 9A Date Collected: 06/20/19 11:34

Date Received: 06/21/19 10:19	

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 07:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 11 Date Collected: 06/20/19 11:41 Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 07:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

### Client Sample ID: EB - 1 Date Collected: 06/20/19 12:50 Date Received: 06/21/19 10:19

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analvzed	Analvst	Lab	1
Total/NA	Analysis	300.0		1			268404	07/01/19 16:21	SKR	TAL HOU	4
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU	

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 600-187419-19

Lab Sample ID: 600-187419-20

Lab Sample ID: 600-187419-21

# **Accreditation/Certification Summary**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

### Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Oklahoma	State Program	6	2018-052	08-31-19
Texas	NELAP	6	T104704223-18-23	10-31-19
USDA	Federal		P330-18-00130	04-30-21

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Job ID: 600-187419-1

Phone (713) 690-4444 Fax (713) 690-5646						407#		
Client Information	17	LB		Kudch	Lab PM: Kudchadkar, Sachin G	Carrier 1	racking No(s): COC No: 600-68943-18804.1	18804.1
Client Contact Mr. Brett Krehbiel	Phone:			E-Mai sach	n.kudchad	E-Mail sachin.kudchadkar@testamericainc.com	Page 1 of 3	
Company: ARCADIS U.S., Inc.						Analysis Requested	Jab #:	
Address: 1004 North Big Spring Suite 121	Due Date Requested:	ed:					Preservation Codes	
City: Midland	TAT Requested (days):	ays):			File		B - NaCH C - Zn Acetale	N - NOTE N - NOTE
State. Z.p. TX, 79701							D - Nitric Acid E - NaHSO4 F - MaOH	
Phone: 916-786-5382(Tel)	P0 #: Purchase Order not required	not require	T		(0)		G - Amchiar H - Ascorbic A	
Email: brett.krehbiel@arcadis.com	MO#				(ON			
Project Name: Midland - Chevron K CLICLI BOLICI	Project #: 60003622				10 S9)			W - pH 4-5 Z - other (specify)
sile COUPES Jail	SSOW#:				U as		of cother:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, S=solid, O=westeloil, BT=Tissue, AmAir)	Field Filtered Perform MS/M 2540C_Calcd, 3	500-187419 (	Total Number	Special Instructions/Note:
	X	( )	Preserva	Preservation Code:			X	
21- MW	51102100	2530	0	Water	-	n of		
mue - 3.	61/07/01	6432	0	Water	-	Cust		
mus - 1	ou rolig	0938	61	Water	-	ody		
MW - 1A	06/20/19	41160	61	Water	-			
MW - 2	40/20/19	1440	G	Water	1			
MILS - UP	511 at 190	52100	61	Water	-			
Dup -1	010 140 /14	1	CI	Water	-			
S-mm	1011011910	5001	CI	Water	-			
muc - SA	01/10/11/1008	1008	G	Water	-			
Rue - 1	EVE   20   19	HIOI	61	Water	-			
2-2-2	61/22/010	l	IJ	Water	)			
Possible Hazard Idantification Non-Hazard Elammakia Stin Initiant Day	Doison B I lation		Padiotonical		Sample	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Detroin To Cliant	samples are retained longer th	ian 1 month)
lested: I, II, III, IV, Other (specify)					Special	C Requireme		CUBLICAL
Empty Kit Relinquished by:		Date:			Time:	Method	Method of Shipment:	
Reinquistree by Consumed - 250	Date/Time	\$/13	311	COMPANY	A Rec	Received by	Date/Time;	Company
1	Date/Time:			Company	Rec	Received by:	Date/Time:	Company
Reinquished by:	Date/Time:			Company	Rec	Received by:	Date/Time;	Company
Custody Seals Intact Custody Seal No.:					Coo	Cooler Temperature(s) °C and Other Remarks:		

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7/15/2019

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6-310 колтway Street Houston, ТХ 77040 Phone (713) 690-4444 Fax (713) 690-5645		Chain o	of Cus	n of Custody Record	ecord	#	#264		
Client Information	111	LR		Lab PM Kudch	Lab PM. Kudchadkar, Sachin G		Carrier Tracking No(s).	COC No: 600-68943-18804.1	804.1
Client Contact Mr. Brett Krehbiel	Phone			E-Ma sach	n kudchadka	E-Mail: sachin.kudchadkar@testamencainc.com		Page 2 of 3	
Company ARCADIS U.S., Inc.						Analysis Requested	lested	Job #.	
Address 1004 North Big Spring Suite 121	Due Date Requested:	;pa						Preservation Codes	
City Midland State, Zp: State, Zp:	TAT Requested (days):	:(sAe						A - HCL B - NaOH C - Zh Acetale D - Nito Aold E - NaHSO4	M - Hexane N - None O - ASNAO2 P - Na2203 O - Na2203
Phone Phone	PO# Purchase Order not required	not required			(			F - MeOH G - Amchlor	
Email. brett krehbiel@arcadis.com	WO #				(ON				
Project Name. Midland - Chevron LEGIAN BUHLA	Project #. 60003622				10 50			E K EDA	W - pH 4-5 Z - other (specify)
Jal	SSOW#:				A) asi			of con	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (weasary, Secold Deserviold, BEFINAUS, AAAF)	Field Filtered Perform MSM 2540C_Calcd, 3			Total Number S	Special Instructions/Note:
	X	X		Preservation Code:					V
mu4	101/22/00	1022	U	Water	4				
HH- MM	811071010	1224	U	Water	1				
RWJ - LOR	OLC/ LO/M	1049	G	Water	1				
RW-L	010/20/14	1051	G	Water	1				
P1- 24	10/20/14	1105	E	Water	1				
Thus - T	curre/14	1120	U	Water	1				
rnue -9	Ple (zo/ 19	1130	G	Water	1				
415- UM	00/20/14	HE 11	U	Water	-				
11- 5114	W/10/14	1141	C	Water	1				
EB-1	00 120/14	1250	IJ	Water	1				
	A.B.			Water					
ant	Poison R Unkaown		Radiolonical		Sample	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Return To Client Discossi Ru Lab Archive For Mon	assessed if samples a	are retained longer than Archive For	11 month) Months
			in the second second		Special Ir	Special Instructions/QC Requirements	in the second	IN COMPANY	CINICAL
Empty Kit Relinquished by:		Date			Time:		Method of Shipment		
Reinaustrad by	Deletime Delicali 8	1	311	CAPT'CA	DIT RECEIVED BY	/eď by:	Date/Time	mei	Company
elinquement by	DateTime	-		Company	Received by	Ved by	Date/Time	.au	Company
Reingushed by	Date/Time.			Company	Received by	ved by,	DateTime	mer	Company
Custody Seals Intact: Custody Seal No.					Cooler	Cooler Temperature(s) °C and Other Remarks	alks		

# **Received by OCD: 3/25/2020 9:15:51** AM

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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on feat in accurant FedEx Service Guide, available on feat in accurant FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, nondelivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other incidental, consequential, or service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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HS-SA-WI-013

<b>Received</b> by	OCD: 3/2	25/2020	9:15:51	AM

	on		Loc: 600 18741	a T	est/	Americ
S	ample Rec	eipt Cheo	cklist	T	HE LEADER IN	I ENVIRONMENTAL TES
IOB NUMBER:			Date/Time Received	٨	cao	19 JUN 2
	VR		CARRIER/DRIVER:		HE	
Custody Seal Present:	YES		Number of Coolers F	Received:	2	
	Temp	1	Observed Temp	Therm	Them	Corrected Temp
Cooler ID	Blank	Trip Blank	(3)	, ID,	CF	( <sup>3</sup> )
Gray	Y/N	Y/N	1.9	66	2	
G ray	Y / N	Y / N Y / N	1.7	-		1.5
	Y / N Y / N	Y/N Y/N				
	Y / N	Y/N		-		~~~~
C	Y/N	YTN		1	1 GI	21/19
	Y / N	Y/N		0	/	
	Y/N	Y / N Y / N				
amples received on ic	6	□ио		_		
ABORATORY PRESE ase samples are>pH 1 H paper Lot #	ERVATION OF	SAMPLES RE	Acid preserved are<		□ YES □ YES	Пио
ABORATORY PRESE ase samples are>pH 1 H paper Lot #	ERVATION OF	SAMPLES RE	Acid preserved are<			
ABORATORY PRESE ase samples are>pH 1 H paper Lot # OA headspace accept	ERVATION OF S		Acid preserved are<	bH 2:	□YES	VES NO
ABORATORY PRESE ase samples are>pH 1 H paper Lot # OA headspace accept	ERVATION OF S		Acid preserved are<	bH 2:	□YES	
ABORATORY PRESE ase samples are>pH 1 H paper Lot # OA headspace accept Did samples meet the la	ERVATION OF S		Acid preserved are<	bH 2:	□YES	
ABORATORY PRESE ase samples are>pH 1 H paper Lot # OA headspace accept Did samples meet the la	ERVATION OF S		Acid preserved are<	bH 2:	□YES	
ABORATORY PRESE ase samples are>pH 1 H paper Lot # OA headspace accept Did samples meet the la	ERVATION OF S		Acid preserved are<	bH 2:	□YES	

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6

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Rev. 3; 07/01/2014

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# Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

#### Login Number: 187419 List Number: 1

Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples.</td>	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7,1.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

List Source: Eurofins TestAmerica, Houston

Job Number: 600-187419-1

14

Received by OCD: 3/25/2020 9:15:51 AM

# 🔅 eurofins

# Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Houston 6310 Rothway Street Houston, TX 77040 Tel: (713)690-4444

# Laboratory Job ID: 600-196675-1

Client Project/Site: Cooper Jal

For:

ARCADIS U.S., Inc. 1004 North Big Spring Suite 121 Midland, Texas 79701

Attn: Mr. Russell Grant

Authorized for release by: 12/19/2019 4:18:13 PM Jasmine Turner, Project Management Assistant I (713)690-4444 jasmine.turner@testamericainc.com

Designee for

Sachin Kudchadkar, Senior Project Manager (713)690-4444 sachin.kudchadkar@testamericainc.com

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

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

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

results through TOTOLACCESS Have a Question?

LINKS

**Review your project** 

Visit us at: www.testamericainc.com Released to Imaging: 9/13/2021 1:48:45 PM

Ask-

The

Expert

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# **Table of Contents**

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This data package is for Eurofins TestAmerica, Houston job number 600-196675-1 and consists of:

☑ R1 - Field chain-of-custody documentation;	
<ul> <li>☑ R2 - Sample identification cross-reference;</li> <li>☑ R3 - Test reports (analytical data sheets) for each environmental sample that includes:</li> </ul>	5
a. Items consistent with NELAC Chapter 5,	6
b. dilution factors,	
c. preparation methods,	
d. cleanup methods, and	
e. if required for the project, tentatively identified compounds (TICs).	8
R4 - Surrogate recovery data including:	
a. Calculated recovery (%R), and	9
b. The laboratory's surrogate QC limits.	
R5 - Test reports/summary forms for blank samples;	
R6 - Test reports/summary forms for laboratory control samples (LCSs) including:	
a. LCS spiking amounts,	
b. Calculated %R for each analyte, and	
c. The laboratory's LCS QC limits.	
R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:	
a. Samples associated with the MS/MSD clearly identified,	
b. MS/MSD spiking amounts,	
c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,	
d. Calculated %Rs and relative percent differences (RPDs), and	
e. The laboratory's MS/MSD QC limits	

- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- $\blacksquare$  R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jasmine Turner, for Sachin Kudchadkar Name (printed)

Signature

12/19/2019

Date

Senior Project Manager Official Title (printed) Page 165 of 399

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

aboratory Nam		LRC Date:	12/19/2019					
roject Name:	Cooper Jal	Laboratory Job Number:	600-196675-1					
eviewer Name	Jasmine Turner, for Sachin Kudchadkar							
				-				
# <sup>1</sup> A <sup>2</sup>	Description			Yes	No	NA <sup>3</sup>	$NR^4$	ER#⁵
1 OI Chair	of-custody (C-O-C)							
Did sa	nples meet the laboratory's standard conditions of sample	acceptability upon receipt?		Х				
	Il departures from standard conditions described in an exc	eption report?		Х				
	e and quality control (QC) identification							
Are a	field sample ID numbers cross-referenced to the laboratory	y ID numbers?		Х				
	aboratory ID numbers cross-referenced to the correspond	ing QC data?		Х				
3 OI Test I	ports							
	Il samples prepared and analyzed within holding times?				Х			R03A
	han those results < MQL, were all other raw values bracke	ted by calibration standards?		Х				
	alculations checked by a peer or supervisor?			Х				
	Il analyte identifications checked by a peer or supervisor?			Х				
	ample detection limits reported for all analytes not detected			Х				
	Il results for soil and sediment samples reported on a dry v					Х		
	6 moisture (or solids) reported for all soil and sediment san					Х		
	ulk soils/solids samples for volatile analysis extracted with	methanol per SW846 Method	d 5035?			Х		
	red for the project, are TICs reported?					Х		
	ate recovery data							
	urrogates added prior to extraction?					Х		
	urrogate percent recoveries in all samples within the labora	atory QC limits?				Х		
	ports/summary forms for blank samples							
	ppropriate type(s) of blanks analyzed?			Х				
	lanks analyzed at the appropriate frequency?			Х				
	nethod blanks taken through the entire analytical process,	including preparation and, if a	pplicable, cleanup					
proce				Х				
	lank concentrations < MQL?			Х				R05D
	tory control samples (LCS):							
	II COCs included in the LCS?			Х				
	ach LCS taken through the entire analytical procedure, inclu-	uding prep and cleanup steps	?	Х				
	CSs analyzed at the required frequency?			Х				
	CS (and LCSD, if applicable) %Rs within the laboratory Q0			Х				
	ne detectability check sample data document the laborator	y's capability to detect the CC	Cs at the MDL used					
	late the SDLs?			Х				
	e LCSD RPD within QC limits?					Х		
	spike (MS) and matrix spike duplicate (MSD) data			V				
	ne project/method specified analytes included in the MS and	nd MSD?		X				
	IS/MSD analyzed at the appropriate frequency?	1::4-0		X				
	IS (and MSD, if applicable) %Rs within the laboratory QC I	IIIIII(S /		X				
	IS/MSD RPDs within laboratory QC limits?			X				
	cal duplicate data			- v	<u> </u>			
	ppropriate analytical duplicates analyzed for each matrix?	0		X X				
	nalytical duplicates analyzed at the appropriate frequency? RPDs or relative standard deviations within the laboratory C			X	-			
	d quantitation limits (MQLs):			$+^{-}$				
		data packago?		X	<u> </u>			
	MQLs for each method analyte included in the laboratory	· · · · · · · · · · · · · · · · · · ·		X				
	MQLs correspond to the concentration of the lowest non-z adjusted MQLs and DCSs included in the laboratory data p			X				
	problems/anomalies	auraye:		<u> </u>				
	known problems/anomalies/special conditions noted in this	RC and EP?		X				
	· · · · · · · · · · · · · · · · · · ·		ana official and the					
samp	oplicable and available technology used to lower the SDL to results?			х				
	aboratory NELAC-accredited under the Texas Laboratory A	Accreditation Program for the	analytes, matrices	1				
	thods associated with this laboratory data package?			Х				
	dentified by the letter "R" must be included in the laboratory			ort(s). I	tems			
	ed by the letter "S" should be retained and made available		ate retention period.					
	anic analyses; I = inorganic analyses (and general chemis	stry, when applicable);						
3. NA =	ot applicable;							
4. NR =	ot reviewed;							

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

		y Name:	Eurofins TestAmerica, Houston	LRC Date:	12/19/2019					
roject			Cooper Jal	Laboratory Job Number:	600-196675-1					
eview	ver	Name:	Jasmine Turner, for Sachin Kudchadkar							
1	- 2						<u>г</u> т			
	A <sup>2</sup>		Description			Yes	No	NA <sup>3</sup>	NR⁺	ER# <sup>5</sup>
61 (	_		bration (ICAL)							
			onse factors and/or relative response factors for each a	analyte within QC limits?		Х				
	- F		ent RSDs or correlation coefficient criteria met?			Х	$\square$			
			umber of standards recommended in the method used			Х				
			pints generated between the lowest and highest standa	rd used to calculate the curve	?	Х				
			lata available for all instruments used?			Х				
		Has the ini	tial calibration curve been verified using an appropriate	second source standard?		Х				
<b>52</b> (	) IC	Initial and	continuing calibration verification (ICV and CCV) a	nd continuing calibration bl	ank (CCB):					
		Was the C	CV analyzed at the method-required frequency?			Х				
		Were perc	ent differences for each analyte within the method-requ	ired QC limits?		Х				
	ľ	Was the IC	CAL curve verified for each analyte?			Х				
	ľ	Was the a	osolute value of the analyte concentration in the inorgai	nic CCB < MDL?		Х				
<b>33</b> (			ctral tuning							
			opropriate compound for the method used for tuning?					Х		
			bundance data within the method-required QC limits?					Х		
64 (	_		andards (IS)							
			ea counts and retention times within the method-requir	red QC limits?				Х		
S5 (	_		(NELAC Section 5.5.10)					~		
			aw data (for example, chromatograms, spectral data) re	eviewed by an analyst?		х	+			
			associated with manual integrations flagged on the rav			X				
<b>36</b>	_		mn confirmation	V Gala:		^				
	-		olumn confirmation results meet the method-required Q	002				Х		
27 0	_		•				+	^		
<b>67</b> (	_		y identified compounds (TICs)	est te en en en eiste ek estre?			$\vdash$	V		
	_		re requested, were the mass spectra and TIC data subj	ect to appropriate checks?			$ \rightarrow $	Х		
<b>58</b>			ce Check Sample (ICS) results							
			ent recoveries within method QC limits?					Х		
5 <b>9</b>			tions, post digestion spikes, and method of standa							
			ent differences, recoveries, and the linearity within the	QC limits specified in the meth	iod?			Х		
<b>S10</b>			etection limit (MDL) studies				$\square$			
			L study performed for each reported analyte?			Х				
			either adjusted or supported by the analysis of DCSs?			Х				
S11 (			y test reports							
		Was the la	boratory's performance acceptable on the applicable p	roficiency tests or evaluation s	tudies?	Х				
S12 (			documentation							
			ndards used in the analyses NIST-traceable or obtained	d from other appropriate source	es?	Х				
S13 (	) IC	Compoun	d/analyte identification procedures							
		Are the pro	ocedures for compound/analyte identification document	ed?		Х				
S14 (	CI	Demonstr	ation of analyst competency (DOC)							
		Was DOC	conducted consistent with NELAC Chapter 5?			Х				
		Is docume	ntation of the analyst's competency up-to-date and on f	file?		Х				
S15 (	Л	Verificatio	n/validation documentation for methods (NELAC C	hapter 5)						
			•	•		1				
		Are all the	methods used to generate the data documented, verific	ed, and validated. where appli	cable?	х				
<b>S16</b>			y standard operating procedures (SOPs)			1				
<u> </u>	_		tory SOPs current and on file for each method performe	ed?		Х	+			
1			tified by the letter "R" must be included in the laboratory		e TRRP-required repo		tems		I	
I			by the letter "S" should be retained and made available			Ji ((3). I	CIII3			
0			c analyses; I = inorganic analyses (and general chemis		te retention penou.					
-				ary, when applicable),						
		NA = Not a								
	1.	NR = Not r	eviewed; eption Report identification number (an Exception Repo							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laborato	ory Name:	Eurofins TestAmerica, Houston	LRC Date:	12/19/2019	-2
Project N	lame:	Cooper Jal	Laboratory Job Number:	600-196675-1	
Reviewer	Name:	Jasmine Turner, for Sachin Kudchadkar			3
ER # <sup>1</sup>			Description		
	remaining	on a test with a holding time of 48 hours or le	ess. As such, the laboratory had insuf	the holding time or less than one shift (8 hours) fficient time remaining to perform the analysis within (600-196675-4), MW-6R (600-196675-5), MW-5 (600-	5
R03A	196675-6) 196675-12	), MW-5A (600-196675-7), MW-1 (600-196675	75-8), MW-4 (600-196675-9), MW-4A (6 675-14), DUP-1 (600-196675-15), MW-	600-196675-10), RW-1 (600-196675-11), RW-2R (600- /-10 (600-196675-16), MW-7 (600-196675-17), MW-8	
		00.0: The method blank for analytical batch 60 tion was less than the reporting limit (RL); the		the method detection limit. This target analyte s of samples was not performed.	8
R05D		00.0: The method blank for analytical batch 60 tion was less than the reporting limit (RL); the		the method detection limit. This target analyte s of samples was not performed.	9
1		00.0: The method blank for analytical batch 60 tion was less than the reporting limit (RL); the		he method detection limit. This target analyte s of samples was not performed.	1
1.		ntified by the letter "R" must be included in the		,	1
-		by the letter "S" should be retained and made		priate retention period.	
2.	•	ic analyses; I = inorganic analyses (and gene	ral chemistry, when applicable);		1
3. 4.	NA = Not a NR = Not r				
· · · ·	MIX = MOU	ievieweu,		an item if "NR" or "No" is checked).	

Sulfate

EuroFins TestAmerica, Houston

0.5

Matrix: Method: Date Analyzed: Job #: TALS Batch: Units:	Water SW-846 9056 / 8/23/2019 600-188237 272774 mg/L	EPA 300			
Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Bromide	CHWC16	0.101	0.200	0.306	0.4
Chloride	CHWC16	0.053	0.200	0.305	0.4
Fluoride	CHWC16	0.060	0.200	0.296	0.2
Nitrate as N	CHWC16	0.025	0.200	0.306	0.2
Nitrite as N	CHWC16	0.030	0.400	0.384	0.2

0.096

0.400

0.482

CHWC16

DCS = Detection Check Standard MQL = Method Quantitation Limit

Matrix: Method: Date Analyzed: Job #: TALS Batch: Units:	Water SM 2540C 8/20/2019 600-188237 272376 mg/L				
Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Total Dissolved Solids	NOEQUIP	10.000	29.880	86.000	10

# **Case Narrative**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

## Job ID: 600-196675-1

#### Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative 600-196675-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 11/27/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

All applicable analytical narratives can be found in the TRRP Checklist section of this report.

# Job ID: 600-196675-1

# **Method Summary**

#### Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL HOU

#### **Protocol References:**

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

#### Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# **Sample Summary**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal Job ID: 600-196675-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
600-196675-1	MW-12	Water	11/23/19 15:10	11/27/19 10:15		
600-196675-2	MW-3	Water	11/23/19 15:22	11/27/19 10:15		
600-196675-3	MW-2	Water	11/23/19 15:32	11/27/19 10:15		
600-196675-4	MW-2A	Water	11/23/19 15:37	11/27/19 10:15		
600-196675-5	MW-6R	Water	11/23/19 15:46	11/27/19 10:15		
00-196675-6	MW-5	Water	11/23/19 15:54	11/27/19 10:15		
600-196675-7	MW-5A	Water	11/23/19 16:04	11/27/19 10:15		
00-196675-8	MW-1	Water	11/24/19 08:26	11/27/19 10:15		
600-196675-9	MW-4	Water	11/24/19 08:44	11/27/19 10:15		
00-196675-10	MW-4A	Water	11/24/19 08:49	11/27/19 10:15		
00-196675-11	RW-1	Water	11/24/19 09:08	11/27/19 10:15		
00-196675-12	RW-2R	Water	11/24/19 09:21	11/27/19 10:15		
00-196675-13	RW-2	Water	11/24/19 09:25	11/27/19 10:15		
00-196675-14	MW-14	Water	11/24/19 09:31	11/27/19 10:15		
00-196675-15	DUP-1	Water	11/24/19 00:00	11/27/19 10:15		
00-196675-16	MW-10	Water	11/24/19 09:52	11/27/19 10:15		
600-196675-17	MW-7	Water	11/24/19 10:11	11/27/19 10:15		
00-196675-18	MW-8	Water	11/24/19 10:22	11/27/19 10:15		
600-196675-19	MW-9	Water	11/24/19 10:32	11/27/19 10:15		
600-196675-20	MW-9A	Water	11/24/19 10:41	11/27/19 10:15		
600-196675-21	MW-11	Water	11/24/19 10:51	11/27/19 10:15		

# **Client Sample Results**

Job ID: 600-196675-1

**Matrix: Water** 

Lab Sample ID: 600-196675-1

Client: ARCADIS U.S., Inc.
Project/Site: Cooper Jal

Client Sample ID: MW-12
Date Collected: 11/23/19 15:10
Date Received: 11/27/19 10:15

Method: 300.0 - Anions, Ion Chr Analyte		Qualifier	MQL (Adj)	SDI	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	337		100	-	mg/L		Flepaleu	12/14/19 06:51	25
Sulfate	337 140	U	125		mg/L			12/14/19 06:51	250
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	1010	н	20.0	20.0	mg/L			12/04/19 15:38	,
Client Sample ID: MW-3 Date Collected: 11/23/19 15:22						Lab	Sample	ID: 600-196 Matrix	
Date Received: 11/27/19 10:15								Iviati ix	. wale
 Method: 300.0 - Anions, Ion Chr	omatogra	phy							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	60.0	b	20.0	2.67	mg/L		-	12/14/19 07:02	5
Sulfate	96.6		25.0	4.79	mg/L			12/14/19 07:02	50
General Chemistry									
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	352	Н	20.0	20.0	mg/L			12/04/19 13:21	
							<u> </u>		
Client Sample ID: MW-2						Lab	Sample	ID: 600-196	
Client Sample ID: MW-2 Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15						Lab	Sample	ID: 600-196 Matrix	
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15	omatogra	phy				Lab	Sample		
Date Collected: 11/23/19 15:32		phy Qualifier	MQL (Adj)	SDL	Unit	Lab	Sample Prepared		: Wate
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr		Qualifier		-	Unit mg/L			Matrix	: Wate
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte	Result	Qualifier		1.07				Matrix	: Wate
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry	Result 27.7	Qualifier	8.00	1.07	mg/L			Matrix Analyzed 12/14/19 07:13	: Wate
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte	Result 27.7 42.0 Result	Qualifier b Qualifier	8.00 10.0 MQL (Adj)	1.07 1.91 <b>SDL</b>	mg/L mg/L Unit			Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed	Dil Far
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry	Result 27.7 42.0	Qualifier b Qualifier	8.00 10.0	1.07 1.91 <b>SDL</b>	mg/L mg/L	D	Prepared	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13	Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte	Result 27.7 42.0 Result	Qualifier b Qualifier	8.00 10.0 MQL (Adj)	1.07 1.91 <b>SDL</b>	mg/L mg/L Unit	D	Prepared Prepared	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed	Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids	Result 27.7 42.0 Result	Qualifier b Qualifier	8.00 10.0 MQL (Adj)	1.07 1.91 <b>SDL</b>	mg/L mg/L Unit	D	Prepared Prepared	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed 12/04/19 13:21	: Wate Dil Fa 2 2 Dil Fa 6675-4
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15	Result           27.7           42.0           Result           274	Qualifier b Qualifier H	8.00 10.0 MQL (Adj)	1.07 1.91 <b>SDL</b>	mg/L mg/L Unit	D	Prepared Prepared	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 12/14/19 07:13 12/04/19 13:21 ID: 600-196	Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37	Result 27.7 42.0 Result 274	Qualifier b Qualifier H	8.00 10.0 MQL (Adj)	1.07 1.91 <b>SDL</b> 10.0	mg/L mg/L Unit	D	Prepared Prepared	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 12/14/19 07:13 12/04/19 13:21 ID: 600-196	Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr	Result 27.7 42.0 Result 274	Qualifier b Qualifier H phy Qualifier	8.00 10.0 MQL (Adj) 10.0	1.07 1.91 SDL 10.0	mg/L mg/L Unit mg/L	D D Lab	Prepared Prepared Sample	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 12/04/19 13:21 ID: 600-196 Matrix	Dil Fa Dil Fa Dil Fa Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte	Result 27.7 42.0 Result 274	Qualifier b Qualifier H phy Qualifier	8.00 10.0 MQL (Adj) 10.0	1.07 1.91 SDL 10.0 SDL 2.67	mg/L mg/L Unit mg/L	D D Lab	Prepared Prepared Sample	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed 12/04/19 13:21 ID: 600-196 Matrix Analyzed	Dil Fa Dil Fa Dil Fa Oll Fa Dil Fa
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate	Result 27.7 42.0 Result 274 comatogra Result 88.0	Qualifier b Qualifier H phy Qualifier	8.00 10.0 MQL (Adj) 10.0 MQL (Adj) 20.0	1.07 1.91 SDL 10.0 SDL 2.67	mg/L mg/L Unit mg/L	D D Lab	Prepared Prepared Sample	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed 12/04/19 13:21 ID: 600-196 Matrix Analyzed 12/14/19 07:23	: Wate Dil Fa 22 Dil Fa 0675-4
Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: MW-2A Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride	Result 27.7 42.0 Result 274 romatogra Result 88.0 76.5	Qualifier b Qualifier H phy Qualifier	8.00 10.0 MQL (Adj) 10.0 MQL (Adj) 20.0	1.07 1.91 <b>SDL</b> 10.0 <b>SDL</b> 2.67 4.79	mg/L mg/L Unit mg/L	D D Lab	Prepared Prepared Sample	Matrix Analyzed 12/14/19 07:13 12/14/19 07:13 Analyzed 12/04/19 13:21 ID: 600-196 Matrix Analyzed 12/14/19 07:23	Dil Fa Dil Fa Dil Fa : Wate

Client: ARCADIS U.S., Inc.

# **Client Sample Results**

Job ID: 600-196675-1

Client Sample ID: MW-6R						Lab	Sample	ID: 600-196	675-5
Date Collected: 11/23/19 15:46								Matrix	
Date Received: 11/27/19 10:15									
_ Method: 300.0 - Anions, Ion Ch	romatoura	nhv							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69.4	b	20.0	2.67	mg/L		•	12/14/19 07:34	50
Sulfate	95.2		25.0	4.79	mg/L			12/14/19 07:34	50
General Chemistry									
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	384	н	20.0	20.0	mg/L			12/04/19 13:21	
Client Sample ID: MW-5						Lab	Sample	ID: 600-196	675-6
Date Collected: 11/23/19 15:54 Date Received: 11/27/19 10:15								Matrix	: Wate
_ Method: 300.0 - Anions, Ion Ch	romatogra	phy							
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1530	b	80.0		mg/L			12/14/19 08:06	200
Sulfate	250		100	19.1	mg/L			12/14/19 08:06	200
General Chemistry									
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	3900	н	100	100	mg/L			12/04/19 13:21	
Client Sample ID: MW-5A						Lab	Sample	ID: 600-196	675-7
Date Collected: 11/23/19 16:04								Matrix	
Date Received: 11/27/19 10:15									
Method: 300.0 - Anions, Ion Ch	romatogra	phy							
Analyte	Result	Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fa
Chloride	116	b	20.0		mg/L			12/14/19 08:17	50
Sulfate	61.1		25.0	4.79	mg/L			12/14/19 08:17	50
General Chemistry									
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
	502	н	20.0	20.0	mg/L			12/04/19 13:21	1
Total Dissolved Solids	002		20.0	_0.0					
Total Dissolved Solids Client Sample ID: MW-1			20.0			Lab	Sample	ID: 600-196	675-8
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26			20.0			Lab	Sample	ID: 600-196 Matrix	
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Ch	romatogra	iphy			Unit		·	Matrix	: Wate
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Ch Analyte	romatogra Result	u <mark>phy</mark> Qualifier	MQL (Adj)	SDL	Unit mg/l	Lab	Prepared	Matrix Analyzed	: Wate
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Ch	romatogra	u <mark>phy</mark> Qualifier		<b>SDL</b> 10.7	Unit mg/L mg/L		·	Matrix	: Wate
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Ch Analyte Chloride Sulfate	romatogra Result 1110	u <mark>phy</mark> Qualifier	- MQL (Adj) 80.0	<b>SDL</b> 10.7	mg/L		·	Matrix Analyzed 12/14/19 08:28	: Wate
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Ch Analyte Chloride	romatogra Result 1110 222	u <mark>phy</mark> Qualifier	- MQL (Adj) 80.0	<b>SDL</b> 10.7 19.1	mg/L		·	Matrix Analyzed 12/14/19 08:28	

# **Client Sample Results**

Job ID: 600-196675-1

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

**Client Sample ID: MW-4** 

Lab Sample ID: 600-196675-9
Matrix: Water

						La		ID. 000-130	
Date Collected: 11/24/19 08:44 Date Received: 11/27/19 10:15								Matrix	: Wate
Method: 300.0 - Anions, Ion Chr	omatogra	nhv							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3050	b	200	26.7	mg/L			12/14/19 09:00	500
Sulfate	420		250	47.9	mg/L			12/14/19 09:00	500
General Chemistry Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	5960	H	100	100	mg/L		•	12/04/19 13:21	
Client Sample ID: MW-4A						Lab	Sample	ID: 600-1966	575-10
Date Collected: 11/24/19 08:49 Date Received: 11/27/19 10:15								Matrix	: Wate
Method: 300.0 - Anions, Ion Chr		i <mark>phy</mark> Qualifier		e Di	Unit	D	Duonouod	Analyzad	Dil Fac
Analyte	321		_ MQL (Adj) 40.0		mg/L		Prepared	Analyzed 12/14/19 09:11	10
Sulfate	94.5	D I	50.0		mg/L			12/14/19 09:11	10
	04.0		00.0	0.01	iiig/L			12,11,10,00,111	10
General Chemistry									
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	824	Н	20.0	20.0	mg/L			12/04/19 13:21	
Client Sample ID: RW-1						Lab	Sample	ID: 600-1966	75-11
Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15								Matrix	: Wate
Method: 300.0 - Anions, Ion Chr				_					
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5780	b	400		mg/L			12/14/19 09:43	1000
Sulfate	722		500	95.7	mg/L			12/14/19 09:43	1000
General Chemistry	Decult	Qualifian		0.01	11 14		Durananad	Anahmad	
Analyte		Qualifier	MQL (Adj)	_	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12200	н	200	200	mg/L			12/04/19 13:21	
Client Sample ID: RW-2R						Lab	Sample	ID: 600-1966	575-12
Date Collected: 11/24/19 09:21								Matrix	: Wate
Date Received: 11/27/19 10:15									

Method: 300.0 - Anions, Ion	Chromatogra	iphy							
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7720	b	400	53.4	mg/L			12/14/19 09:54	1000
Sulfate	943		500	95.7	mg/L			12/14/19 09:54	1000
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	21000	Н	200	200	mg/L			12/04/19 13:21	1

# **Client Sample Results**

Job ID: 600-196675-1

Lab Sample ID: 600-196675-13

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### Client Sample ID: RW-2 Date Collected: 11/24/19 09:25 Date Reseived: 44/27/19 40:15

Method: 300.0 - Anions, Ion Chr									
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3510	b	200		mg/L			12/18/19 01:23	500
Sulfate	464		250	47.9	mg/L			12/18/19 01:23	50
General Chemistry									
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	9880	Н	200	200	mg/L			12/04/19 13:21	
Client Sample ID: MW-14						Lab	Sample	ID: 600-1966	75-14
Date Collected: 11/24/19 09:31 Date Received: 11/27/19 10:15								Matrix	: Wate
- Method: 300.0 - Anions, Ion Chr	omatogra	phy							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	37.1	b	8.00	1.07	mg/L		•	12/14/19 10:24	2
Sulfate	94.5		10.0		mg/L			12/14/19 10:24	2
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	328	Н	20.0	20.0	mg/L		•	12/04/19 13:21	
Client Sample ID: DUP-1 Date Collected: 11/24/19 00:00 Date Received: 11/27/19 10:15						Lab	Sample	ID: 600-1966 Matrix	
Method: 300.0 - Anions, Ion Chr	omatogra	nhv							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	40.4	b	8.00	1.07	mg/L		-	12/14/19 11:25	2
Sulfate	95.9		10.0		mg/L			12/14/19 11:25	2
General Chemistry									
Analyte	Desult	Ovellfier			Unit	-	Prepared	Analyzad	
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	ricpurcu	Analyzed	Dil Fa
Total Dissolved Solids	Result 324		20.0		mg/L	D	Tropurcu	12/04/19 13:21	Dil Fa
-			· •				•	•	
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52			· •				•	12/04/19 13:21	75-10
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52	324	H	· •				•	12/04/19 13:21	75-10
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr	324 omatogra	H	· •	20.0			•	12/04/19 13:21	75-1
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte	324 omatogra	H phy Qualifier	20.0	20.0 SDL	mg/L	Lab	Sample	12/04/19 13:21 ID: 600-1966 Matrix	575-1 : Wate
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15	324 omatogra Result	H phy Qualifier	20.0	20.0 SDL 5.34	mg/L Unit	Lab	Sample	12/04/19 13:21	075-10 : Wate
Total Dissolved Solids Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride	324 omatogra Result 230	H phy Qualifier	<u> </u>	20.0 SDL 5.34	mg/L Unit mg/L	Lab	Sample	12/04/19 13:21 ID: 600-1966 Matrix Analyzed 12/14/19 11:46	<b>75-1</b> : Wate Dil Fa

Analyzed

12/04/19 13:21

Analyte

**Total Dissolved Solids** 

MQL (Adj)

20.0

SDL Unit

20.0 mg/L

D

Prepared

Result Qualifier

826 H

Dil Fac

1

# **Client Sample Results**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal Client Sample ID: MW-7 Date Collected: 11/24/19 10:11 Date Received: 11/27/19 10:15								Job ID: 600-19	96675-
Date Collected: 11/24/19 10:11									
						Lab	Sample	ID: 600-1966 Matrix	
Method: 300.0 - Anions, Ion Chro Analyte		phy Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	2080	b	200	26.7	mg/L			12/14/19 12:06	50
Sulfate	272	-	250		mg/L			12/14/19 12:06	50
General Chemistry Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	6300	Н	100	100	mg/L		-	12/04/19 13:21	
Client Sample ID: MW-8						l ab	Sample	ID: 600-1966	75-1
Date Collected: 11/24/19 10:22 Date Received: 11/27/19 10:15								Matrix	
Method: 300.0 - Anions, Ion Chro Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	12.9	b	10.0	1.34	mg/L			12/14/19 12:27	2
Sulfate	27.6		12.5	2.39	mg/L			12/14/19 12:27	2
General Chemistry						_			
Analyte Total Dissolved Solids	Result 239	Qualifier H	MQL (Adj) 10.0	_	Unit mg/L	D	Prepared	Analyzed 12/04/19 13:21	Dil Fa
Client Sample ID: MW-9						Lab	Samplo	ID: 600-1966	75 1
Date Collected: 11/24/19 10:32 Date Received: 11/27/19 10:15						Lab	Cample	Matrix	
Method: 300.0 - Anions, Ion Chro	matogra Result	phy Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte									
Analyte Chloride	337	b	40.0	5.34	mg/L			12/14/19 12:47	10
Analyte	337 80.6	b	40.0 50.0		mg/L mg/L			12/14/19 12:47 12/14/19 12:47	
Analyte Chloride	80.6	b Qualifier		9.57	•	D	Prepared		10 10 <b>Dil Fa</b>

# **Client Sample ID: MW-9A**

Date Collected: 11/24/19 10:41 D

Method: 300.0 - Anior	ns, Ion Chromatogra	phy					
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared
Chloride	231	b	40.0	5.34	mg/L		
Sulfate	83.2		50.0	9.57	mg/L		

' J Result Qualifier SDL Unit Analyte MQL (Adj) D Prepared Analyzed Dil Fac 20.0 12/04/19 13:21 **Total Dissolved Solids** 838 H 20.0 mg/L

Eurofins TestAmerica, Houston

Lab Sample ID: 600-196675-20

Analyzed

12/14/19 13:48

12/14/19 13:48

iC 00 00 C 1 8 er ic 25 25

Matrix: Water

Dil Fac

100

100

1

# **Client Sample Results**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

Client Sample ID: MW-1	1					Lab	Sample I	D: 600-1966	575-21
Date Collected: 11/24/19 10:	51							Matrix	: Wate
Date Received: 11/27/19 10:	15								
	•								
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.8	b	20.0	2.67	mg/L			12/14/19 14:50	50
Sulfate	113		25.0	4.79	mg/L			12/14/19 14:50	50
 General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
		Н	20.0		mg/L			12/04/19 13:21	

ML NC

ND

PQL

QC

RER RL

RPD

TEF

TEQ

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	Definitions/Glossary	
Client: ARCAI		
Project/Site: Cooper Jal		
Qualifiers		
HPLC/IC Qualifier		
Qualifier b	Qualifier Description           The compound was found in the blank and sample	
D I	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.	
J	Analyte was not detected at or above the SDL.	5
-		
General Cher		
Qualifier	Qualifier Description	
Н	Sample was prepped or analyzed beyond the specified holding time	
U	Analyte was not detected at or above the SDL.	
Glossary		8
Abbreviation	These commonly used abbreviations may or may not be present in this report.	9
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	
CFL	Contains Free Liquid	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	

Not Calculated

**Quality Control** 

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Not Detected at the reporting limit (or MDL or EDL if shown)

Relative Percent Difference, a measure of the relative difference between two points

Reporting Limit or Requested Limit (Radiochemistry)
Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Job ID: 600-196675-1

Project/Site: Cooper Jal															
Method: 300.0 - Anions, Ion	Chro	oma	atograp	hy											
_ Lab Sample ID: MB 600-283030/3	4									Clie	ent Sam	ple ID: Me	thod	l Bla	ank
Matrix: Water												Prep Typ			
Analysis Batch: 283030															
		MB	MB												
Analyte	Re	sult	Qualifier	MQL (Adj)			Unit		D	P	repared	Analyze	d	Dil	Fac
Chloride		130		0.400			mg/L		_			12/14/19 0			1
Sulfate	0.0	957	U	0.500	0.0	0957	mg/L					12/14/19 0	7:45		1
Lab Sample ID: MB 600-283030/6									(	Clie	ent Sam	ple ID: Me	thod	l Bla	ank
Matrix: Water												Prep Typ			
Analysis Batch: 283030															
-		MB	MB												
Analyte			Qualifier	MQL (Adj)			Unit		D	P	repared	Analyze	d	Dil	Fac
Chloride	0.3	105	J	0.400			mg/L		_			12/14/19 0	2:43		1
Sulfate	0.0	957	U	0.500	0.0	0957	mg/L					12/14/19 0	2:43		1
Lab Sample ID: LCS 600-283030/	35							Cli	ent	Sar	nple ID	: Lab Cont	rol S	Sam	ela
Matrix: Water											•	Prep Typ			
Analysis Batch: 283030															
				Spike	LCS	LCS	5					%Rec.			
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride				20.0	19.45			mg/L		_	97	90 - 110			
Sulfate				20.0	19.18			mg/L			96	90 - 110			
Lab Sample ID: LCS 600-283030/ Matrix: Water Analysis Batch: 283030	7							Cli	ent	Sar	nple ID	: Lab Cont Prep Typ			
				Spike	LCS	LCS	5					%Rec.			
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride				20.0	19.37			mg/L		_	97	90 - 110			
Sulfate				20.0	19.14			mg/L			96	90 - 110			
Lab Sample ID: 600-196675-10 M Matrix: Water	S										Clie	nt Sample Prep Typ			
Analysis Batch: 283030															
	mple		•	Spike		MS						%Rec.			
	esult		lifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride	321	b		1000	1285			mg/L			96	80 - 120			
Sulfate	94.5			1000	1026			mg/L			93	80 - 120			
Lab Sample ID: 600-196675-10 M Matrix: Water	SD										Clie	nt Sample Prep Typ			
Analysis Batch: 283030	mnlo	6.m	nlo	Spike	MSD	Mer	<b>`</b>					%Rec.			RPD
	mple esult			Spike Added	Result			l Init		Р	%Rec	%Rec. Limits	RPD		
Analyte R Chloride	321			1000	1296	Jua	unier	Unit mg/L		<b>D</b>	97	80 - 120	1		imit_ 20
Sulfate	94.5	D		1000	1046			mg/L			95	80 - 120 80 - 120	2		20
Lab Sample ID: MB 600-283045/4 Matrix: Water									•	Clie	ent Sam	ple ID: Me Prep Typ			
Analysis Batch: 283045															
-		MB	MB												
Analyte	Po	cult	Qualifier	MQL (Adj)		sui	Unit		D	P	repared	Analyze	d	Dil	Fac
-												-			
Chloride		909		0.400	0.0	0534	mg/L mg/L					12/14/19 0			1

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5 6

9

Job ID: 600-196675-1

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 600-28	3045/5							CI	ient	Sar	nple ID	: Lab Cor		
Matrix: Water Analysis Batch: 283045												Prep Ty	he: 10	nai/NA
Analysis Batch. 203045				Spike	LCS	LCS	5					%Rec.		
Analyte				Added	Result			Unit		D	%Rec	Limits		
Chloride				20.0	20.20			mg/L			101	90 - 110		
Sulfate				20.0	19.48			mg/L			97	90 - 110		
_ Lab Sample ID: 600-196675	-14 MS										Clie	ent Sampl	e ID: I	<b>NW-14</b>
Matrix: Water												Prep Ty		
Analysis Batch: 283045														
	Sample	Sam	ple	Spike	MS	MS						%Rec.		
Analyte	Result	Qual	ifier	Added	Result	Qua	alifier	Unit		D	%Rec	Limits		
Chloride	37.1	b		200	243.4			mg/L			103	80 - 120		
Sulfate	94.5			200	294.4			mg/L			100	80 - 120		
_ Lab Sample ID: 600-196675	-14 MSD										Clie	ent Sampl	e ID: I	<b>NW-14</b>
Matrix: Water												Prep Ty		
Analysis Batch: 283045													•	
•	Sample	Sam	ple	Spike	MSD	MSI	D					%Rec.		RPD
Analyte	Result	Qual	ifier	Added	Result	Qua	alifier	Unit		D	%Rec	Limits	RPD	Limit
Chloride	37.1	b		200	243.4			mg/L			103	80 - 120	0	20
Sulfate	94.5			200	293.7			mg/L			100	80 - 120	0	20
_ Lab Sample ID: 600-196675	-20 MS										Clie	nt Sampl	e ID: N	/W-9A
Matrix: Water												Prep Ty	pe: To	tal/NA
Analysis Batch: 283045													-	
	Sample	Sam	ple	Spike	MS	MS						%Rec.		
Analyte	Result	Qual	ifier	Added	Result	Qua	alifier	Unit		D	%Rec	Limits		
Chloride	231	b		1000	1255			mg/L			102	80 - 120		
Sulfate	83.2			1000	1041			mg/L			96	80 - 120		
Lab Sample ID: 600-196675	-20 MSD										Clie	nt Sampl	e ID: N	/W-9A
Matrix: Water												Prep Ty	pe: To	tal/NA
Analysis Batch: 283045	Sample	Sam	nle	Spike	MSD	MSI	n					%Rec.		RPD
Analyte	Result			Added	Result	-		Unit		D	%Rec	Limits	RPD	Limit
Chloride	231			1000	1261	Gut		mg/L		- <u>-</u>	103	80 - 120	1	
Sulfate	83.2	D		1000	1045			mg/L			96	80 - 120 80 - 120	0	
_ Lab Sample ID: MB 600-283 Matrix: Water	8211/35									Clie	ent Sam	ple ID: M Prep Ty		
Analysis Batch: 283211														
		MB							_	_	-			
Analyte			Qualifier	MQL (Adj	•		Unit		D	P	repared	Analy		Dil Fac
Chloride		1862		0.400			mg/L					12/17/19		1
Sulfate	0.0	0957	U	0.500	) O.(	0957	mg/L					12/17/19	22:19	1
Lab Sample ID: MB 600-283 Matrix: Water	8211/4									Clie	ent Sam	nple ID: M Prep Ty		
Analysis Batch: 283211		МВ	MD											
Analyte	Re		MB Qualifier	MQL (Adj	)	SDL	Unit		D	P	repared	Analy	zed	Dil Fac
,											-			
Chloride	0.2	1863	J	0.400	0.0	0534	mg/L					12/17/19	11:46	1

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Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 600-283211/36					Clie	nt Sai	nple ID	: Lab Control S	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 283211		Queilles	1.00	1.00				0/ D = =	
Ameliate		Spike	-	LCS	11	_	0/ <b>D</b> = =	%Rec.	
Analyte		Added	1017	Qualifier	Unit	D	%Rec	Limits	
Chloride		1000			mg/L		102	90 - 110	
Sulfate		1000	980.3		mg/L		98	90 - 110	
Lab Sample ID: LCS 600-283211/5					Clie	nt Sai	nple ID	: Lab Control S	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 283211		-							
		Spike	-	LCS				%Rec.	
Analyte		Added		Qualifier	Unit	D	%Rec	Limits	
Chloride		20.0	20.14		mg/L		101	90 - 110	
Sulfate		20.0	19.34		mg/L		97	90 - 110	
Method: SM 2540C - Solids, Total	Dissolve	d (TDS)							
Lab Sample ID: MB 600-282061/1						Clie	ent Sam	nple ID: Method	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 282061									
N	IB MB								
Analyte Resu	ult Qualifier	MQL (Adj)		SDL Unit	I	D P	repared	Analyzed	Dil Fac
Total Dissolved Solids 10	).0 U	10.0		10.0 mg/L				12/04/19 13:21	1
Lab Sample ID: LCS 600-282061/2					Clie	nt Sai	nole ID	: Lab Control S	ample
Matrix: Water								Prep Type: To	
Analysis Batch: 282061									
		Spike	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Dissolved Solids		1800	1726		mg/L		96	90 - 110	
-					-				
Lab Sample ID: 600-196675-10 DU							Clie	ent Sample ID: N	/W-4A
Matrix: Water								Prep Type: To	tal/NA
Analysis Batch: 282061									
Sample S	Sample		DU	DU					RPD
Analyte Result C	Qualifier		Result	Qualifier	Unit	D		RPD	Limit
Total Dissolved Solids 824 H	1		806.0		mg/L			2	10
Lab Sample ID: 600-196675-21 DU							Clie	ent Sample ID: I	<b>NW-11</b>
Matrix: Water								Prep Type: To	tal/NA
Analysis Batch: 282061									
Sample S	Sample		DU	DU					RPD
Analyte Result C				Qualifier	Unit	D		RPD	
Total Dissolved Solids 364 H			340.0		mg/L			7	
ab Sample ID: MB 600-282105/1						Clie	nt Sam	nle ID: Method	Blank
Lab Sample ID: MB 600-282105/1 Matrix: Water						Clie	ent Sam	nple ID: Method	
Matrix: Water						Clie	ent Sam	nple ID: Method Prep Type: To	
Matrix: Water Analysis Batch: 282105	18 MB					Clie	ent Sam		
Matrix: Water Analysis Batch: 282105	1B MB ult Qualifier	MQL (Adj)		SDL Unit			ent Sarr repared		

Job ID: 600-196675-1

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Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal Job ID: 600-196675-1

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# Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 600-2 Matrix: Water Analysis Batch: 282105	82105/2					Clie	nt Sa	mple ID	: Lab Control S Prep Type: T		
			Spike		LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1800	1726		mg/L		96	90 - 110		
_ Lab Sample ID: 600-19667	5-1 DU							Clie	ent Sample ID:	MM	V-12
Matrix: Water									Prep Type: T		
Analysis Batch: 282105											
-	Sample	Sample		DU	DU						RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D		RPI	<b>)</b>	Limit
Total Dissolved Solids	1010	Н		1032		mg/L				2	10

# **Unadjusted Detection Limits**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

			JOD ID. 600-196675-1	
omatography				
MQL	MDL	Units		
0.400	0.0534	mg/L		
0.500	0.0957	mg/L		
MQL	MDL	Units		
10.0	10.0	mg/L		
				ī
	MQL 0.400 0.500 MQL	MQL         MDL           0.400         0.0534           0.500         0.0957	MQL         MDL         Units           0.400         0.0534         mg/L           0.500         0.0957         mg/L	MQL         MDL         Units           0.400         0.0534         mg/L           0.500         0.0957         mg/L

# **QC** Association Summary

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal Job ID: 600-196675-1

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# HPLC/IC

#### Analysis Batch: 283030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-1	MW-12	Total/NA	Water	300.0	
600-196675-2	MW-3	Total/NA	Water	300.0	
600-196675-3	MW-2	Total/NA	Water	300.0	
600-196675-4	MW-2A	Total/NA	Water	300.0	
600-196675-5	MW-6R	Total/NA	Water	300.0	
600-196675-6	MW-5	Total/NA	Water	300.0	
600-196675-7	MW-5A	Total/NA	Water	300.0	
600-196675-8	MW-1	Total/NA	Water	300.0	
600-196675-9	MW-4	Total/NA	Water	300.0	
600-196675-10	MW-4A	Total/NA	Water	300.0	
600-196675-11	RW-1	Total/NA	Water	300.0	
600-196675-12	RW-2R	Total/NA	Water	300.0	
MB 600-283030/34	Method Blank	Total/NA	Water	300.0	
MB 600-283030/6	Method Blank	Total/NA	Water	300.0	1
LCS 600-283030/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-283030/7	Lab Control Sample	Total/NA	Water	300.0	
600-196675-10 MS	MW-4A	Total/NA	Water	300.0	
600-196675-10 MSD	MW-4A	Total/NA	Water	300.0	1
Analysis Batch: 2830	045				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-14	MW-14	Total/NA	Water	300.0	
600-196675-15	DUP-1	Total/NA	Water	300.0	
600-196675-16	MW-10	Total/NA	Water	300.0	
600-196675-17	MW-7	Total/NA	Water	300.0	
600-196675-18	MW-8	Total/NA	Water	300.0	
600-196675-19	MW-9	Total/NA	Water	300.0	
600-196675-20	MW-9A	Total/NA	Water	300.0	
600-196675-21	MW-11	Total/NA	Water	300.0	
MB 600-283045/4	Method Blank	Total/NA	Water	300.0	

# 600-196675-20 MSD MW-9A Analysis Batch: 283211

Lab Control Sample

MW-14

MW-14

MW-9A

LCS 600-283045/5

600-196675-14 MS

600-196675-14 MSD 600-196675-20 MS

Lab Sample ID 600-196675-13	Client Sample ID RW-2	Prep Type Total/NA	Matrix Water	Method 300.0	Prep Batch
MB 600-283211/35	Method Blank	Total/NA	Water	300.0	
MB 600-283211/4	Method Blank	Total/NA	Water	300.0	
LCS 600-283211/36	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-283211/5	Lab Control Sample	Total/NA	Water	300.0	

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Water

Water

Water

Water

Water

300.0

300.0

300.0

300.0 300.0

#### **General Chemistry**

#### Analysis Batch: 282061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-2	MW-3	Total/NA	Water	SM 2540C	
600-196675-3	MW-2	Total/NA	Water	SM 2540C	
600-196675-4	MW-2A	Total/NA	Water	SM 2540C	

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# **QC** Association Summary

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

# **General Chemistry (Continued)**

### Analysis Batch: 282061 (Continued)

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-5	MW-6R	Total/NA	Water	SM 2540C	
600-196675-6	MW-5	Total/NA	Water	SM 2540C	
600-196675-7	MW-5A	Total/NA	Water	SM 2540C	
600-196675-8	MW-1	Total/NA	Water	SM 2540C	
600-196675-9	MW-4	Total/NA	Water	SM 2540C	
600-196675-10	MW-4A	Total/NA	Water	SM 2540C	
600-196675-11	RW-1	Total/NA	Water	SM 2540C	
600-196675-12	RW-2R	Total/NA	Water	SM 2540C	
00-196675-13	RW-2	Total/NA	Water	SM 2540C	
00-196675-14	MW-14	Total/NA	Water	SM 2540C	
00-196675-15	DUP-1	Total/NA	Water	SM 2540C	
00-196675-16	MW-10	Total/NA	Water	SM 2540C	
600-196675-17	MW-7	Total/NA	Water	SM 2540C	
00-196675-18	MW-8	Total/NA	Water	SM 2540C	
600-196675-19	MW-9	Total/NA	Water	SM 2540C	
600-196675-20	MW-9A	Total/NA	Water	SM 2540C	
00-196675-21	MW-11	Total/NA	Water	SM 2540C	
VIB 600-282061/1	Method Blank	Total/NA	Water	SM 2540C	
_CS 600-282061/2	Lab Control Sample	Total/NA	Water	SM 2540C	
00-196675-10 DU	MW-4A	Total/NA	Water	SM 2540C	
500-196675-21 DU	MW-11	Total/NA	Water	SM 2540C	

#### Analysis Batch: 282105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-1	MW-12	Total/NA	Water	SM 2540C	
MB 600-282105/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-282105/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-196675-1 DU	MW-12	Total/NA	Water	SM 2540C	

# Lab Chronicle

Job ID: 600-196675-1

### Lab Sample ID: 600-196675-1 **Matrix: Water**

Lab Sample ID: 600-196675-2

Lab Sample ID: 600-196675-3

Date Collected: 11/23/19 15:10 Date Received: 11/27/19 10:15

**Client Sample ID: MW-12** 

Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		250			283030	12/14/19 06:51	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282105	12/04/19 15:38	TNL	TAL HOU

#### **Client Sample ID: MW-3** Date Collected: 11/23/19 15:22 Date Received: 11/27/19 10:15

	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	Analysis	- Method 300.0	Run	Factor 50	Amount	Amount	283030	or Analyzed 12/14/19 07:02	Analyst W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

# **Client Sample ID: MW-2** Date Collected: 11/23/19 15:32

Date Received: 11/27/19 10:15									

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			283030	12/14/19 07:13	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-2A** Date Collected: 11/23/19 15:37

Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 07:23	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-6R** Date Collected: 11/23/19 15:46

Date Received: 11/27/19 10:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 07:34	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-5** Date Collected: 11/23/19 15:54 Date Received: 11/27/19 10:15

_	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	Type Analysis	Method 300.0	Run	Factor	Amount	Amount	Number 283030	or Analyzed 12/14/19 08:06	Analyst W1N	Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

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#### Lab Sample ID: 600-196675-4 **Matrix: Water**

Lab Sample ID: 600-196675-5

Lab Sample ID: 600-196675-6

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

# Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### Client Sample ID: MW-5A Date Collected: 11/23/19 16:04 Date Received: 11/27/19 10:15

	ved: 11/27/19 1								IVIA	
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 08:17	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			283030	12/14/19 08:28	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-4 Date Collected: 11/24/19 08:44 Date Received: 11/27/19 10:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			283030	12/14/19 09:00	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-4A Date Collected: 11/24/19 08:49

Date Received: 11/27/19 10:15 Batch Batch Dil Initial Final Batch Prepared Method Number or Analyzed Analyst Prep Type Туре Factor Amount Amount Run Lab 300.0 283030 12/14/19 09:11 W1N Total/NA Analysis 100 TAL HOU Total/NA Analysis SM 2540C 1 50 mL 100 mL 282061 12/04/19 13:21 TNL TAL HOU

# Client Sample ID: RW-1

Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analvzed	Analvst	Lab
Total/NA	Analysis	300.0		1000			283030	12/14/19 09:43		TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: RW-2R Date Collected: 11/24/19 09:21 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analvzed	Analvst	Lab
Total/NA	Analysis	300.0		1000			283030	12/14/19 09:54		TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

Matrix: Water

Job ID: 600-196675-1

Lab Sample ID: 600-196675-8

Lab Sample ID: 600-196675-11

Lab Sample ID: 600-196675-12

 061
 12/04/19 13:21
 TNL
 TAL HOU
 10

 Lab Sample ID: 600-196675-9
 Matrix: Water
 12

 Ch
 Prepared
 Analyst
 Lab

 030
 12/14/19 09:00
 W1N
 TAL HOU
 14

 061
 12/04/19 13:21
 TNL
 TAL HOU
 14

 Lab Sample ID: 600-196675-10
 Matrix: Water
 14

 Lab Sample ID: 600-196675-10
 Matrix: Water
 15

 Ch
 Prepared
 Prepared
 15

Matrix: Water

Matrix: Water

# Lab Chronicle

Job ID: 600-196675-1

Matrix: Water

Matrix: Water

**Matrix: Water** 

Matrix: Water

Matrix: Water

### Lab Sample ID: 600-196675-13 Matrix: Water

Lab Sample ID: 600-196675-14

Lab Sample ID: 600-196675-15

Lab Sample ID: 600-196675-16

Lab Sample ID: 600-196675-17

Lab Sample ID: 600-196675-18

Date Collected: 11/24/19 09:25 Date Received: 11/27/19 10:15

**Client Sample ID: RW-2** 

Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			283211	12/18/19 01:23	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-14 Date Collected: 11/24/19 09:31 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	<b>Type</b> Analysis	Method 300.0	Run	Factor 20	Amount	Amount	Number 283045	or Analyzed 12/14/19 10:24	Analyst W1N	Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: DUP-1 Date Collected: 11/24/19 00:00 Date Received: 11/27/19 10:15

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			283045	12/14/19 11:25	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 11:46	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-7 Date Collected: 11/24/19 10:11

Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500	<u> </u>		283045	12/14/19 12:06	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-8 Date Collected: 11/24/19 10:22 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25			283045	12/14/19 12:27	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

Job ID: 600-196675-1

Matrix: Water

Matrix: Water

12 13 14

### Lab Sample ID: 600-196675-19 **Matrix: Water**

Lab Sample ID: 600-196675-20

Lab Sample ID: 600-196675-21

Date Collected: 11/24/19 10:32 Date Received: 11/27/19 10:15

Client Sample ID: MW-9

Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 12:47	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-9A** Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 13:48	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-11** Date Collected: 11/24/19 10:51 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	300.0		50			283045	12/14/19 14:50	W1N	TAL HOU	
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU	

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# **Accreditation/Certification Summary**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0759	08-04-20
Louisiana	NELAP	01967	06-30-20
Oklahoma	State	2019-073	08-31-20
Texas	NELAP	T104704223-19-25	10-31-19 *
Texas	NELAP	T104704223-19-25	10-31-20
USDA	US Federal Programs	P330-18-00130	04-30-21
Utah	NELAP	TX000832019-5	07-31-20

Eurofins TestAmerica, Houston

Job ID: 600-196675-1

Phone (713) 690-4444 Fax (713) 690-5646									
Client Information	Sampler Carles	N	« them	Lab PM Kudchadł	Lab PM Kudchadkar, Sachin G	0	Carrier Tracking No(s)	COC No 600-72356-19860.3	.3
Client Contact: Mr. Russell Grant	Phone 361-	201-02	10364	E-Mait: sachin.ku	E-Mait: sachin kudchadkar@testamericainc.com	ainc.com		Page Page	
Company. ARCADIS U.S., Inc.					An	Analysis Requested	ested	Job#	
Address: 1004 North Big Spring Suite 121	Due Date Requested:	ed:						0	10
City Midland State Zip	TAT Requested (days):	ays):			-17			A - HCL B - NaOH C - ZN Acetate D - Nitric Acid	M - Hexane N - None O - AsNaO2 P - Na204S
1.5, / 9/01 Phone: 916-786-5382(Tel)	PO #: 30006543 Mark Owen	Owen							R - Na2S203 S - H2SO4
Email: russell.grant@arcadis-us.com	#OM				(0)			I - Ice J - Di Water	<ol> <li>I.SP Dodecanydra U - Acetone</li> <li>MCAA</li> </ol>
Project Name. MARKAN COOPEN Jul Site:	Project #. 60003622 SSOW#:							K - EDTA L - EDA Other:	W - pH 4-5 Z - other (specify)
Samole Identification	Samole Date	Sample Time	Sample Type (C=comp, G=drab)	Matrix 65 (w-water, Serolid, Orwateolid, Orwateolid, Matrix Audu)	000-CI' 204 5240C- 1D2 5440C- 1D2			o tetal Number o	tructions (Note-
oampre toenuncation			00	X	2 2 2	and the second	al coloradore de		opecial instructions/note:
21-MW	112319	15/0	U	Water	XX		-	-	410
E-WM MANAPART	61/27/11	1522	5	Water	XX			1	
MW-Z	11/23/19	1532	5	Water	XX			T	
MW-ZA	11/23/19	1537	5	Water	XX			1	
MW-6R	11/23/19	1546	5	Water	XX		pota	1	
MW-5-MM	101/52/11	1554	5	Water	XX		of Cu		
MW-5A	11/23/19	1604	G	Water	XX		o nisi	1.	
HU-1	11/2/11	92.80	R	Water	XX		40 9.	1	
h-nh	61 1 2 11	4480	R	Water	XX		2996	l	
Mw-4A	112419	6480	G	Water	XX		1-00	1	
RW-1	11/214/11	3062	U	Water	XX		9.	1	
Possible Hazard Identification	Doison B Duknown		Radiological		ample Disposal ( A	fee may be as:	r be assessed if samples a	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Return To Client Mon	nonth) Months
Deliverable Requested: I, III, IV, Other (specify)				03	Special Instructions/QC Requirements	C Requirements			
Empty Kit Relinquished by:		Date		Time:	15		Method of Shipment.		
Reinquistred by Reinquistred by Reinquistred by	DateTime DateTime	1 /	1800	Company ARCA PUS Company	Received by	Q	Date/Time Date/Time	27/19 1015	Company Company
Reinquished by:	Date/Time			Company	Received by:		Date/Time	a.	Company
Custody Seals Intact: Custody Seal No.:					Cooler Temperature(s) <sup>a</sup> C and Other Remarks	<sup>o</sup> C and Other Remo	irks:		

12/19/2019

Page 193 of 399

Phone (713) 690-4444 Fax (713) 690-5646								
Client Information	Sampler Carlos	Hactine	2	Lab PM Kudchadk	ar, Sachin G	Carher Tracking No(s),	COC No 600-72356-19860.3	60.3
Client Contact Mr. Russell Grant	Phone 761-0361	1-0361		E-Mall sachin.ku	E-Mail sachin kudchadkar@lestamericainc com	E	Page Page	
Company ARCADIS U.S., Inc.					Analysis	Analysis Requested	a dol	
Address 1004 North Big Spring Suite 121	Due Date Requested;	d;					Preservation Codes:	
City Midland State, Zp TX, 79701	TAT Requested (days):	;(s/i					B - NaCH B - NaCH C - Zh Acetate D - Nifnc Acid E - NaHSO4	N None 0 AsNaO2 P - Na2045 0 - Na2045
Phone 916-786-5382(Tel)	PO# 30006543 Mark Owen	Owen		((			F - MeOH G - Amchior H - Ascorbic Acid	
Email tussell grant@arcadis-us.com	#OM			_	(0)			
Project Name MARKOWEN Cropper Jul	Project # 60003622 SSOW#							Z - other (specify)
Samole Identification	Sample Date	Sample Time	Sample Type (C=comp, G=qrab)	Matrix (www.net. (www.net. Second. Oswanica, Discond.	900-Cl' SO4 2540C- TDS 2540C- TDS 260-Cl, SO4		Total Number o	Special Instructions/Note:
	X	X	Preserva	X	z			V
RW-2R	11/24/11	1250	৬	Water	XX		1	
RW-2	11/24/14	0925	J	Water	XX		1	
Mw-14	1124 14	1240	B	Water	XX		1	
1-dha	612211	1	R	Water	XX		1	
OI-MM	112419	2560	G	Water	XX			
E-MW	11 124 9	11:01	C	Water	XX		1	
MW-B	11/24/14	10.12	B	Water	XX		1	
MW-9	RIZHIN	10.32	Y	Water	XX		1	
MW-9A	11124/19	1041	G	Water	XX		-	
Mw-II	11/24/14	1051	5	Water	ХХ		4	
				Water				
Possible Hazard Identification	Poison B Dunknown	Ш	Radiological		Sample Disposa! ( A fee may be assessed if samples are retained longer than 1 month) Return To Client R Disposal By Lab Archive For Mor	r be assessed if samples	are retained longer than	1 month) Months
iverable Requested 1, II, III, IV, Other (specify)				03	pecial Instructions/QC Requi	rements		
Empty Kit Relinquished by:		Date:		Time:	a.	Method of Shipment	nt	
Reinquistred by Reinquistred by.	Date/Time	0081	0	ARCH DU Company	Received by AL	DateTime	101 61/10 101S	Company
Reinquistied by	Date/Tune			Company	Referred by	Date/Time	inte:	Conipany
Custody Seals Intact. Custody Seal No.					Cooler Temperature(s) °C and Other Remarks	ther Remarks		

12/19/2019

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Received by	OCD:	3/25/2020	9:15:	51 AM
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			Loc: 600 196675		eurofins	1
Eurofins TestAmer	ica Houston		10			Environment Testing TestAmerica
s	ample Rece	eipt Check	list			
			the Street Based on the			'19NCV 27 10:
			ate/Time Received: _	Ar	cadi	
JOB NUMBER:	0	C	LIENT:	Fade	Twon Tw	2
JNPACKED BY: _	- gg	C	ARRIER/DRIVER: _	flut	X	
Custody Seal Present:	ØYES DI	NO N	umber of Coolers Receiv	ved:	1	
Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
331	XIN	YIN	2.1	676	10.1	2.2
	Y/N Y/N	Y/N Y/N				
	Y / N	Y/N			10 1	>
	Y/N	Y/N		/		1-11-0
2	Y / N	Y/N		0	11/2	1/19
2		Y/N		0	11/2	1/19
Samples received on i	Y / N CF = correction factor	Y/N		0	4 11/2	1/19
Samples received on i	CF = correction factor ce? PYES	Y/N NO			4× 11/2	1/14
	CF = correction factor ce? PYES	Y/N NO		DYES	4× 11/2	7/19
Samples received on i	Y     N       CF = correction factor       ce?       YES       SERVATION OF S	Y / N NO	UIRED: DNO cid preserved are <ph 2:<="" td=""><td></td><td></td><td>7/19</td></ph>			7/19
Samples received on i ABORATORY PRES Base samples are>pH	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:	Y / N NO SAMPLES REC	cid preserved are <ph 2:<="" td=""><td>DYES</td><td></td><td>1/14</td></ph>	DYES		1/14
Samples received on i	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:	Y / N NO SAMPLES REC		DYES		
Samples received on i ABORATORY PRES Base samples are>pH FX1005 samples <u>froze</u>	Y       N         CF = correction factor         ce?       YES         SERVATION OF S         12:       YES         12:       YES         m upon receipt:	Y / N NO SAMPLES REC NO A U YES D	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F</ph>	□YES REEZER:		/
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot #	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN FI OA headspace acceptab</ph>	□YES REEZER: ble (5-6mm):		D ENA
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot #	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F</ph>	□YES REEZER: ble (5-6mm):		/
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot # d samples meet the labo	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN FI OA headspace acceptab</ph>	□YES REEZER: ble (5-6mm):		D ENA
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot #	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN FI OA headspace acceptab</ph>	□YES REEZER: ble (5-6mm):		D ENA
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot # d samples meet the labo	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN FI OA headspace acceptab</ph>	□YES REEZER: ble (5-6mm):		D ENA
Samples received on in ABORATORY PRES Base samples are>pH TX1005 samples <u>froze</u> oH paper Lot # d samples meet the labo	Y     N       CF = correction factor       ce?       YES       SERVATION OF S       12:       YES       12:       YES       11:       YES       12:       YES       12:       YES       12:       YES       12:       YES       YES	Y / N NO SAMPLES REC NO A U YES D V	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN FI OA headspace acceptab</ph>	□YES REEZER: ble (5-6mm):		D ENA

•

# Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

#### Login Number: 196675 List Number: 1 Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples.</td>	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

List Source: Eurofins TestAmerica, Houston

Job Number: 600-196675-1

Eurofins TestAmerica, Houston . Released to Imaging: 9/13/2021 1:48:45 PM

# **APPENDIX E**

**Cumulative Summary of Groundwater Potentiometric Elevation Data** 



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID TOC		Depth to	Groundwater	Constructed	Casing	Well Screen
	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-1	05/18/98	135.05	3184.95	173.00	2.00	153-173
3320.00	05/25/99	134.93	3185.07			
	02/08/01	134.80	3185.20			
	05/10/02 10/22/02	134.77 134.89	3185.23 3185.11			
	05/20/03	135.17	3184.83			
	11/24/03	134.70	3185.30			
	05/11/04	134.75	3185.25			
	11/15/04 05/17/05	134.76 134.29	3185.24 3185.71			
	11/15/05	134.93	3185.07			
	05/08/06	134.68	3185.32			
	11/13/06 05/29/07	134.62 134.71	3185.38 3185.29			
	11/16/07	134.70	3185.30			
	05/14/08	134.73	3185.27			
	11/03/08	134.69	3185.31			
	05/19/09 11/02/09	134.64 134.71	3185.36 3185.29			
	05/05/10	134.90	3185.10			
	11/08/10	134.50	3185.50			
	05/11/11	134.60	3185.40			
	11/08/11 05/16/12	134.64 134.60	3185.36 3185.40			
	10/10/12	134.00	3185.27			
	05/16/13	134.58	3185.42			
	10/08/13	134.53	3185.47			
	05/01/14 10/05/14	134.70 134.49	3185.30 3185.51			
	05/21/15	134.56	3185.44			
	10/19/15	134.80	3185.20			
	05/25/16	134.69	3185.31			
	10/17/16 05/10/17	134.35 134.44	3185.65 3185.56			
3321.94	10/24/17	134.63	3187.31			
	05/22/18	134.45	3187.49			
	10/17/18	134.54	3187.40			
	06/20/19 11/20/19	134.56 134.45	3187.38 3187.49	171.17 174.20		
MW-2	05/18/98	135.00	3184.86	173.00	2.00	163-173
3319.86	05/25/99	134.79	3185.07			
		134.63	3185.23			
	02/08/01					
	05/10/02	134.65	3185.21			
	05/10/02 10/22/02	134.65 134.72	3185.14			
	05/10/02	134.65				
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04	134.65 134.72 134.95 134.56 134.55	3185.14 3184.91 3185.30 3185.31			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04	134.65 134.72 134.95 134.56 134.55 134.53	3185.14 3184.91 3185.30 3185.31 3185.33	   		  
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04	134.65 134.72 134.95 134.56 134.55	3185.14 3184.91 3185.30 3185.31			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52 134.44	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.42	   		  
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52 134.44 134.54	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.42 3185.42 3185.32			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52 134.44	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.42			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/14/07 05/14/08 11/03/08	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52 134.44 134.54 134.52 134.53 134.44	3185.14 3185.30 3185.30 3185.33 3185.33 3185.47 3185.09 3185.42 3185.42 3185.42 3185.32 3185.33 3185.33			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.39\\ 134.77\\ 134.52\\ 134.44\\ 134.54\\ 134.54\\ 134.53\\ 134.44\\ 134.46\end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.47 3185.39 3185.34 3185.32 3185.32 3185.33 3185.42 3185.42 3185.40			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/05 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/16/09	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.55\\ 134.55\\ 134.53\\ 134.53\\ 134.77\\ 134.52\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.45\\ 134.44\\ 134.51\\ 134.46\\ 134.51\\ \end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.34 3185.34 3185.34 3185.34 3185.34 3185.34 3185.40 3185.40 3185.35			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.39\\ 134.77\\ 134.52\\ 134.44\\ 134.54\\ 134.54\\ 134.53\\ 134.44\\ 134.46\end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.47 3185.39 3185.34 3185.32 3185.32 3185.33 3185.42 3185.42 3185.40			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/16/09 05/05/10 05/05/10 11/08/10	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.77\\ 134.53\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.45\\ 134.45\\ 134.46\\ 134.51\\ 134.62\\ 134.25\\ 134.25\\ 134.25\\ 134.25\\ 134.31\\ \end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.44 3185.42 3185.34 3185.34 3185.34 3185.34 3185.42 3185.40 3185.42 3185.41 3185.61 3185.61			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/05/10 11/08/10 11/08/11 11/08/11	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.39\\ 134.77\\ 134.52\\ 134.44\\ 134.54\\ 134.52\\ 134.44\\ 134.53\\ 134.46\\ 134.51\\ 134.62\\ 134.25\\ 134.25\\ 134.31\\ 134.36\\ \end{array}$	$\begin{array}{r} 3185.14\\ 3185.30\\ 3185.30\\ 3185.31\\ 3185.33\\ 3185.47\\ 3185.09\\ 3185.47\\ 3185.42\\ 3185.42\\ 3185.42\\ 3185.32\\ 3185.32\\ 3185.33\\ 3185.42\\ 3185.35\\ 3185.42\\ 3185.55\\ 3185.55\\ 3185.55\\ 3185.50\\ \end{array}$			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/14/07 05/14/08 05/19/09 11/03/08 05/19/09 11/08/10 05/10/11 11/08/11 05/16/12	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.77\\ 134.52\\ 134.77\\ 134.52\\ 134.44\\ 134.54\\ 134.52\\ 134.53\\ 134.44\\ 134.46\\ 134.46\\ 134.46\\ 134.62\\ 134.25\\ 134.25\\ 134.31\\ 134.36\\ 134.31\\ \end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.34 3185.32 3185.33 3185.42 3185.42 3185.42 3185.55 3185.55 3185.55			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/05/10 11/08/10 11/08/11 11/08/11	$\begin{array}{c} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.39\\ 134.77\\ 134.52\\ 134.44\\ 134.54\\ 134.52\\ 134.44\\ 134.53\\ 134.46\\ 134.51\\ 134.62\\ 134.25\\ 134.25\\ 134.31\\ 134.36\\ \end{array}$	$\begin{array}{r} 3185.14\\ 3185.30\\ 3185.30\\ 3185.31\\ 3185.33\\ 3185.47\\ 3185.09\\ 3185.47\\ 3185.42\\ 3185.42\\ 3185.42\\ 3185.32\\ 3185.32\\ 3185.33\\ 3185.42\\ 3185.35\\ 3185.42\\ 3185.55\\ 3185.55\\ 3185.55\\ 3185.50\\ \end{array}$			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/08/10 05/05/10 11/08/10 05/16/12 10/10/12 05/16/13 10/07/13	$\begin{array}{r} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.53\\ 134.53\\ 134.39\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.52\\ 134.52\\ 134.53\\ 134.44\\ 134.46\\ 134.45\\ 134.45\\ 134.45\\ 134.62\\ 134.25\\ 134.25\\ 134.31\\ 134.36\\ 134.31\\ 134.31\\ 134.35\\ 134.33\\ 142.85\\ \end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.34 3185.32 3185.33 3185.42 3185.33 3185.42 3185.51 3185.55 3185.55 3185.55 3185.53 3185.53 3177.01			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/06 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/16/09 05/05/10 11/08/10 05/05/10 11/08/11 10/07/13 10/07/13 05/07/14	134.65 134.72 134.95 134.56 134.55 134.53 134.53 134.39 134.77 134.52 134.44 134.54 134.54 134.54 134.53 134.44 134.46 134.45 134.42 134.42 134.31 134.31 134.31 134.31	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.47 3185.34 3185.32 3185.34 3185.32 3185.34 3185.42 3185.42 3185.42 3185.42 3185.42 3185.42 3185.42 3185.55 3185.5			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/05/10 05/05/10 05/05/11 11/08/10 11/08/11 11/08/11 05/16/13 10/07/13 05/01/14 10/07/13	$\begin{array}{r} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.55\\ 134.53\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.54\\ 134.52\\ 134.44\\ 134.53\\ 134.45\\ 134.51\\ 134.62\\ 134.51\\ 134.25\\ 134.31\\ 134.36\\ 134.31\\ 134.35\\ 134.33\\ 142.85\\ 134.37\\ 134.44\\ 134.44\\ 134.51\\ 134.33\\ 142.85\\ 134.37\\ 134.44\\$	3185.14 3185.30 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.34 3185.34 3185.34 3185.34 3185.34 3185.33 3185.42 3185.40 3185.55 3185.61 3185.55 3185.5			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/06 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/16/09 05/05/10 11/08/10 05/05/10 11/08/11 10/07/13 10/07/13 05/07/14	134.65 134.72 134.95 134.56 134.55 134.53 134.53 134.39 134.77 134.52 134.44 134.54 134.54 134.54 134.53 134.44 134.46 134.45 134.42 134.42 134.31 134.31 134.31 134.31	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.47 3185.34 3185.32 3185.34 3185.32 3185.34 3185.42 3185.42 3185.42 3185.42 3185.42 3185.42 3185.42 3185.55 3185.5			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/05/10 05/05/10 05/05/10 05/05/10 05/05/10 11/08/11 11/08/11 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16	$\begin{array}{r} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.55\\ 134.53\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.44\\ 134.52\\ 134.53\\ 134.44\\ 134.51\\ 134.62\\ 134.51\\ 134.62\\ 134.51\\ 134.31\\ 134.35\\ 134.31\\ 134.35\\ 134.33\\ 142.85\\ 134.37\\ 134.14\\ 134.21\\ 134.20\\ 134.38\\ \end{array}$	3185.14 3185.30 3185.31 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.34 3185.32 3185.34 3185.32 3185.34 3185.33 3185.42 3185.40 3185.55 3185.61 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.55 3185.56 3185.66 3185.66 3185.48			
	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/11/05 11/15/04 05/11/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 11/08/10 05/05/10 11/08/11 05/14/13 10/07/13 10/07/13 10/07/14 05/21/15 10/19/15 10/17/16	134.65 134.72 134.95 134.55 134.55 134.53 134.39 134.77 134.52 134.44 134.52 134.44 134.52 134.44 134.45 134.52 134.53 134.44 134.62 134.51 134.35 134.31 134.35 134.33 142.85 134.33 142.85 134.33 142.85 134.33 142.85 134.33	3185.14 3185.30 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.32 3185.32 3185.33 3185.42 3185.33 3185.42 3185.42 3185.42 3185.55 3185.55 3185.55 3185.55 3185.55 3185.53 3185.55 3185.53 3185.53 3185.53 3185.55 3185.55 3185.53 3185.55 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.653185.65 3185.65 3185.65 3185.65 3185.653185.65 3185.65 3185.863185.86			
3321.27	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/05/10 05/05/10 05/05/10 05/05/10 05/05/10 11/08/11 11/08/11 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16	$\begin{array}{r} 134.65\\ 134.72\\ 134.95\\ 134.56\\ 134.55\\ 134.55\\ 134.53\\ 134.77\\ 134.52\\ 134.44\\ 134.52\\ 134.44\\ 134.52\\ 134.53\\ 134.44\\ 134.51\\ 134.62\\ 134.51\\ 134.62\\ 134.51\\ 134.31\\ 134.35\\ 134.31\\ 134.35\\ 134.33\\ 142.85\\ 134.37\\ 134.14\\ 134.21\\ 134.20\\ 134.38\\ \end{array}$	3185.14 3184.91 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.32 3185.33 3185.42 3185.42 3185.42 3185.42 3185.41 3185.55 3185.50 3185.55 3185.55 3185.55 3185.55 3185.55 3185.65 3185.65 3185.65 3185.66 3185.68 3185.73			
3321.27	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/08/10 05/05/10 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 10/10/15 10/19/15 05/22/16 10/17/16 05/21/16 10/17/16 05/10/17	134.65 134.72 134.95 134.56 134.55 134.53 134.39 134.77 134.52 134.44 134.52 134.52 134.54 134.52 134.53 134.44 134.46 134.51 134.62 134.25 134.31 134.35 134.31 134.35 134.31 134.33 134.31 134.33 134.21 134.33	3185.14 3185.30 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.32 3185.32 3185.33 3185.42 3185.33 3185.42 3185.42 3185.42 3185.55 3185.55 3185.55 3185.55 3185.55 3185.53 3185.55 3185.53 3185.53 3185.53 3185.55 3185.55 3185.53 3185.55 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.653185.65 3185.65 3185.65 3185.65 3185.653185.65 3185.65 3185.863185.86			
3321.27	05/10/02 10/22/02 05/20/03 11/24/03 05/31/104 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/319/09 11/16/09 05/05/19 05/10/17 11/08/10 05/10/11 11/08/11 05/16/12 10/17/13 05/01/14 10/05/14 10/05/14 10/05/14 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17 10/17/16 10/25/17 10/2	134.65           134.72           134.95           134.56           134.55           134.53           134.53           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.52           134.51           134.62           134.51           134.51           134.36           134.31           134.35           134.31           134.32           134.33           134.34           134.33           134.31           134.32           134.33           134.34           134.32           134.33           134.31           134.32           134.33           134.32           134.33           134.32           134.31           134.32           134.31           134.32           13	3185.14 3185.30 3185.31 3185.33 3185.47 3185.09 3185.47 3185.32 3185.32 3185.32 3185.32 3185.32 3185.33 3185.42 3185.33 3185.42 3185.55 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.65 3185.72 3185.73 3186.73 3186.73 3187.16			
3321.27	05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/11/05 11/15/04 05/17/05 11/15/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 11/08/10 05/05/10 11/08/11 05/14/13 10/07/13 10/07/13 10/07/14 05/14/14 05/21/15 10/17/16 05/25/16 10/17/16 05/22/18	134.65           134.72           134.95           134.56           134.55           134.53           134.53           134.53           134.53           134.53           134.53           134.52           134.52           134.52           134.52           134.52           134.53           134.54           134.52           134.44           134.51           134.51           134.31           134.35           134.31           134.33           142.85           134.31           134.33           142.85           134.31           134.33           142.85           134.37           134.38           134.31           134.33           134.31           134.33           134.33           134.33           134.33           134.33           134.33           134.33           134.33           134.33           13	3185.14 3184.91 3185.30 3185.30 3185.31 3185.33 3185.47 3185.09 3185.34 3185.32 3185.32 3185.32 3185.32 3185.33 3185.33 3185.42 3185.33 3185.42 3185.53 3185.55 3185.55 3185.55 3185.55 3185.55 3185.53 3185.53 3185.53 3185.72 3185.66 3185.66 3185.48 3185.48 3185.86 3185.73 3187.76			

\\TX05FP01\Data\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2019

ARCADIS Design & Consultancy for natural and built assets

Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-2A	05/18/98	134.80	3185.06	145.00	2.00	130-145
3319.86	05/25/99	134.73	3185.13			
	02/08/01	134.58	3185.28			
	05/10/02 10/22/02	134.50 134.66	3185.36 3185.20			
	05/20/03	135.80	3184.06			
	11/24/03	134.60	3185.26			
	05/11/04 11/15/04	134.53 134.58	3185.33 3185.28			
	05/17/05	134.47	3185.39			
	11/15/05	134.74	3185.12			
	05/08/06 11/13/06	134.46 134.39	3185.40 3185.47			
	05/29/07	134.50	3185.36			
	11/14/07	134.48	3185.38			
	05/14/08 11/03/08	134.49 134.46	3185.37 3185.40			
	05/19/09	134.42	3185.44			
	11/02/09	134.45	3185.41			
	05/05/10 11/08/10	134.52 134.30	3185.34 3185.56			
	05/11/11	134.38	3185.48			
	11/08/11	134.42	3185.44			
	05/16/12 10/10/12	134.43 134.65	3185.43 3185.21			
	05/16/13	134.35	3185.51			
	10/07/13	134.20	3185.66			
	05/01/14 10/05/14	134.45 134.15	3185.41 3185.71			
	05/21/15	134.32	3185.54			
	10/19/15	134.40	3185.46			
	05/25/16 10/17/16	134.49	3185.37			
	05/10/17	134.10 134.29	3185.76 3185.57			
3321.3	10/25/17	134.40	3186.90			
	05/22/18	134.31	3186.99			
	10/17/18 06/20/19	134.31 134.43	3186.99 3186.87	142.47		
	11/20/19	134.24	3187.06	142.23		
MW-3	05/18/98	132.65	3185.56	171.00	2.00	 161-171
MW-3 3318.21	05/18/98 05/25/99	132.65 132.52	3185.56 3185.69		2.00	 161-171 
-	05/18/98	132.65	3185.56	171.00		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02	132.65 132.52 132.40 132.40 132.40 132.49	3185.56 3185.69 3185.81 3185.81 3185.72	171.00  		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	132.65 132.52 132.40 132.40 132.49 132.75	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46	171.00     		   
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02	132.65 132.52 132.40 132.40 132.40 132.49	3185.56 3185.69 3185.81 3185.81 3185.81 3185.72 3185.46 3185.92	171.00  		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04	132.65 132.52 132.40 132.49 132.75 132.29 132.29 132.38 132.46	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75	171.00       		     
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	132.65 132.52 132.40 132.40 132.29 132.75 132.29 132.38 132.46 132.32	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89	171.00     		   
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05	132.65           132.52           132.40           132.49           132.75           132.29           132.38           132.46           132.32           132.32	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.89 3185.66	171.00       		     
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/08/06 11/13/06	132.65 132.52 132.40 132.40 132.75 132.75 132.29 132.38 132.46 132.32 132.32 132.55 132.32 132.55	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.94	171.00       		     
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07	132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.55 132.32 132.32 132.35	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.69 3185.89 3185.94 3185.94	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/08/06 11/13/06	132.65 132.52 132.40 132.40 132.75 132.75 132.29 132.38 132.46 132.32 132.32 132.55 132.32 132.55	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.66 3185.89 3185.94 3185.85 3185.85	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 11/03/08	132.65           132.52           132.40           132.40           132.40           132.40           132.20           132.21           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.36           132.36           132.31	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.85 3185.85 3185.85 3185.85	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/13/06 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09	132.65           132.52           132.40           132.40           132.75           132.29           132.28           132.38           132.32           132.32           132.32           132.35           132.36           132.36           132.36           132.31           132.35	3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.85 3185.84 3185.85 3185.85 3185.85 3185.90 3185.90	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 11/03/08	132.65           132.52           132.40           132.40           132.40           132.40           132.20           132.21           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.36           132.36           132.31	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.94 3185.85 3185.87 3185.85 3185.87 3185.89 3185.89 3185.90 3185.96 3185.96	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 05/19/09 11/02/09 05/19/09 11/02/09 05/19/09 11/02/09	132.65           132.52           132.40           132.40           132.75           132.29           132.38           132.45           132.25           132.32           132.36           132.32           132.32           132.32           132.32           132.33           132.36           132.36           132.36           132.36           132.36           132.36           132.36           132.37           132.48           132.14	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.66 3185.89 3185.66 3185.89 3185.89 3185.89 3185.89 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.90 3185.90 3185.90 3185.90 3185.73 3186.77 3186.07	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 05/05/10 11/02/09	132.65           132.52           132.40           132.40           132.75           132.29           132.29           132.38           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.33           132.34           132.35           132.36           132.31           132.25           132.37           132.28           132.21           132.22           132.31           132.24	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.85 3185.87 3185.87 3185.87 3185.87 3185.90 3185.90 3185.90 3185.97	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 05/19/09 11/02/09 05/19/09 11/02/09 05/19/09 11/02/09	132.65           132.52           132.40           132.40           132.75           132.29           132.38           132.45           132.25           132.32           132.36           132.32           132.32           132.32           132.32           132.33           132.36           132.36           132.36           132.36           132.36           132.36           132.36           132.37           132.48           132.14	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.66 3185.89 3185.66 3185.89 3185.89 3185.89 3185.89 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.90 3185.90 3185.90 3185.90 3185.73 3186.77 3186.07	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 11/03/08 05/14/08 11/03/08 05/14/08 11/03/08/10 05/11/11 11/08/10 05/11/11 11/08/10 05/11/11	132.65           132.52           132.40           132.40           132.75           132.29           132.38           132.32           132.35           132.32           132.36           132.36           132.36           132.36           132.37           132.38           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.32           132.34           132.25           132.36           132.37           132.48           132.24           132.30           132.25           132.36	3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.94 3185.94 3185.85 3185.85 3185.87 3185.85 3185.87 3185.90 3185.90 3185.91 3185.91 3185.91 3185.96 3185.96	171.00 		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.32           132.32           132.32           132.32           132.34           132.36           132.31           132.36           132.31           132.32           132.34           132.32           132.34           132.35           132.36           132.37           132.38           132.24           132.25           132.30           132.25           132.25           132.25           132.25	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.94 3185.85 3185.87 3185.87 3185.85 3185.87 3185.86 3185.84 3185.73 3185.96	171.00 		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 11/03/08 05/14/08 11/03/08 05/14/08 11/03/08/10 05/11/11 11/08/10 05/11/11 11/08/10 05/11/11	132.65           132.52           132.40           132.40           132.75           132.29           132.38           132.32           132.35           132.32           132.36           132.36           132.36           132.36           132.37           132.38           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.31           132.25           132.32           132.34           132.25           132.36           132.37           132.48           132.24           132.30           132.25           132.36	3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.94 3185.94 3185.85 3185.85 3185.87 3185.85 3185.87 3185.90 3185.90 3185.91 3185.91 3185.91 3185.96 3185.96	171.00 		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/08/11 10/08/13 05/1/14 10/08/13	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.32           132.32           132.32           132.32           132.32           132.34           132.36           132.36           132.37           132.48           132.24           132.30           132.25           132.25           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.210           132.58	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.76 3185.89 3185.89 3185.89 3185.94 3185.85 3185.87 3185.87 3185.87 3185.86 3185.84 3185.73 3185.96 3185.97 3185.67	171.00 		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/16/12 10/08/13 05/01/14 05/14/03 05/01/14 05/14/03	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.38           132.32           132.35           132.32           132.36           132.36           132.31           132.36           132.31           132.36           132.31           132.32           132.33           132.34           132.35           132.37           132.36           132.37           132.48           132.30           132.25           132.24           132.25           132.14           132.14           132.25           132.25           132.25           132.25	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.85 3185.87 3185.94 3185.90 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/12/03 05/11/04 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 05/19/09 11/02/09 05/05/10 05/19/09 11/02/09 05/05/10 11/08/10 05/16/12 10/10/12 10/10/12 10/10/14 05/16/13 05/01/14 10/05/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/02/14 10/05/14 10/02/	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.25           132.36           132.36           132.36           132.36           132.36           132.36           132.36           132.37           132.36           132.37           132.38           132.25           132.36           132.37           132.38           132.36           132.37           132.48           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25	3185.56 3185.69 3185.81 3185.81 3185.72 3185.72 3185.92 3185.92 3185.83 3185.66 3185.89 3185.66 3185.89 3185.84 3185.85 3185.94 3185.94 3185.94 3185.94 3185.94 3185.94 3185.94 3185.94 3185.94 3185.94 3185.95 3185.96 318	171.00         		
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/16/12 10/08/13 05/01/14 05/14/03 05/01/14 05/14/03	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.38           132.32           132.35           132.32           132.36           132.36           132.31           132.36           132.31           132.36           132.31           132.32           132.33           132.34           132.35           132.37           132.36           132.37           132.48           132.31           132.25           132.48           132.25           132.54           132.25           132.14           132.25           132.25           132.25           132.25           132.25	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.66 3185.89 3185.89 3185.85 3185.87 3185.94 3185.90 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3186.07 3185.96	171.00         		
3318.21	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 11/16/07 11/16/07 11/16/07 05/14/08 05/19/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/01 05/16/13 10/08/13 05/01/14 10/05/14 10/05/14 10/05/14 10/05/14 10/19/15 10/19/15 10/19/15 10/17/16 05/10/17	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.32           132.35           132.36           132.37           132.36           132.36           132.37           132.36           132.37           132.25           132.24           132.25           13	3185.56 3185.69 3185.81 3185.81 3185.72 3185.72 3185.92 3185.92 3185.83 3185.66 3185.89 3185.66 3185.89 3185.66 3185.94 3185.94 3185.94 3185.94 3185.94 3185.90 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 318			
-	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 11/03/08 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 05/05/10 11/08/11 05/16/12 05/16/13 10/08/13 05/02/16 10/17/16 05/22/16 10/17/16 05/25/16 10/17/16 05/25/16 10/17/16 05/25/16 10/17/16	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.38           132.32           132.32           132.32           132.32           132.34           132.36           132.36           132.36           132.36           132.37           132.38           132.31           132.25           132.32           132.32           132.32           132.32           132.32           132.32           132.32           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           13	3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.94 3185.87 3185.87 3185.87 3185.87 3185.96 3185.97 318			
3318.21	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 11/16/07 11/16/07 11/16/07 05/14/08 05/19/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/01 05/16/13 10/08/13 05/01/14 10/05/14 10/05/14 10/05/14 10/05/14 10/19/15 10/19/15 10/19/15 10/17/16 05/10/17	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.32           132.35           132.36           132.37           132.36           132.36           132.37           132.36           132.37           132.25           132.24           132.25           13	3185.56 3185.69 3185.81 3185.81 3185.72 3185.72 3185.92 3185.92 3185.83 3185.66 3185.89 3185.66 3185.89 3185.66 3185.94 3185.94 3185.94 3185.94 3185.94 3185.90 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 318			
3318.21	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/19 11/02/09 05/05/10/17 10/24/17 05/21/15 10/17/16 05/25/16 10/17/16 05/21/15 10/17/16 05/25/16	132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.38           132.32           132.32           132.32           132.32           132.33           132.34           132.35           132.36           132.37           132.36           132.37           132.48           132.25           132.37           132.24           132.25           132.25           132.25           132.25           132.25           132.14           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           13	3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.92 3185.83 3185.75 3185.89 3185.89 3185.89 3185.86 3185.94 3185.87 3185.90 3185.90 3185.90 3185.90 3185.93 3185.97 3187 3187 3187 3187 3187 3187 3187 3187 3187 3187 3187 3187 318			

\\TX05FP01\Data\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2019



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-4	05/18/98	136.01	3183.73	171.00	2.00	161-171
3319.74	05/25/99	135.57	3184.17			
	02/08/01 05/10/02	135.87 135.67	3183.87 3184.07			
	10/22/02	135.90	3183.84			
	05/20/03	136.00	3183.74			
	11/24/03	135.70	3184.04			
	05/11/04 11/15/04	135.34 135.76	3184.40 3183.98			
	05/17/05	135.69	3184.05			
	11/15/05	135.85	3183.89			
	05/08/06	135.60	3184.14			
	11/13/06 05/29/07	135.59 135.75	3184.15 3183.99			
	11/14/07	135.62	3184.12			
	05/14/08	135.76	3183.98			
	11/03/08	135.66	3184.08			
	05/19/09 11/02/09	135.67 135.68	3184.07 3184.06			
	05/05/10	135.83	3183.91			
	11/08/10	135.36	3184.38			
	05/05/11	135.40	3184.34			
	11/08/11 05/16/12	135.43 135.38	3184.31 3184.36			
	10/10/12	135.55	3184.19			
	05/16/13	135.38	3184.36			
	10/07/13 05/01/14	135.53 135.41	3184.21 3184.33			
	10/05/14	135.61	3184.13			
	05/21/15	135.25	3184.49			
	10/19/15	135.70	3184.04			
	05/25/16 10/17/16	135.44 135.11	3184.30 3184.63			
	05/10/17	135.20	3184.54			
3321.58	10/25/17	135.40	3186.18			
	05/22/18	135.13	3186.45			
	10/16/18 06/20/19	135.32 136.21	3186.26 3185.37	 171.81		
	11/19/19	135.06	3186.52	177.64		
MW-4A	05/18/98	135.68	3183.90	143.00	2.00	128-143
3319.58	05/21/99	135.65	3183.93			
	05/25/99	135.90	3183.68			
	02/08/01 05/10/02	135.34 135.30	3184.24 3184.28			
	10/22/02	135.51	3184.07			
	05/20/03	135.55	3184.03			
	11/24/03 05/11/04	135.31 135.72	3184.27 3183.86			
	11/15/04	135.38	3184.20			
	05/17/05	135.32	3184.26			
	11/15/05	135.52	3184.06			
	05/08/06 11/13/06	135.26 135.20	3184.32 3184.38			
	05/29/07	135.32	3184.26			
	11/14/07	135.20	3184.38			
	05/14/08	135.31	3184.27			
	11/03/08 05/19/09	135.27 135.25	3184.31 3184.33			
	11/02/09	135.25	3184.33			
	05/05/10	135.33	3184.25			
	11/08/10	135.18	3184.40			
	05/11/11 11/08/11	135.17 135.22	3184.41 3184.36			
	05/16/12	135.18	3184.40			
	10/10/12	135.33	3184.25			
	05/16/13	135.20	3184.38 3184.57			
	10/07/13	135.01 135.26	3184.57 3184.32			
	05/01/14					
	05/01/14 10/05/14	135.05	3184.53			
	10/05/14 05/21/15	135.05 135.11	3184.47			
	10/05/14 05/21/15 10/19/15	135.05 135.11 135.20	3184.47 3184.38			
	10/05/14 05/21/15 10/19/15 05/25/16	135.05 135.11 135.20 135.27	3184.47 3184.38 3184.31			
	10/05/14 05/21/15 10/19/15	135.05 135.11 135.20	3184.47 3184.38	 		
3321.42	10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17	135.05 135.11 135.20 135.27 135.00 135.01 135.22	3184.47 3184.38 3184.31 3184.58 3184.57 3186.20	  		
3321.42	10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17 05/22/18	135.05 135.11 135.20 135.27 135.00 135.01 135.01 135.22 134.97	3184.47 3184.38 3184.31 3184.58 3184.57 3186.20 3186.45	     		  
3321.42	10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17	135.05 135.11 135.20 135.27 135.00 135.01 135.22	3184.47 3184.38 3184.31 3184.58 3184.57 3186.20	   		  

#### \\TX05FP01\Data\ENVIChevronTexaco TX8IHES Transfer\04 Field Investigations\2019\6 - Annual GWMRCooper Jal/2019 GWM Report\2019 Report\2unvalative Tables\_appendix C and E\_reformatted\_02.6.20



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-5	05/18/98	137.42	3183.68	171.00	2.00	161-171
3321.10	05/25/99	137.28	3183.82			
	02/08/01	137.18 137.10	3183.92			
	05/10/02 10/22/02	137.04	3184.00 3184.06			
	05/20/03	137.45	3183.65			
	11/24/03	137.01	3184.09			
	05/11/04 11/15/04	137.01 137.08	3184.09 3184.02			
	05/17/05	137.00	3184.10			
	11/15/05 05/08/06	137.18 136.90	3183.92 3184.20			
	11/13/06	136.81	3184.29			
	05/29/07	136.92	3184.18			
	11/14/07 05/14/08	136.85 136.97	3184.25 3184.13			
	11/03/08	136.89	3184.21			
	05/19/09	136.90	3184.20			
	<u>11/02/09</u> 05/05/10	136.90 137.02	3184.20 3184.08			
	11/08/10	136.93	3184.17			
	05/11/11	136.92	3184.18			
	11/08/11 05/16/12	136.84 136.80	3184.26 3184.30			
	10/10/12	136.80	3184.30			
	05/16/13	136.80	3184.30			
	10/07/13 05/01/14	136.79 136.83	3184.31 3184.27			
	10/05/14	136.63	3184.47			
	05/21/15	130.60	3190.50			
	10/19/15 05/25/16	136.70 136.79	3184.40 3184.31			
	10/17/16	136.51	3184.59			
	05/10/17	136.53	3184.57			
3322.98	10/25/17 05/22/18	136.80 136.51	3186.18 3186.47			
	10/16/18	136.58	3186.40			
	06/20/19	136.65	3186.33	173.72		
	11/19/19	136.91	3186.07	177.50		
MW-5A 3321.07	05/18/98 05/25/99	137.20 137.11	3183.87 3183.96	141.00	2.00	126-141
0021.07	02/08/01	136.99	3184.08			
	05/10/02	136.90	3184.17			
	10/22/02 05/20/03	137.17 137.24	3183.90 3183.83			
	11/24/03	136.91	3184.16			
	05/11/04	136.88	3184.19			
	11/15/04 05/17/05	136.92 136.83	3184.15 3184.24			
	11/15/05	137.06	3184.01			
	05/08/06	136.80	3184.27			
	11/13/06 05/29/07	136.74 136.82	3184.33 3184.25			
	11/14/07	136.88	3184.19			
	05/14/08	136.83	3184.24			
	11/03/08 05/19/09	136.81 136.78	3184.26 3184.29			
		130.70				
	11/02/09	136.80	3184.27			
	11/02/09 05/05/10	136.80 136.91	3184.27 3184.16			
	11/02/09	136.80	3184.27 3184.16 3184.38			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11	136.80 136.91 136.69 136.87 136.77	3184.27 3184.16 3184.38 3184.20 3184.30			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12	136.80 136.91 136.69 136.87 136.77 136.74	3184.27 3184.16 3184.38 3184.20 3184.30 3184.33	    		   
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12	136.80 136.91 136.69 136.87 136.77 136.74 136.85	3184.27 3184.16 3184.38 3184.20 3184.30 3184.33 3184.22			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.72 137.45	3184.27 3184.16 3184.38 3184.20 3184.30 3184.33 3184.33 3184.22 3184.35 3183.62	    		   
	11/02/09 05/05/10 05/11/11 05/11/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.72 137.45 136.81	3184.27 3184.16 3184.38 3184.20 3184.30 3184.30 3184.33 3184.22 3184.35 3183.62 3183.62	    		   
	11/02/09 05/05/10 05/11/11 05/11/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.72 137.45 136.81 136.81	3184.27 3184.16 3184.38 3184.20 3184.30 3184.33 3184.33 3184.22 3184.35 3183.62 3184.26 3184.26			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.74 136.85 137.45 136.81 136.61 136.68 136.55	$\begin{array}{r} 3184.27\\ 3184.16\\ 3184.38\\ 3184.30\\ 3184.30\\ 3184.30\\ 3184.33\\ 3184.22\\ 3184.35\\ 3183.62\\ 3184.26\\ 3184.46\\ 3184.46\\ 3184.39\\ 3184.52\\ \end{array}$			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 05/01/14 10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.85 136.81 136.61 136.68 136.55 136.84	$\begin{array}{r} 3184.27\\ 3184.16\\ 3184.38\\ 3184.30\\ 3184.30\\ 3184.33\\ 3184.22\\ 3184.35\\ 3184.22\\ 3184.26\\ 3184.46\\ 3184.46\\ 3184.49\\ 3184.52\\ 3184.52\\ 3184.23\\ \end{array}$			
	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/107/13 05/01/14 10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.72 137.45 136.81 136.61 136.68 136.64 136.55 136.84 136.43	3184.27 3184.16 3184.38 3184.20 3184.30 3184.33 3184.22 3184.35 3184.22 3184.26 3184.46 3184.46 3184.52 3184.52 3184.52 3184.64			
3321.07	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 10/05/14 05/21/15 05/25/16 10/17/16 05/10/17 10/25/17	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.85 136.81 136.61 136.68 136.55 136.84	$\begin{array}{r} 3184.27\\ 3184.16\\ 3184.38\\ 3184.30\\ 3184.30\\ 3184.33\\ 3184.22\\ 3184.35\\ 3184.22\\ 3184.26\\ 3184.46\\ 3184.46\\ 3184.49\\ 3184.52\\ 3184.52\\ 3184.23\\ \end{array}$			
3321.07	11/02/09 05/05/10 05/11/11 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 05/01/14 05/02/14 05/22/15 10/19/15 05/25/16 10/17/16 05/22/18	136.80 136.91 136.69 136.87 136.77 136.74 136.85 136.72 137.45 136.81 136.61 136.68 136.68 136.55 136.84 136.66 136.80 136.55	$\begin{array}{r} 3184.27\\ 3184.16\\ 3184.38\\ 3184.20\\ 3184.20\\ 3184.30\\ 3184.33\\ 3184.32\\ 3184.22\\ 3184.26\\ 3184.26\\ 3184.26\\ 3184.46\\ 3184.46\\ 3184.52\\ 3184.64\\ 3184.41\\ 3184.41\\ 3184.52\\ \end{array}$			
3321.07	11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 10/05/14 05/21/15 05/25/16 10/17/16 05/10/17 10/25/17	$\begin{array}{c} 136.80\\ 136.91\\ 136.69\\ 136.87\\ 136.77\\ 136.74\\ 136.85\\ 136.72\\ 137.45\\ 136.81\\ 136.81\\ 136.81\\ 136.61\\ 136.68\\ 136.55\\ 136.84\\ 136.43\\ 136.66\\ 136.80\\ \end{array}$	$\begin{array}{r} 3184.27\\ 3184.16\\ 3184.38\\ 3184.30\\ 3184.30\\ 3184.33\\ 3184.22\\ 3184.35\\ 3184.22\\ 3184.42\\ 3184.42\\ 3184.46\\ 3184.42\\ 3184.52\\ 3184.64\\ 3184.64\\ 3184.41\\ 3184.27\\ \end{array}$			

\\TX05FP01\Data\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2019



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-6	05/18/98	136.73	3184.42	170.00	2.00	120-170
3321.15	05/25/99	136.61	3184.54			
	02/08/01	136.50	3184.65			
	05/10/02	136.40	3184.75			
	10/22/02 05/20/03	136.57 136.85	3184.58 3184.30			
	11/24/03	136.38	3184.77			
	05/11/04	136.41	3184.74			
	11/15/04 05/17/05	136.08 136.58	3185.07 3184.57			
	11/15/05	136.82	3184.33			
	05/08/06	136.58	3184.57			
	11/13/06	136.49	3184.66			
	05/29/07 11/15/07	136.61 136.59	3184.54 3184.56			
	05/14/08	136.58	3184.57			
	11/03/08	136.52	3184.63			
	05/19/09	136.52	3184.63			
	11/02/09 05/05/10	136.51 136.53	3184.64 3184.62			
	11/08/10	136.40	3184.75			
	05/11/11			Casing Damaged		
	11/08/11			Casing Damaged		
	05/16/12			Casing Damaged Casing Damaged		
	10/10/12 09/30/13			gged and Abando		
MW-6R	10/07/13	136.17	3185.33	176.00	4.00	136-176
3321.50	05/01/14	136.25	3185.25			
	10/05/14	136.40	3185.10			
	05/21/15 10/19/15	136.13 136.20	3185.37 3185.30			
	05/25/16	136.27	3185.23			
	10/17/16	135.96	3185.54			
	05/10/17	136.07	3185.43			
3323.04	10/25/17 05/22/18	136.20 136.03	3186.84 3187.01			
	10/17/18	136.09	3186.95			
	06/20/19					
	11/19/19	136.04	3187.00	187.37		
MW-7	11/19/19 05/18/98	136.19	3182.20	166.00	2.00	 151-166
MW-7 3318.39	11/19/19 05/18/98 05/25/99	136.19 135.98	3182.20 3182.41	166.00 		
	11/19/19 05/18/98	136.19	3182.20	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02	136.19 135.98 135.87 135.67 135.89	3182.20 3182.41 3182.52 3182.72 3182.50	166.00  		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	136.19 135.98 135.87 135.67 135.89 136.12	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27	166.00  		 
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03	136.19 135.98 135.87 135.67 135.89 136.12 135.71	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.27 3182.68	166.00  		 
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	136.19 135.98 135.87 135.67 135.89 136.12	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27	166.00     	   	   
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	136.19 135.98 135.87 135.67 136.12 136.71 135.71 135.74 135.78 135.68	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.61 3182.61	166.00        		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 11/15/05	136.19 135.98 135.87 135.67 135.69 136.12 135.71 135.74 135.78 135.68 135.68	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.65 3182.61 3182.71 3182.71	166.00     	   	   
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/22/02 05/11/04 11/15/04 05/11/04 05/17/05 05/08/06	136.19 135.98 135.87 135.67 135.67 136.12 136.71 135.74 135.74 135.78 135.68 135.90 135.64	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.61 3182.71 3182.49 3182.75	166.00        		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 11/15/05	136.19 135.98 135.87 135.67 135.69 136.12 135.71 135.74 135.78 135.68 135.68	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.65 3182.61 3182.71 3182.71	166.00         		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/11/04 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07	136.19           135.98           135.67           135.67           135.71           135.71           135.78           135.78           135.78           135.79           135.71           135.78           135.78           135.78           135.78           135.78           135.79           135.50           135.58           135.73           135.64	3182.20 3182.41 3182.52 3182.72 3182.60 3182.65 3182.65 3182.61 3182.71 3182.49 3182.75 3182.81 3182.75	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/04 05/29/07 11/15/07 05/14/08	136.19 135.98 135.87 135.67 135.67 135.71 135.74 135.78 135.78 135.78 135.68 135.90 135.64 135.54 135.64	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.61 3182.71 3182.71 3182.75 3182.81 3182.75 3182.75 3182.71	166.00         		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/15/07 05/14/08 11/03/08	136.19 135.98 135.87 135.67 135.67 135.71 135.74 135.74 135.74 135.78 135.68 135.68 135.58 135.58 135.58 135.58 135.66 135.66	3182.20 3182.41 3182.52 3182.72 3182.72 3182.68 3182.65 3182.61 3182.71 3182.49 3182.75 3182.81 3182.81 3182.75 3182.75 3182.71 3182.73	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/04 05/29/07 11/15/07 05/14/08	136.19 135.98 135.87 135.67 135.67 135.71 135.74 135.78 135.78 135.78 135.68 135.90 135.64 135.54 135.64	3182.20 3182.41 3182.52 3182.72 3182.50 3182.27 3182.68 3182.65 3182.61 3182.71 3182.71 3182.75 3182.81 3182.75 3182.75 3182.71	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/17/05 11/15/07 05/08/06 05/29/07 11/15/07 05/14/08 11/03/08 05/29/07 11/03/08 05/19/09 11/02/09 05/05/10	136.19 135.98 135.87 135.67 135.67 135.71 135.74 135.74 135.78 135.68 135.68 135.68 135.64 135.58 135.66 135.66 135.66 135.65 135.80	3182.20 3182.41 3182.52 3182.72 3182.72 3182.68 3182.65 3182.61 3182.71 3182.49 3182.75 3182.81 3182.75 3182.81 3182.75 3182.71 3182.73 3182.73 3182.73 3182.73 3182.74 3182.59	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 11/15/07 05/14/08 05/14/08 05/19/09 11/02/	136.19           135.98           135.67           135.67           135.67           135.71           135.73           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.65           135.65           135.65           135.65           135.50           135.51	3182.20 3182.41 3182.52 3182.72 3182.50 3182.65 3182.65 3182.65 3182.65 3182.61 3182.71 3182.75 3182.81 3182.66 3182.75 3182.75 3182.71 3182.73 3182.73 3182.74 3182.59 3182.59 3182.88	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 05/08/06 11/13/06 05/29/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 05/5/11/11	136.19           135.98           135.67           135.67           135.71           135.71           135.74           135.78           135.74           135.73           135.64           135.63           135.64           135.63           135.64           135.63           135.66           135.63           135.65           135.66           135.65           135.65           135.61           135.51           135.63	3182.20 3182.41 3182.52 3182.72 3182.60 3182.65 3182.65 3182.65 3182.61 3182.71 3182.49 3182.75 3182.75 3182.75 3182.75 3182.76 3182.76 3182.74 3182.79 3182.74 3182.75 3182.74 3182.75 3182.74 3182.75 3182.74 3182.75 3182.76 3182.74 3182.74 3182.75 3182.76 3182.74 3182.75 3182.76 3182.74 3182.76 3182.76 3182.74 3182.76 3182.74 3182.76 3182.74 3182.76 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.75 3182.74 3182.76 3182.74 3182.75 3182.74 3182.75 3182.74 3182.74 3182.75 3182.74 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 318	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 11/15/07 05/14/08 05/14/08 05/19/09 11/02/	136.19           135.98           135.87           135.67           135.67           135.71           135.71           135.74           135.78           135.68           135.78           135.68           135.68           135.68           135.68           135.64           135.64           135.68           135.68           135.68           135.68           135.66           135.65           135.66           135.56           135.56           135.568           135.568           135.662	3182.20 3182.41 3182.52 3182.72 3182.50 3182.72 3182.68 3182.65 3182.61 3182.71 3182.75 3182.81 3182.75 3182.75 3182.75 3182.75 3182.75 3182.75 3182.76 3182.76 3182.74 3182.59 3182.74 3182.77 3182.77	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 02/28/01 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/07 05/14/08 11/03/08 11/03/08 11/03/08 11/03/08 11/02/09 05/05/10 05/11/11 11/08/11 05/16/12 0/10/12	136.19           135.98           135.67           135.67           135.67           135.71           135.74           135.78           135.67           135.74           135.78           135.68           135.68           135.64           135.64           135.64           135.66           135.66           135.66           135.66           135.63           135.65           135.66           135.61           135.62           135.51           135.63           135.51           135.62           135.55           135.67	3182.20 3182.41 3182.52 3182.72 3182.60 3182.65 3182.65 3182.65 3182.65 3182.61 3182.71 3182.75 3182.75 3182.75 3182.75 3182.77 3182.76 3182.76 3182.77 3182.78 3182.77 3182.88 3182.71 3182.78 3182.78 3182.78 3182.78 3182.78 3182.78 3182.78 3182.78 3182.88 3182.88 318	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/11/05 11/15/04 05/17/05 11/15/04 05/17/05 11/15/07 05/14/08 11/03/08 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 05/05/10 05/14/08 11/03/08 05/19/09 05/05/10 11/03/08 05/19/09 05/05/10 11/03/08 11/03/08 05/19/09 05/05/10 11/03/08 11/03/	136.19           135.98           135.87           135.67           135.67           135.71           135.71           135.74           135.78           135.78           135.78           135.68           135.78           135.68           135.68           135.64           135.64           135.68           135.68           135.68           135.68           135.66           135.65           135.66           135.56           135.56           135.57           135.57           135.57           135.57           135.57           135.57           135.57           135.57           135.57           135.59	3182.20 3182.41 3182.52 3182.72 3182.50 3182.72 3182.68 3182.65 3182.61 3182.71 3182.49 3182.75 3182.81 3182.75 3182.75 3182.75 3182.75 3182.76 3182.76 3182.74 3182.59 3182.88 3182.77 3182.89 3182.77 3182.89 3182.77 3182.89 3182.77 3182.80	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/15/07 05/14/08 11/03/08 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 11/02/09 05/05/11/11 11/08/11 05/16/12 10/07/13 10/07/13	136.19 135.98 135.87 135.67 135.67 135.67 135.74 135.74 135.74 135.78 135.68 135.68 135.68 135.68 135.68 135.68 135.66 135.66 135.66 135.66 135.65 135.65 135.55 135.59 NS	3182.20 3182.41 3182.52 3182.72 3182.72 3182.65 3182.61 3182.61 3182.61 3182.61 3182.71 3182.49 3182.75 3182.81 3182.73 3182.73 3182.73 3182.74 3182.59 3182.84 3182.77 3182.84 3182.84 3182.80 NS	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/11/05 11/15/04 05/17/05 11/15/04 05/17/05 11/15/07 05/14/08 11/03/08 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 05/05/10 05/14/08 11/03/08 05/19/09 05/05/10 11/03/08 05/19/09 05/05/10 11/03/08 11/03/08 05/19/09 05/05/10 11/03/08 11/03/	136.19           135.98           135.67           135.67           135.67           135.71           135.74           135.78           135.67           135.74           135.73           135.64           135.73           135.64           135.63           135.66           135.66           135.66           135.63           135.63           135.65           135.65           135.61           135.62           135.51           135.55           135.55           135.59           135.59           135.65           135.65           135.59           135.65           135.65	3182.20 3182.41 3182.52 3182.72 3182.50 3182.72 3182.68 3182.65 3182.61 3182.71 3182.49 3182.75 3182.81 3182.75 3182.75 3182.75 3182.75 3182.76 3182.76 3182.74 3182.59 3182.88 3182.77 3182.89 3182.77 3182.89 3182.77 3182.89 3182.77 3182.80	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 11/15/07 05/14/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 05/11/11 11/08/10 05/05/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/07/13 05/07/13	136.19 135.98 135.87 135.67 135.67 135.67 135.74 135.74 135.74 135.78 135.68 135.68 135.68 135.68 135.68 135.68 135.66 135.66 135.66 135.66 135.65 135.65 135.55 135.59 NS	3182.20 3182.41 3182.52 3182.72 3182.72 3182.65 3182.65 3182.65 3182.65 3182.65 3182.65 3182.71 3182.75 3182.76 3182.74 3182.74 3182.74 3182.88 3182.74 3182.84 3182.80 NS 3182.74	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 05/08/06 11/13/06 05/29/07 05/14/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 11/03/07 11/05/07 11/05/14 10/05/14 05/01/14 10/05/14 05/01/14 10/05/	136.19           135.98           135.67           135.67           135.67           135.67           135.71           135.73           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.69           135.61           135.62           135.51           135.55           135.56           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.52           135.54	3182.20 3182.41 3182.52 3182.72 3182.50 3182.65 3182.65 3182.65 3182.65 3182.65 3182.61 3182.71 3182.75 3182.75 3182.75 3182.73 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.74 3182.85 318	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/17/05 11/15/04 05/17/05 11/15/07 05/08/06 11/13/06 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 05/05/10 05/19/09 05/05/10 05/11/11 11/08/11 05/11/11 11/08/11 05/11/11 11/08/11 05/11/11 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16	136.19           135.98           135.67           135.67           135.67           135.71           135.71           135.74           135.78           135.78           135.78           135.68           135.78           135.68           135.68           135.68           135.64           135.68           135.68           135.68           135.68           135.61           135.62           135.63           135.64           135.65           135.66           135.67           135.56           135.57           135.58           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.55           135.54           135.54           135.54	3182.20 3182.41 3182.52 3182.72 3182.50 3182.72 3182.68 3182.65 3182.61 3182.71 3182.49 3182.71 3182.75 3182.75 3182.71 3182.75 3182.74 3182.74 3182.74 3182.80 NS 3182.74 3182.81 3182.74 3182.81	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/11/05 11/15/04 05/11/05 05/08/06 11/13/06 05/29/07 11/15/07 05/14/08 11/03/08 05/29/07 11/03/08 05/19/09 11/02/09 05/05/10 11/03/08 11/03/08 11/03/08 11/03/08 11/03/08 05/19/09 11/02/09 05/05/10 11/03/11 05/14/11 10/07/13 10/07/13 10/07/14 05/21/15 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 05/25/16 0/17/16	136.19           135.98           135.87           135.67           135.67           135.67           135.67           135.71           135.71           135.74           135.73           135.64           135.66           135.68           135.66           135.67           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.69           135.58           135.61           135.62           135.51           135.52           135.59           NS           135.58           135.59           NS           135.52           135.54           135.52           135.54           135.55           135.55           135.53	3182.20 3182.41 3182.52 3182.72 3182.72 3182.65 3182.65 3182.65 3182.61 3182.71 3182.73 3182.75 3182.75 3182.75 3182.73 3182.73 3182.73 3182.73 3182.74 3182.77 3182.84 3182.77 3182.80 NS 3182.74 3182.80 NS 3182.74 3182.81 3182.81 3182.87 3182.81 3182.87 3182.81 3182.87 3182.81 3182.87 3182	166.00		
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/17/05 11/15/04 05/17/05 11/15/07 05/08/06 11/13/06 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 05/05/10 05/19/09 05/05/10 05/11/11 11/08/11 05/11/11 11/08/11 05/11/11 11/08/11 05/11/11 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16	136.19           135.98           135.67           135.67           135.67           135.67           135.71           135.73           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.66           135.61           135.62           135.51           135.61           135.62           135.51           135.55           135.56           135.55           135.55           135.55           135.52           135.52           135.52           135.54           135.55           135.54           135.55           135.54           135.35           135.39	3182.20 3182.41 3182.52 3182.72 3182.50 3182.72 3182.65 3182.65 3182.65 3182.65 3182.61 3182.71 3182.75 3182.75 3182.75 3182.73 3182.73 3182.74 3182.74 3182.74 3182.59 3182.88 3182.59 3182.88 3182.74 3182.87 3182.84 3182.84 3182.81 3182.81 3182.81 3182.85 3182.85 3182.85 3182.64 3183.00	166.00		
3318.39	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 05/14/08 11/03/08 10/07/13 05/01/14 10/05/14 10/05/14 10/07/13 05/01/14 10/07/13 05/01/14 10/07/14 05/25/16 10/17	136.19           135.98           135.87           135.67           135.67           135.67           135.67           135.71           135.71           135.74           135.73           135.64           135.66           135.68           135.66           135.67           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.68           135.69           135.58           135.61           135.62           135.51           135.52           135.59           NS           135.58           135.59           NS           135.52           135.54           135.52           135.54           135.55           135.55           135.53	3182.20 3182.41 3182.52 3182.72 3182.72 3182.65 3182.65 3182.65 3182.61 3182.71 3182.73 3182.75 3182.75 3182.75 3182.73 3182.73 3182.73 3182.73 3182.74 3182.77 3182.84 3182.77 3182.80 NS 3182.74 3182.80 NS 3182.74 3182.81 3182.81 3182.87 3182.81 3182.87 3182.81 3182.87 3182.81 3182.87 3182	166.00		
3318.39	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 05/08/06 11/13/06 05/29/07 05/14/08 11/03/08 10/07/13 10/07/13 10/07/16 10/17/16 10/17/16 10/17/16 10/17/16 10/15/18 10/15/	136.19           135.98           135.67           135.67           135.67           135.67           135.67           135.71           135.73           135.64           135.64           135.66           135.66           135.68           135.68           135.64           135.66           135.66           135.66           135.61           135.62           135.65           135.61           135.62           135.51           135.62           135.52           135.52           135.52           135.52           135.52           135.52           135.52           135.52           135.53           135.53           135.33           135.39           135.39           135.59	3182.20 3182.41 3182.52 3182.72 3182.65 3182.77 3182.66 3182.65 3182.61 3182.61 3182.49 3182.75 3182.75 3182.75 3182.73 3182.73 3182.74 3182.74 3182.74 3182.74 3182.74 3182.88 3182.74 3182.88 3182.74 3182.88 3182.74 3182.88 3182.74 3182.84 3182.84 3182.80 NS 3182.74 3182.84 3182.84 3182.85 3182.84 3182.84 3182.85 3182.84 3182.85 3182.84 3182.84 3182.85 3182.84			
3318.39	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/05 11/15/04 05/17/05 11/15/07 11/15/07 11/15/07 11/15/07 05/14/08 11/03/08 05/29/07 11/15/07 05/14/08 11/03/08 05/19/09 05/05/10 11/03/08 11/03/	136.19           135.98           135.67           135.67           135.67           135.67           135.67           135.71           135.71           135.74           135.73           135.68           135.64           135.58           135.66           135.66           135.66           135.66           135.66           135.68           135.66           135.68           135.69           135.61           135.62           135.58           135.59           NS           135.59           NS           135.59           NS           135.52           135.53           135.54           135.55           135.51           135.52           135.53           135.54           135.35           135.39           135.38           135.39           135.39           135.39           135.39            135.3	3182.20 3182.41 3182.52 3182.72 3182.72 3182.65 3182.65 3182.61 3182.61 3182.71 3182.49 3182.75 3182.81 3182.81 3182.73 3182.73 3182.73 3182.74 3182.74 3182.87 3182.80 NS 3182.74 3182.80 NS 3182.81 3182.84 3182.80 NS 3182.84 3182.80 NS 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.85 3182.84 3182.84 3182.84 3182.85 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.84 3182.64 3183.04 3184.80			

ARCADIS Design & Consultancy for natural and built assets



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-8	05/18/98	134.36	3182.78	170.00	2.00	155-170
3317.14	05/25/99	134.21	3182.93			
	02/08/01 05/10/02	134.08 133.95	3183.06 3183.19			
	10/22/02	134.18	3182.96			
	05/20/03	134.38	3182.76			
	11/24/03 05/11/04	133.99 134.02	3183.15 3183.12			
	11/15/04	134.02	3183.03			
	05/17/05	133.97	3183.17			
	11/15/05 05/08/06	134.21 133.94	3182.93 3183.20			
	11/13/06	133.90	3183.24			
	05/29/07	134.02	3183.12			
	11/15/07 05/15/08	133.76 133.98	3183.38 3183.16			
	11/03/08	134.01	3183.13			
	05/19/09	133.97	3183.17			
	11/02/09 05/05/10	134.00 134.08	3183.14 3183.06			
	11/08/10	134.03	3183.11			
	05/11/11	133.98	3183.16			
	11/08/11 05/16/12	133.96 133.84	3183.18 3183.30			
	10/10/12	134.15	3182.99			
	05/16/13	133.94	3183.20			
	10/07/13 05/01/14	133.90 133.91	3183.24 3183.23			
	10/05/14	133.75	3183.39			
	05/21/15	133.88	3183.26			
	10/19/15 05/25/16	133.88 133.86	3183.26 3183.28			
	10/17/16	133.68	3183.46			
	05/10/17	133.84	3183.30			
3319.06	10/24/17 05/22/18	133.72 133.77	3185.34 3185.29			
	10/17/18	133.87	3185.19			
	06/20/19	133.87	3185.19	146.85		
	11/20/19	133.84	3185.22	146.92		
MW-9 3312.79	05/18/98 05/25/99	132.89 132.68	3179.90 3180.11	164.00	2.00	149-164
0012.70	02/08/01	132.52	3180.27			
	05/10/02	137.20	3175.59			
	10/22/02 05/20/03	132.56 132.75	3180.23 3180.04			
	11/24/03	132.35	3180.44			
	05/11/04	132.39	3180.40			
	05/11/04 11/15/04	132.39 132.43	3180.40 3180.36			
	05/11/04	132.39	3180.40	   		  
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06	132.39 132.43 132.26 132.60 132.26	3180.40 3180.36 3180.53 3180.19 3180.53	    	   	   
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06	132.39 132.43 132.26 132.60 132.26 132.26 132.19	3180.40 3180.36 3180.53 3180.19 3180.53 3180.60	  		
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06	132.39 132.43 132.26 132.60 132.26	3180.40 3180.36 3180.53 3180.19 3180.53			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08	132.39 132.43 132.26 132.60 132.26 132.20 132.19 132.32 132.34 132.29	3180.40 3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.50	     		    
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08	132.39 132.43 132.26 132.60 132.26 132.19 132.32 132.32 132.34 132.29 132.33	3180.40 3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.47 3180.50 3180.46	   		  
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08	132.39 132.43 132.26 132.60 132.26 132.20 132.19 132.32 132.34 132.29	3180.40 3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.50	     		    
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10	132.39 132.43 132.26 132.26 132.26 132.21 132.32 132.34 132.32 132.33 132.29 132.33 132.21 132.33 132.21 132.35 132.41	3180.40 3180.36 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.50 3180.46 3180.58 3180.46 3180.58 3180.44 3180.38	     		    
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 05/15/08 05/15/08 05/19/09 11/02/09 11/02/09 11/02/09	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.33           132.35           132.31           132.32	3180.40 3180.36 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.45 3180.46 3180.58 3180.44 3180.38 3180.89			       
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10	132.39 132.43 132.26 132.26 132.26 132.21 132.32 132.34 132.32 132.33 132.29 132.33 132.21 132.33 132.21 132.35 132.41	3180.40 3180.36 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.50 3180.46 3180.58 3180.46 3180.58 3180.44 3180.38			       
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/01 05/11/11 11/08/11 05/16/12	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.33           132.21           132.33           132.34           132.32           132.33           132.21           132.32           132.31           132.21           132.35           132.41           132.10           132.19           132.05	$\begin{array}{r} 3180.40\\ 3180.36\\ 3180.53\\ 3180.53\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.46\\ 3180.50\\ 3180.46\\ 3180.58\\ 3180.44\\ 3180.38\\ 3180.69\\ 3180.57\\ 3180.60\\ 3180.67\\ 3180.60\\ \end{array}$			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12	132.39           132.43           132.26           132.26           132.26           132.32           132.32           132.33           132.29           132.33           132.21           132.35           132.41           132.20           132.21           132.35           132.41           132.20           132.20           132.20           132.32	$\begin{array}{r} 3180.40\\ 3180.36\\ 3180.53\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.50\\ 3180.46\\ 3180.58\\ 3180.48\\ 3180.58\\ 3180.69\\ 3180.57\\ 3180.69\\ 3180.57\\ 3180.60\\ 3180.74\\ 3180.74\\ 3180.47\\ \end{array}$			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/01 05/11/11 11/08/11 05/16/12	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.33           132.21           132.33           132.34           132.32           132.33           132.21           132.32           132.31           132.21           132.32           132.41           132.10           132.22           132.19           132.05	$\begin{array}{r} 3180.40\\ 3180.36\\ 3180.53\\ 3180.53\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.46\\ 3180.46\\ 3180.50\\ 3180.48\\ 3180.48\\ 3180.57\\ 3180.69\\ 3180.67\\ 3180.67\\ 3180.60\\ 3180.74\\ \end{array}$			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/07/13	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.33           132.21           132.33           132.22           132.31           132.32           132.32           132.33           132.21           132.35           132.41           132.05           132.05           132.32           132.08           131.94	3180.40 3180.36 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.45 3180.50 3180.46 3180.58 3180.44 3180.58 3180.69 3180.57 3180.69 3180.74 3180.74 3180.71 3180.71 3180.85 Not Measu			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/13/06 05/29/07 11/03/08 05/19/09 11/03/08 05/19/09 05/05/10 11/03/08 05/19/09 05/05/10 11/03/08 05/11/11 11/08/10 05/11/11 10/07/13 05/16/12 10/10/12 05/16/13 10/07/14 10/05/14	132.39           132.43           132.26           132.60           132.27           132.31           132.32           132.33           132.29           132.31           132.29           132.31           132.32           132.31           132.29           132.35           132.41           132.02           132.35           132.41           132.02           132.03           132.03           132.04           132.32           132.32           132.32           132.32           132.32           131.94           131.95	3180.40 3180.36 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.50 3180.46 3180.50 3180.44 3180.58 3180.44 3180.38 3180.44 3180.57 3180.60 3180.74 3180.74 3180.71 3180.71 3180.71 3180.81	        	        	
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/07/13	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.33           132.21           132.33           132.22           132.31           132.32           132.32           132.33           132.21           132.35           132.41           132.05           132.05           132.32           132.08           131.94	3180.40 3180.36 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.45 3180.50 3180.46 3180.58 3180.44 3180.58 3180.69 3180.57 3180.69 3180.74 3180.74 3180.71 3180.71 3180.85 Not Measu			
	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/13/06 05/29/07 11/03/08 05/19/09 11/03/08 05/19/09 05/05/10 11/03/08 05/19/09 05/05/10 11/03/08 05/11/11 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/07/14 05/02/14 05/12/15 10/19/15 05/12/16	132.39           132.43           132.26           132.26           132.26           132.27           132.32           132.33           132.29           132.33           132.21           132.35           132.41           132.20           132.10           132.21           132.20           132.05           132.05           132.05           132.05           131.94           132.05           132.01           132.05           132.01	3180.40 3180.36 3180.53 3180.19 3180.53 3180.47 3180.47 3180.47 3180.45 3180.40 3180.50 3180.46 3180.58 3180.58 3180.69 3180.57 3180.69 3180.74 3180.74 3180.71 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.78 3180.81	         -	        	
	05/11/04 11/15/04 11/15/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/13/06 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 05/105/10 05/105/10 05/11/11 05/16/12 05/16/13 10/07/13 05/01/14 05/21/15 05/25/16 10/17/16	132.39           132.43           132.26           132.26           132.26           132.19           132.32           132.33           132.29           132.31           132.32           132.33           132.29           132.31           132.32           132.35           132.41           132.21           132.21           132.21           132.21           132.05           132.08           131.94           131.95           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           131.98           131.91	3180.40 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.46 3180.46 3180.50 3180.46 3180.50 3180.46 3180.50 3180.69 3180.57 3180.60 3180.74 3180.71 3180.84 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.84	         -	        	
3314.68	05/11/04 11/15/04 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/15/08 11/03/08 05/15/08 11/03/08 05/15/07 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/09 11/02/01 11/08/11 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 10/05/14 10/05/14 10/15/14 10/12/15 05/22/16 10/17/16 05/10/17	132.39           132.43           132.26           132.26           132.26           132.32           132.33           132.29           132.33           132.21           132.33           132.23           132.31           132.21           132.32           132.35           132.41           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.01           131.98           131.91           131.95	3180.40 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.45 3180.46 3180.46 3180.50 3180.46 3180.50 3180.44 3180.83 3180.69 3180.74 3180.74 3180.74 3180.85 Not Measu 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.85	         -	        	
3314.68	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/13/06 05/19/09 11/02/09 05/05/10 05/10/11/11 11/08/11 05/16/12 10/07/13 10/07/13 10/07/13 05/05/14/11 10/05/14 10/05/14 05/21/15 10/17/16 05/25/16 10/17/16 05/25/16 10/17/16 05/21/15 10/17/16 05/21/15 10/17/16 10/25/16 10/17/16 10/27/18 05/22/18 10/22/18	132.39           132.43           132.43           132.26           132.60           132.26           132.19           132.32           132.33           132.34           132.32           132.33           132.31           132.32           132.33           132.35           132.41           132.35           132.41           132.10           132.21           132.05           132.08           131.94           131.95           131.95           131.95           131.91           131.92           131.92           131.92	3180.40 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.46 3180.50 3180.46 3180.50 3180.46 3180.50 3180.60 3180.74 3180.60 3180.71 3180.71 3180.71 3180.71 3180.71 3180.71 3180.71 3180.74 3180.71 3180.84 3180.74 3180.78 3180.84 3180.81 3180.81 3180.84 3180.81 3180.84 3180.81 3180.84 3180.8		         -	
3314.68	05/11/04 11/15/04 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 05/15/08 05/15/08 05/15/08 11/03/08 05/15/08 11/03/08 05/15/08 11/03/08 05/15/08 11/03/08 05/15/08 11/03/08 11/02/09 05/05/10 11/08/11 05/16/12 10/17/13 05/01/14 10/05/14 05/22/18 10/17/16 05/22/18 10/17/18 05/22/18	132.39           132.43           132.26           132.26           132.26           132.21           132.32           132.33           132.29           132.33           132.21           132.33           132.21           132.32           132.35           132.41           132.10           132.22           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           132.05           131.94           131.95           131.91           131.92           131.93           131.93           131.90           131.98	3180.40 3180.36 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.45 3180.46 3180.46 3180.50 3180.46 3180.57 3180.60 3180.74 3180.67 3180.67 3180.74 3180.71 3180.85 Not Measu 3180.84 3180.74 3180.74 3180.74 3180.74 3180.74 3180.85 Not Measu 3180.84 3180.84 3182.76 3182.70	         -	        	
3314.68	05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/13/06 05/19/09 11/02/09 05/05/10 05/10/17 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/05/14 10/05/14 05/21/15 10/17/16 05/25/16 10/17/16 05/25/16 10/17/16 05/22/18	132.39           132.43           132.43           132.26           132.60           132.26           132.19           132.32           132.33           132.34           132.32           132.33           132.31           132.32           132.33           132.35           132.41           132.35           132.41           132.10           132.21           132.05           132.08           131.94           131.95           131.95           131.95           131.91           131.92           131.92           131.92	3180.40 3180.53 3180.53 3180.53 3180.53 3180.60 3180.47 3180.45 3180.46 3180.50 3180.46 3180.50 3180.46 3180.50 3180.60 3180.74 3180.60 3180.71 3180.71 3180.71 3180.71 3180.71 3180.71 3180.71 3180.74 3180.71 3180.84 3180.74 3180.78 3180.84 3180.81 3180.81 3180.84 3180.81 3180.84 3180.81 3180.84 3180.8		         -	

\\TX05FP01\Data\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2019



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
тос	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL)	05/40/00	100.05	0.170.0.1	110.00		107.110
MW-9A 3312.56	05/18/98 05/25/99	132.65 132.43	3179.91 3180.13	142.00	2.00	127-142
0012100	02/08/01	132.37	3180.19			
	05/10/02	137.20	3175.36			
	10/22/02	132.35	3180.21			
	05/20/03 11/24/03	132.55 132.10	3180.01 3180.46			
	05/11/04	132.14	3180.42			
	11/15/04	132.19	3180.37			
	05/17/05	132.06	3180.50			
	11/15/05 05/08/06	132.35 132.02	3180.21 3180.54			
	11/13/06	131.09	3181.47			
	05/29/07	132.08	3180.48			
	11/14/07	132.06	3180.50			
	05/15/08 11/03/08	132.03 131.98	3180.53 3180.58			
	05/19/09	132.00	3180.56			
	11/02/09	131.90	3180.66			
	05/05/10	131.96	3180.60			
	11/08/10	131.85	3180.71			
	05/11/11 11/08/11	132.06 131.95	3180.50 3180.61			
	05/16/12	131.95	3180.01			
	10/10/12	132.09	3180.47			
	05/16/13	131.88	3180.68			
	10/07/13	131.90	3180.66			
	05/01/14 10/05/14			red - Obstruction I red - Obstruction I		
	05/21/15			red - Obstruction I		
	10/19/15	131.68	3180.88			
	05/25/16	131.73	3180.83			
	10/17/16	131.62	3180.94			
			3180.88			
2214 49	05/10/17	131.68				
3314.48	10/24/17	131.60	3182.88			
3314.48						
3314.48	10/24/17 05/22/18	131.60 131.81	3182.88 3182.67	  141.72		  
3314.48	10/24/17 05/22/18 10/17/18	131.60 131.81 131.72	3182.88 3182.67 3182.76			   
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98	131.60 131.81 131.72 131.69 131.63 137.18	3182.88 3182.67 3182.76 3182.79 3182.85 3182.85 3182.12	 141.72		
	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99	131.60 131.81 131.72 131.69 131.63 137.18 137.04	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26	 141.72 145.66 166.00 	  2.00 	  151-166 
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26 3182.26 3182.42	 141.72 145.66		
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80	3182.88 3182.67 3182.76 3182.79 3182.85 3182.85 3182.12 3182.26 3182.42 3182.50	 141.72 145.66 166.00 	  2.00 	  151-166 
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26 3182.26 3182.42	 141.72 145.66 166.00 	  2.00 	  151-166 
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 11/24/03	131.60 131.81 131.72 131.69 131.63 137.18 137.18 137.04 136.88 136.88 136.80 136.91 137.13 136.71	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26 3182.42 3182.42 3182.50 3182.17 3182.59	 141.72 145.66 166.00       	  2.00   	  151-166   
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77	3182.88 3182.67 3182.76 3182.79 3182.85 3182.26 3182.26 3182.42 3182.50 3182.42 3182.50 3182.50 3182.59 3182.53	 141.72 145.66 166.00       	  2.00    	  151-166      
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26 3182.42 3182.50 3182.39 3182.17 3182.59 3182.53 3182.53 3182.48	 141.72 145.66 166.00       	  2.00    	  151-166     
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77	3182.88 3182.67 3182.76 3182.79 3182.85 3182.26 3182.26 3182.42 3182.50 3182.42 3182.50 3182.50 3182.59 3182.53	 141.72 145.66 166.00       	  2.00    	  151-166      
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.81 136.91 137.13 136.77 136.82 136.34 136.95 136.65	3182.88 3182.67 3182.76 3182.79 3182.85 3182.42 3182.42 3182.42 3182.50 3182.17 3182.53 3182.53 3182.53 3182.53	 141.72 145.66 166.00       	  2.00     	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/13/06	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.82 136.65 136.65	3182.88 3182.67 3182.76 3182.79 3182.85 3182.26 3182.42 3182.42 3182.50 3182.42 3182.50 3182.17 3182.59 3182.53 3182.48 3182.48 3182.96 3182.71	 141.72 145.66 166.00       	 2.00      	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 05/17/05 11/15/05 11/15/05 05/08/06 05/29/07	131.60 131.81 131.72 131.69 131.63 137.18 137.18 137.04 136.88 136.80 136.91 136.71 136.71 136.77 136.82 136.54 136.59 136.65 136.68	3182.88 3182.67 3182.76 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.39 3182.53 3182.53 3182.53 3182.53 3182.96 3182.35 3182.65	 141.72 145.66 166.00       	  2.00     	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/17/05 05/08/06 11/15/05	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.81 136.81 136.81 136.81 136.81	3182.88 3182.67 3182.76 3182.76 3182.79 3182.85 3182.12 3182.26 3182.42 3182.50 3182.39 3182.17 3182.59 3182.53 3182.48 3182.95 3182.65 3182.71 3182.65 3182.69	 141.72 145.66 166.00       	 2.00      	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 05/17/05 11/15/05 11/15/05 05/08/06 05/29/07	131.60 131.81 131.72 131.69 131.63 137.18 137.18 137.04 136.88 136.80 136.91 136.71 136.71 136.77 136.82 136.54 136.59 136.65 136.68	3182.88 3182.67 3182.76 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.39 3182.53 3182.53 3182.53 3182.53 3182.96 3182.35 3182.65	 141.72 145.66 166.00       	 2.00      	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 05/08/06 11/13/06 05/29/07 11/15/07	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.65 136.65 136.65	3182.88 3182.67 3182.76 3182.79 3182.85 3182.12 3182.26 3182.42 3182.42 3182.50 3182.42 3182.50 3182.17 3182.59 3182.53 3182.48 3182.48 3182.65 3182.62 3182.65	 141.72 145.66 166.00       	 2.00      	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 05/15/08 11/03/08 05/19/09 11/02/09	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77 136.82 136.69 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60	3182.88 3182.67 3182.76 3182.79 3182.85 3182.26 3182.42 3182.26 3182.42 3182.50 3182.50 3182.50 3182.51 3182.53 3182.53 3182.48 3182.65 3182.65 3182.62 3182.65 3182.65 3182.65 3182.70 3182.70	 141.72 145.66       	 2.00   	 151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/13/06 05/29/07 11/15/08 11/03/08 05/19/09 11/02/09 05/05/10	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.77 136.62 136.64 136.59 136.65 136.65 136.60 136.60 136.60 136.60 136.60	3182.88 3182.67 3182.76 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.50 3182.50 3182.53 3182.53 3182.53 3182.48 3182.96 3182.71 3182.65 3182.71 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70 3182.70	 141.72 145.66 166.00       	 2.00      	  151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/07 05/15/08 11/02/09 05/15/08 11/02/09 11/02/09 05/05/10 11/08/10	131.60 131.81 131.72 131.63 137.18 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.71 136.77 136.82 136.34 136.34 136.95 136.65 136.65 136.66 136.60 136.60 136.60 136.64 136.58	3182.88 3182.67 3182.76 3182.76 3182.79 3182.85 3182.26 3182.22 3182.26 3182.42 3182.50 3182.39 3182.53 3182.53 3182.53 3182.53 3182.65 3182.65 3182.65 3182.65 3182.65 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70	 141.72 145.66       	 2.00   	 151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/13/06 05/29/07 11/15/08 11/03/08 05/19/09 11/02/09 05/05/10	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.77 136.62 136.64 136.59 136.65 136.65 136.60 136.60 136.60 136.60 136.60	3182.88 3182.67 3182.76 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.50 3182.50 3182.53 3182.53 3182.53 3182.48 3182.96 3182.71 3182.65 3182.71 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70 3182.70	141.72 145.66 166.00	 2.00   	 151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/07 05/15/08 11/03/08 05/19/09 11/08/10 05/11/11 11/08/10 05/11/11 11/08/11 05/16/12	131.60 131.81 131.72 131.63 137.18 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77 136.82 136.34 136.34 136.55 136.65 136.65 136.60 136.60 136.60 136.60 136.62 136.57 136.57 136.57	3182.88 3182.67 3182.76 3182.76 3182.79 3182.85 3182.85 3182.26 3182.42 3182.50 3182.39 3182.50 3182.50 3182.59 3182.53 3182.53 3182.53 3182.65 3182.71 3182.65 3182.70 3182.72 3182.86	141.72 145.66 166.00	 2.00   	 151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07 11/15/07 05/15/08 11/03/08 05/19/09 11/08/10 05/11/11 11/08/10 05/11/11	$\begin{array}{c} 131.60\\ 131.81\\ 131.72\\ 131.69\\ 131.63\\ 137.18\\ 137.04\\ 136.88\\ 136.80\\ 136.80\\ 136.80\\ 136.80\\ 136.80\\ 136.91\\ 137.13\\ 136.71\\ 136.77\\ 136.62\\ 136.65\\ 136.65\\ 136.65\\ 136.65\\ 136.65\\ 136.61\\ 136.60\\ 136.60\\ 136.60\\ 136.60\\ 136.60\\ 136.61\\ 136.62\\ 136.62\\ 136.57\\ 136.58\\ 136.62\\ 136.57\\ 136.64\\ 136.58\\ 136.62\\ 136.62\\ 136.64\\ 136.91\\ \end{array}$	3182.88 3182.67 3182.76 3182.76 3182.76 3182.79 3182.85 3182.85 3182.26 3182.42 3182.50 3182.39 3182.50 3182.50 3182.53 3182.53 3182.65 3182.65 3182.71 3182.65 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70 3182.70 3182.72 3182.86 3182.72 3182.86 3182.73 3182.83 3182.73 3182.88 3182.73 3182.88 3182.73	141.72 145.66 166.00	 2.00  	 151-166       
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/05 11/15/08 05/19/09 05/15/08 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/15/11/11 11/08/11 05/16/12 10/10/12 05/16/13	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.65 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.62	3182.88 3182.67 3182.79 3182.79 3182.85 3182.26 3182.42 3182.20 3182.42 3182.50 3182.42 3182.50 3182.17 3182.59 3182.53 3182.48 3182.48 3182.96 3182.71 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.73 3182.79	141.72 145.66 166.00	 2.00   	151-166
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/22/02 05/20/03 11/15/05 05/08/06 11/15/05 05/08/06 11/15/07 05/15/08 11/03/08 05/19/09 11/08/10 05/11/11 11/08/10 05/16/12 10/10/12 05/16/13 10/07/13	131.60 131.81 131.72 131.63 137.18 137.18 137.04 136.88 136.80 136.91 137.13 136.77 136.82 136.59 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.60 136.65 136.60 136.65 136.57	3182.88 3182.67 3182.76 3182.76 3182.76 3182.79 3182.85 3182.26 3182.22 3182.26 3182.39 3182.39 3182.53 3182.53 3182.53 3182.53 3182.65 3182.71 3182.65 3182.65 3182.70 3182.75	141.72 145.66 166.00	 2.00   	151-166
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/05 11/15/08 05/19/09 05/15/08 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/15/11/11 11/08/11 05/16/12 10/10/12 05/16/13	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.65 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.62	3182.88 3182.67 3182.79 3182.79 3182.85 3182.26 3182.42 3182.20 3182.42 3182.50 3182.42 3182.50 3182.17 3182.59 3182.53 3182.48 3182.48 3182.96 3182.71 3182.65 3182.70 3182.70 3182.70 3182.70 3182.70 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.72 3182.68 3182.73 3182.79	141.72 145.66 166.00	 2.00   	
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 05/15/08 11/02/09 05/19/09 11/02/09 05/15/10 05/11/11 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/16/14	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.81 137.13 136.71 136.77 136.82 136.69 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.60 136.60 136.60 136.62 136.57 136.54 136.57 136.44 136.51 136.55 136.37	3182.88 3182.67 3182.76 3182.76 3182.76 3182.76 3182.76 3182.85 3182.85 3182.42 3182.26 3182.39 3182.50 3182.39 3182.53 3182.53 3182.48 3182.95 3182.65 3182.71 3182.65 3182.70 3182.69 3182.70 3182.70 3182.70 3182.70 3182.70 3182.72 3182.86 3182.72 3182.86 3182.73 3182.73 3182.73 3182.86 3182.79 3182.79 3182.75 3182.75 3182.75 3182.75	141.72 145.66 166.00	 2.00   	
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/12/02 05/20/03 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/19/09 11/02/09 05/15/10 05/11/11 11/08/10 05/11/12 05/16/12 10/10/12 05/16/13 05/01/14 10/05/14 05/21/15	131.60           131.81           131.72           131.63           137.18           137.18           137.04           136.88           136.80           137.13           136.81           137.13           136.71           136.71           136.71           136.71           136.82           136.82           136.65           136.65           136.65           136.61           136.62           136.61           136.62           136.61           136.62           136.61           136.62           136.63           136.64           136.55           136.65           136.62           136.57           136.57           136.51           136.55           136.37           136.40           136.41	3182.88 3182.67 3182.76 3182.76 3182.76 3182.76 3182.76 3182.85 3182.85 3182.42 3182.26 3182.39 3182.50 3182.39 3182.59 3182.53 3182.48 3182.65 3182.65 3182.65 3182.65 3182.65 3182.70 3182.69 3182.70 3182.70 3182.70 3182.72 3182.86 3182.72 3182.89 3182.90 3182.89	141.72 145.66 166.00	 2.00   	
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/07 05/15/08 11/03/08 05/19/09 05/05/10 11/15/07 05/15/10 11/102/09 05/05/10 11/02/09 05/05/10 11/102/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/16/13 10/07/13 10/07/13 10/07/13 10/07/14 05/21/15 10/19/15	131.60 131.81 131.72 131.69 131.63 137.18 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77 136.82 136.69 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.62 136.62 136.62 136.57 136.44 136.55 136.62 136.62 136.62 136.62 136.62 136.62 136.62 136.62 136.65 136.62 136.62 136.62 136.65 136.62 136.65 136.62 136.62 136.65 136.62 136.64 136.64 136.40	3182.88 3182.67 3182.79 3182.79 3182.85 3182.26 3182.42 3182.26 3182.42 3182.50 3182.50 3182.50 3182.50 3182.53 3182.48 3182.65 3182.65 3182.65 3182.65 3182.65 3182.65 3182.65 3182.70 3182.65 3182.70 3182.65 3182.70 3182.86 3182.90 3182.90	141.72 145.66 166.00		
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 05/15/08 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/11 10/07/13 05/16/13 10/07/13 05/21/15 10/19/15 05/25/16 10/17/16	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.62 136.57 136.57 136.42 136.42 136.40 136.33	3182.88 3182.67 3182.79 3182.79 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.42 3182.50 3182.48 3182.96 3182.48 3182.65 3182.65 3182.71 3182.65 3182.70 3182.65 3182.70 3182.86 3182.70 3182.70 3182.70 3182.80 3182.70 3182.70 3182.80 3182.79 3182.79 3182.90 3182.90	141.72 145.66 166.00		
MW-10 3319.30	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/05 05/08/06 11/15/05 05/08/06 11/15/07 05/15/08 11/02/09 05/15/10 05/11/11 11/08/10 05/11/13 05/16/12 10/10/12 05/16/13 05/01/14 10/05/14 10/12/15 05/25/16 10/17/16 05/12/16	131.60 131.81 131.72 131.69 131.63 137.18 137.18 137.04 136.88 136.80 136.91 137.13 136.71 136.77 136.82 136.69 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.62 136.62 136.57 136.44 136.55 136.57 136.44 136.55 136.42 136.40 136.40	3182.88 3182.67 3182.76 3182.76 3182.76 3182.76 3182.76 3182.79 3182.85 3182.26 3182.20 3182.39 3182.50 3182.59 3182.59 3182.53 3182.65 3182.65 3182.65 3182.65 3182.70 3182.60 3182.70 3182.86 3182.72 3182.86 3182.79 3182.88 3182.90 3182.90 3182.90	141.72 145.66 166.00		
MW-10	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/05 11/15/05 05/08/06 11/13/06 05/29/07 11/15/07 05/15/08 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/11 10/07/13 05/16/13 10/07/13 05/21/15 10/19/15 05/25/16 10/17/16	131.60 131.81 131.72 131.69 131.63 137.18 137.04 136.88 136.80 136.80 136.91 137.13 136.71 136.77 136.82 136.34 136.65 136.65 136.65 136.65 136.60 136.60 136.60 136.60 136.60 136.60 136.62 136.55 136.57 136.44 136.55 136.44 136.55 136.44 136.55 136.44 136.55 136.40 136.40 136.34	3182.88 3182.67 3182.79 3182.79 3182.79 3182.85 3182.42 3182.42 3182.42 3182.42 3182.50 3182.42 3182.50 3182.48 3182.96 3182.48 3182.65 3182.65 3182.71 3182.65 3182.70 3182.65 3182.70 3182.86 3182.70 3182.70 3182.70 3182.80 3182.70 3182.70 3182.80 3182.79 3182.79 3182.90 3182.90	141.72 145.66 166.00		
MW-10 3319.30	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 10/22/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/05 05/08/06 11/15/08 11/15/05 05/08/06 11/15/08 11/09/11 11/08/10 05/11/13 05/11/13 05/16/12 10/10/12 05/16/13 05/21/15 10/19/15 05/22/18 10/17/16 05/22/18 10/17/16	131.60           131.81           131.72           131.63           137.18           137.18           137.18           137.18           137.13           136.80           136.81           137.13           136.71           136.71           136.71           136.71           136.82           136.82           136.65           136.65           136.65           136.61           136.62           136.61           136.62           136.61           136.62           136.61           136.62           136.61           136.62           136.61           136.62           136.62           136.63           136.55           136.44           136.51           136.42           136.42           136.44           136.34           136.34           136.34           136.34	3182.88 3182.67 3182.76 3182.76 3182.76 3182.76 3182.76 3182.79 3182.85 3182.26 3182.20 3182.39 3182.39 3182.50 3182.59 3182.59 3182.53 3182.65 3182.65 3182.71 3182.65 3182.70 3182.60 3182.70 3182.86 3182.70 3182.80 3182.79 3182.90 3182.90 3182.90 3182.90 3184.84 3191.05 3184.78	141.72 145.66 166.00		
MW-10 3319.30	10/24/17 05/22/18 10/17/18 06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 10/22/02 10/22/02 10/22/03 11/24/03 05/11/04 11/15/05 11/15/05 11/15/05 11/15/05 11/15/05 11/15/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 10/07/13 05/10/12 05/16/13 10/07/13 05/25/16 10/17/16 05/22/18	131.60           131.81           131.72           131.63           137.18           137.18           137.04           136.88           136.80           136.81           137.13           136.71           136.71           136.71           136.71           136.71           136.71           136.65           136.65           136.65           136.65           136.65           136.65           136.65           136.65           136.65           136.65           136.62           136.62           136.63           136.62           136.61           136.62           136.62           136.63           136.644           136.51           136.42           136.42           136.42           136.42           136.40           136.33           136.42           136.40           136.33           136.42           1	3182.88 3182.67 3182.79 3182.79 3182.85 3182.26 3182.42 3182.20 3182.42 3182.50 3182.42 3182.50 3182.42 3182.50 3182.71 3182.65 3182.65 3182.65 3182.65 3182.65 3182.70 3182.65 3182.70 3182.86 3182.70 3182.70 3182.86 3182.70 3182.80 3182.70 3182.80 3182.70 3182.80 3182.70 3182.80 3182.70 3182.80 3182.70 3182.90 3182.90 3182.90 3182.90 3182.90	141.72 145.66 166.00		



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation (ft MSL)	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
MW-11	03/23/99	131.12	3178.57	140.00	4.00	125-140
3309.69	05/25/99 02/08/01	130.91 130.11	3178.78 3179.58			
	05/10/02	135.60	3174.09			
	10/22/02	130.76	3178.93			
	05/20/03 11/24/03	131.03 130.57	3178.66 3179.12			
	05/11/04	130.61	3179.08			
	11/15/04	130.65	3179.04			
	05/17/05 11/15/05	131.56 130.70	3178.13 3178.99			
	05/08/06	130.41	3179.28			
	11/13/06	130.42	3179.27			
	05/29/07 11/14/07	130.52 130.42	3179.17 3179.27			
	05/15/08	130.46	3179.23			
	11/03/08	130.41	3179.28			
	05/19/09 11/02/09	130.40 130.40	3179.29 3179.29			
	05/05/10	130.43	3179.26			
	11/08/10	130.28	3179.41			
	05/11/11 11/08/11	130.40 130.37	3179.29 3179.32			
	05/16/12	130.23	3179.46			
	10/10/12	130.49	3179.20			
	05/16/13 10/07/13	130.27 130.12	3179.42 3179.57			
	05/01/14	130.21	3179.48			
	10/05/14	130.16	3179.53			
	05/21/15 10/19/15	130.17 130.20	3179.52 3179.49			
	05/25/16	130.17	3179.52			
	10/17/16	130.02	3179.67			
2244 56	05/10/17	130.09	3179.60			
3311.56	10/24/17 05/22/18	130.14 130.07	3181.42 3181.49			
	10/17/18	130.09	3181.47			
	06/20/19 11/20/19	130.13 130.04	3181.43 3181.52	165.71 172.30		
MW-12*	05/10/02	130.04	3188.86	172.30	4.00	157-172
3328.43	10/22/02	139.73	3188.70			
	05/20/03	139.72	3188.71			
	11/24/03 05/11/04	139.69 139.64	3188.74 3188.79			
	11/15/04	139.68	3188.75			
	05/17/05	139.58	3188.85			
	11/15/05 05/08/06	139.83 139.55	3188.60 3188.88			
	11/13/06	139.53	3188.90			
	05/29/07	139.65	3188.78			
	11/16/07 05/14/08	139.05 139.69	3189.38 3188.74			
	11/03/08	139.61	3188.82			
	05/19/09	139.59	3188.84			
	11/02/09 05/05/10	139.62 139.66	3188.81 3188.77			
	11/08/10	139.55	3188.88			
	05/11/11	139.04	3189.39			
	11/08/11 05/16/12	139.68	3188.75 3188.78			
	10/10/12	139.65 139.95	3188.48			
	05/16/13	139.67	3188.76			
	10/07/13 05/01/14	139.50 139.58	3188.93 3188.85			
	10/05/14	139.56	3188.87			
	05/21/15	139.65	3188.78			
	10/19/15	139.65	3188.78			
	05/25/16 10/17/16	139.71 139.45	3188.72 3188.98			
	05/10/17	139.61	3188.82			
3330.33	10/24/17	139.72	3190.61			
	05/22/18 10/17/18	139.59 139.68	3190.74 3190.65			
	06/20/19	139.72	3190.61	171.02		
	11/20/19	139.65	3190.68	174.57		

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Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-13*	05/10/02	144.45	3194.04	171.65	4.00	157-172
3338.49	10/22/02	144.49	3194.00			
	05/20/03	144.90	3193.59			
	11/24/03 05/11/04	144.37 144.47	3194.12 3194.02			
	11/15/04	144.56	3193.93			
	05/17/05	144.36	3194.13			
	11/15/05 05/08/06	144.60 144.29	3193.89 3194.20			
	11/13/06	144.38	3194.11			
	05/29/07	144.54 144.54	3193.95			
	11/16/07 05/14/08	144.45	3193.95 3194.04			
	11/03/08	144.36	3194.13			
	05/19/09 11/02/09	144.51 144.35	3193.98 3194.14			
	05/05/10	144.35	3194.14			
	11/08/10	144.40	3194.09			
	05/11/11 11/08/11	144.60 144.74	3193.89 3193.75			
	05/16/12	144.74	3193.79			
	10/10/12	144.82	3193.67			
	05/16/13 10/07/13	144.70 144.60	3193.79			
	05/01/14	144.50	3193.89 3193.96			
	10/05/14	144.70	3193.79			
	05/21/15 10/19/15	144.78 144.75	3193.71 3193.74			
	05/25/16	144.73	3193.62			
	10/17/16	144.54	3193.95			
	05/10/17 07/11/17	144.66	3193.83 Well Plu	 gged and Abando		
MW-14	10/07/13	134.60	3182.24	171.50	4.00	131-171
3316.84	05/01/14	134.51	3182.33			
	10/05/14 05/21/15	134.44 134.31	3182.40 3182.53			
	10/19/15	134.49	3182.35			
	05/25/16	134.42	3182.42			
	10/17/16 05/10/17	134.30 134.35	3182.54 3182.49			
3318.36	10/24/17	134.30	3184.06			
	05/22/18	134.32	3184.04			
	10/15/18 06/20/19	134.41 134.78	3183.95 3183.58	 178.74		
	11/20/19	130.48	3187.88	178.42		
RW-1	05/21/99	134.32	3184.18	175.00	5.00	130-174
3318.50	05/25/99	134.24	3184.26			
	02/08/01 05/10/02	134.15 134.00	3184.35 3184.50			
	10/22/02	134.17	3184.33			
	05/20/03	134.40	3184.10			
	11/24/03 05/11/04	134.02 134.01	3184.48 3184.49			
	11/15/04	134.06	3184.44			
	05/17/05	133.97	3184.53			
	11/15/05	134.20	3184.30			
	05/08/06 11/13/06	133.93 133.92	3184.57 3184.58			
	05/29/07	134.00	3184.50			
	11/15/07 05/14/08	133.88	3184.62			
	11/03/08	133.98 133.99	3184.52 3184.51			
	05/19/09	133.92	3184.58			
	11/02/09 05/05/10	134.00	3184.50			
	11/08/10	134.03 133.81	3184.47 3184.69			
	05/11/11	133.83	3184.67			
	11/08/11	133.88	3184.62			
	05/16/12 10/10/12	133.84 135.01	3184.66 3183.49			
	05/16/13	133.85	3184.65			
	10/07/13	133.68	3184.82			
	05/01/14 10/05/14	133.91 133.64	3184.59 3184.86			
	05/21/15	133.73	3184.77			
	10/19/15	133.73	3184.77			
	05/25/16	133.73	3184.77			
	10/17/16 05/10/17	133.80 133.67	3184.70 3184.83			
	10/25/17	133.80	3186.51			
3320.31		400.04	3186.70			
3320.31	05/22/18	133.61				
3320.31	05/22/18 10/16/18 06/20/19	133.61 133.76 133.64	3186.55 3186.67	 164.03		



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID TOC Elevation (ft MSL)	Collection Date	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft MSL)	Constructed Depth (ft below TOC)	Casing Diameter (in)	Well Screen Interval (ft bgs)
RW-2	02/08/01	135.58	3183.04	160.00	5.00	134-173
3318.62	05/10/02	135.55	3183.07			
	10/22/02	135.55	3183.07			
	05/20/03	135.58	3183.04			
	11/24/03	135.54	3183.08			
	05/11/04	135.48	3183.14			
	11/15/04	135.43	3183.19			
	05/17/05	135.46	3183.16			
	11/15/05	135.65	3182.97			
	05/08/06	135.42	3183.20			
	11/13/06	135.47	3183.15			
	05/29/07	135.54	3183.08			
	11/15/07	135.48	3183.14			
	05/14/08	135.48	3183.14			
	11/03/08	135.44	3183.18			
	05/19/09	135.44	3183.18			
	11/02/09	135.45	3183.17			
	05/05/10	135.47	3183.15			
	11/08/10	135.30	3183.32			
	05/11/11	135.55	3183.07			
	11/08/11	135.46	3183.16			
	05/16/12	135.40	3183.22			
	10/10/12	135.49	3183.13			
	05/16/13	135.33	3183.29			
	05/01/14	135.40	3183.22			
	10/05/14	135.29	3183.33			
	05/21/15	135.28	3183.34			
	10/19/15 05/25/16	135.32 135.21	3183.30 3183.41			
	10/17/16	135.21	3183.41			
	05/10/17	135.15	3183.47			
3320.42	10/25/17	135.14	3185.48			
3320.42	05/22/18	135.12	3185.30			
	10/15/18	135.21	3185.21			
	06/20/19	135.23	3185.19	156.50		
	11/19/19	135.08	3185.34	172.60		
						100.170
RW-2R	10/07/13	135.43	3183.19	173.00	6.00	133-173
3320.68	10/07/13	136.94	3183.74			
	05/01/14	137.05	3183.63			
	10/05/14	136.85	3183.83			
	05/21/15	136.85	3183.83			
	10/19/15	136.92	3183.76			
	05/25/16	136.89	3183.79			
	10/17/16	136.75	3183.93			
2220 60	05/10/17	136.77	3183.91			
3320.68	10/25/17 05/22/18	137.00 136.76	3183.68 3183.92			
	10/15/18	136.87	3183.92			
	06/20/19	136.87	3183.89	176.82		
	11/19/19	136.79	3183.89	176.82		
						400.470
RW-6R	10/07/13	135.43	3183.19	173.00	6.00	133-173

Notes:

otes: 1. TOC - Top of Casing 2. ft bgs - feet below ground surface 3. in - inches 4. NS - Not sampled

A - Indicates groundwater monitor well installed in shallow Uppermost Groundwater Bearing Unit.
 MSL - Mean Sea Level
 \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.

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# **APPENDIX A**

Site Background



### **REGULATORY BACKGROUND**

Site assessment activities were initiated in 1993 when Environmental Spill Control, Inc. (ESCI) of Hobbs, New Mexico, performed a subsurface assessment of an unlined earthen produced water overflow pit, reportedly located adjacent to the western edge of the Site. During the investigation, five boreholes were advanced to depths ranging from 15 feet below ground surface (ft bgs) to 100 ft bgs. The investigation revealed the presence of hydrocarbon-impacted soil. In 1996, Texaco Exploration and Production, Inc. (Texaco) filed a notice of intent to close the pit with the New Mexico Oil Conservation Division (NMOCD). Approximately 1,248 cubic yards (cy) of hydrocarbon-impacted soil were removed from the pit. During the closure activities, the excavation was lined with imported clay and backfilled with imported caliche. Texaco submitted a pit closure report to the NMOCD in December 1996.

In 1997, the NMOCD requested additional assessment activities to define the vertical extent of affected soil beneath the former pit. Assessment activities performed by Highlander Environmental Corporation revealed elevated chloride concentrations in the soil. In October 1997, monitoring well MW-1 was installed near the former pit. Groundwater samples collected from the monitoring well contained chloride concentrations above the New Mexico Water Quality Control Commission (NMWQCC) Human Health Standards for Groundwater (250 milligrams per liter [mg/L]). Assessment activities performed through May 1998 included the installation of 13 additional monitoring wells. In 1998, electromagnetic (EM 34) terrain conductivity surveys were completed to identify areas of elevated chloride concentrations in soil.

#### **REGULATORY FRAMEWORK**

The NMOCD of the New Mexico Energy, Minerals, and Natural Resources Department has regulatory jurisdiction over corrective actions conducted at the Site. Corrective actions follow guidance given by the NMOCD in *Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993)*. These guidelines require remediation of four constituents of concern (COCs) in groundwater to the human health standards of the NMWQCC set forth in New Mexico Administrative Code 20.6.2.3103B as follows:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride	250
Total Dissolved Solids (TDS)	1,000
Fluoride	1.6
Sulfate (SO4)	600

Note: mg/L = milligrams per liter

The original analyte list included carbonate alkalinity, bicarbonate alkalinity, total alkalinity, nitrate-N, calcium, magnesium, potassium, sodium, chloride, TDS, fluoride, and sulfate. In a letter to the NMOCD, dated December 15, 2014, GHD, on behalf of CEMC, requested a reduction in the list of analytical parameters and a reduction in the wells included in the monitoring program. In a subsequent email, dated May 19, 2015, the NMOCD approved the reduction of the list of analyses to chloride, TDS, fluoride, and sulfate only. No wells were eliminated from the monitoring program.

## **GROUNDWATER SAMPLING AND ANALYSIS**

Groundwater at the Site is monitored semiannually via a network of 18 monitor wells and 2 recovery wells as outlined in the *Work Plan for Plume Delineation and Modification to Proposed Groundwater Monitoring Schedule* submitted on November 18, 1998 and approved by the NMOCD on February 2, 1999. Five down gradient monitoring wells (MW-8, MW-9, MW-10, MW-11, and MW-14) were sampled during the first semi-annual monitoring event conducted on May 22, 2018. All 20 monitoring and recovery wells were sampled during the second semi-annual monitoring event performed on October 15 through 19, 2018. Semi-annual groundwater monitoring activities and annual reporting to the NMOCD for this Site have been performed by GHD (formerly Conestoga-Rovers & Associates, Inc. [CRA]) since 2005 and continued until 2018.

In June 1998, Texaco prepared a groundwater corrective action plan to mitigate chloride concentrations and to provide plume containment by extracting groundwater from the affected groundwater-bearing unit (GWBU). Between 1999 and 2013, assessment activities included the installation of wells MW-6R, MW-11 through MW-14, RW-1, RW-2, and RW-2R. Monitoring well MW-6 was plugged and abandoned in September 2013 due to a damaged well casing. Due to on-Site wells (MW-1, MW-2, MW-2A, MW-3, and MW-6) fully delineating the northern boundary of the chloride plume, monitoring well MW-13, located approximately 1,000 feet up-gradient and off-Site, was plugged and abandoned on July 11, 2017.

Historically, chloride concentrations show decreasing trends in upgradient monitor wells MW-1, MW-2, and MW-5, as shown on concentration versus date graphs in Exhibit 1A, available in the *2018 Annual Groundwater Monitoring Report*. Increasing trends have been observed since 1997 in downgradient monitor wells MW-7, MW-9, MW-9A, and MW-10, as indicated in Exhibit 1B (available in the *2018 Annual Groundwater Monitoring Report*), although more recent data indicate that these concentrations are stabilizing with some variability, with the exception of monitor well MW-7. Similar trends are apparent in TDS and sulfate concentrations. There are no strong trends in the observed historical concentrations of fluoride. Based on current and historical concentration data, the groundwater plume at the Site is fully delineated.

#### Soil Boring and Monitor Well Installation

The New Mexico Office of the State Engineer (NMOSE) governs water usage in the State of New Mexico. Applications for Permits to Appropriate Groundwater were submitted by Texaco in October 1999 and were approved with specific conditions in June 2008. A total of 65 acre-feet (ac-ft) per annum from the two on-Site recovery wells (RW-1 and RW-2) was granted by the NMOSE for environmental remediation purposes. Usage of groundwater was granted by the NMOSE under well permits CP-884 (RW-2; 32.5 ac-ft per annum) and CP-885 (RW-1; 32.5 ac-ft per annum).

Due to apparent damage at RW-2 that would prevent the installation of a pump, RW-2R was installed under well permit CP-884-POD2 to replace RW-2 in 2013. An application to change the designation of RW-2 from a recovery well to a monitoring well was submitted on December 16, 2016. This was done to allow the well to remain in the monitoring well network instead of being plugged and abandoned. The change was conditionally approved, pending further assessment of the well integrity, by the NMOSE in a phone conversation on January 9, 2017. On February 10, 2017, GHD further assessed RW-2 and found the annular seal to be compliant with New Mexico Administrative Code (NMAC) 19.27.4.30 Regulations and the well casing and well pad to be in good condition. These findings were documented in a letter sent

to the NMOSE on February 16, 2017. Based on GHD's reported understanding of the January 9, 2017, conversation, RW-2 is now designated as a monitoring well.

To date, neither RW-1 nor RW-2R have been equipped for groundwater recovery. Notifications to NMOSE will be submitted if these wells become equipped in the future. Until each well is permanently equipped, an Extension of Time (EOT) request will be sent to the NMOSE. An EOT was received by NMOSE on April 23, 2018. The request was approved in written correspondence and extended through April 30, 2020.

#### **GEOLOGY/HYDROGEOLOGY ASSESSMENT**

#### **Site Setting**

The Site is located on Lea County Road J7, approximately five and a half miles northwest of Jal, New Mexico, in Section 24, Township 24 South, Range 36 East, Lea County, New Mexico. The latitude and longitude coordinates of the Site are 32° 12' 7.13" N and 103° 13' 4.36" W.

Land in the vicinity of the Site is utilized primarily for livestock ranching and oil and gas production, and production and has areas of undeveloped rangeland vegetated with indigenous grass. An injection well facility, operated by Resaca Resources, LLC (Resaca), is located adjacent to the Site. No active Chevron U.S.A. Inc. (Chevron) operations are present in the area.

#### **Regional Geologic Conditions**

The region is characterized by a surface cover of up to 200 feet of unconsolidated to semi-lithified sediments of the Ogallala Formation consisting of sand, clay, and fluvial gravel. The upper portion of the Ogallala Formation has been heavily cemented by caliche. The Tertiary-aged sediments are underlain by the Triassic-aged Dockum Group shale ("red beds").

#### **Site Geology**

The Site boring logs used to interpret the Site geology included the October 2013 GHD field work and logs from previous groundwater assessments. The locations of the soil borings and monitoring wells are shown on Figure 2. The subsurface stratigraphy typically included the following:

- A thick sand (0 to 163 feet) layer of unconsolidated fine sand containing trace caliche nodules. Sand grains gradually increasing to fine to medium grained at 140 feet,
- A fine sand layer typically ranging from 3 feet to 30 feet,
- A sandy clay layer typically ranging from 2 feet to 11 feet directly above the upper Dockum "redbeds",
- Red and gray weathered shale and mudstone "redbeds" of the Triassic Dockum Group that form the underlying confining layer.

#### **Hydrogeologic Conditions**

Regional groundwater flow in the Ogallala Aquifer is controlled by the slope of the land surface to the south with localized eastward flow into the valley of Monument Draw. The aquifer typically behaves as an unconfined aquifer. Monument Draw is an intermittent stream that contains water only after heavy rains (Texas Water Development Board [TWDB], 2008)1. The Dockum Group Shale is considered the underlying aquitard for the Ogallala Aquifer.

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Appendix A\_Final\_02.10.20

#### Site Hydrogeology

Groundwater beneath the Site is found within the lower Ogallala deposits. The depth to groundwater at the Site ranges from approximately 140 to 190 ft bgs, based on the groundwater monitoring event conducted in June/November 2019. The saturated thickness of the unconfined aquifer ranges from approximately 15 to 30 ft. The saturated thickness varies in conjunction with the elevation of the top of the Dockum shale. The thickest saturated portion of the Ogallala is to the southwest where the bedrock surface of the Dockum is the lowest. A dry borehole was encountered at BH-C, east of the property boundary of the Site.

At the Site, the local groundwater flow direction trends to the southeast with an average horizontal hydraulic gradient of approximately 0.0169 feet per foot (ft/ft), as presented in the attached figures. The southeast groundwater flow direction observed at the Site is consistent with the regional groundwater flow direction to the southeast in the Ogallala Aquifer. The deflection to the east at the eastern property boundary is likely related to the break of the slope of the land towards the Monument Draw to the east.

# **APPENDIX B**

Field Methodology and Documentation



**FIELD METHODOLOGY** 

Prior to sampling, static fluid water levels were measured with an electronic interface probe to the nearest hundredth of a foot and recorded. In addition, a conductivity probe was used to record the conductivity levels every 2 feet in each well to evaluate the vertical distribution of chloride-affected groundwater. After recording conductivity levels, discrete samples were collected at the interval of highest conductivity using a Hydrasleeve<sup>™</sup>. Geochemical water quality parameters (pH, temperature, and conductivity) were recorded at the sampling depth. All non-disposable groundwater sampling equipment was thoroughly decontaminated between measurements to prevent possible cross-contamination between wells. Laboratory-supplied sample containers were filled directly from the Hydrasleeve<sup>™</sup>.

Groundwater samples were placed on ice in insulated coolers and chilled to a temperature of approximately 4°C (40°F). The coolers were sealed for shipment with proper chain-of-custody documentation and shipped to Eurofins TestAmerica, located in Houston, Texas, for analysis of chloride and sulfate by Environmental Protection Agency (EPA) Method 300.0 and total dissolved solids (TDS) by SM 2540C.

		ion Checklist and Report	ing Form	
Site Name/ Location	Cuper Jal Chevron Fuller	Project Number	30047270.0007	
Well Identification	<u>nw -1 I</u>	nspection Date cull3/19	Inspector_U	3
Measured Well Depth	171,17 M	easuring Point TOC	Depth to water	134.56
		VISUAL INSPECTION		
<ol> <li>Are hinges, latches</li> <li>Is concrete pad in s</li> <li>Is well name or oth</li> <li>Is well cap in place</li> <li>Is measuring point</li> <li>Does well opening</li> </ol> Does water-level indica (Enter depth to water in Does water-level indica (Total depth may be for	s, or locks functional satisfactory condition her identification mail and in good condition marked or readily re- /stickup show signs / PH ator/measuring device her space provided above.) ator/measuring device	e travel to bottom of well? mpletion diagrams, or previous well	ell?	Y Y Y Y Y N N/A Y N N/A Y N N/A
Does bailer/pump trave	l freely to and from	bottom of well?	Y	N N/A
		evidence of damage (gouges, nage from foreign objects in	Y	N (N/A)
Does the bailer contain	excessive amounts o	f silt or rust?	Y	N N/A
Does water appear disco	olored or have an un	usual odor or appearance?	Y	N N/A
Is the lock on the well c	over/cap clean and f	ully functional?	Y	N N/A
NOTES AND OBSERVATIONS:				
Cupy Jal				
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Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B0047270.0007</u>				
Well Identification <u>mue-</u> Inspection Date <u>cue III liq</u> Inspector <u>LR</u>	_	_	_	
Measured Well Depth 1 62.39 Measuring Point TCC Depth to water 19	ч.	27	_	
VISUAL INSPECTION				
1) Is protective sleeve/cover in place and secure?	Ŷ	N	N/A	
2) Are hinges, latches, or locks functional and in good condition?	Y	Ν	N/A	
	¥	N	N/A	
4) Is well name or other identification marked clearly on or near the well?	Y	N	N/A	
5) Is well cap in place and in good condition?	Ŷ	Ν	N/A	
<ul> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> </ul>	Y	N	N/A	
7) Does well opening/stickup show signs of damage or deterioration?	Y	N	N/A	
PHYSICAL INSPECTION				
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	r	N	N/A	
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ċ.	N	N/A	
Does bailer/pump travel freely to and from bottom of well? Y	N	N/A		
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N	(	N/A		
	C	-		
Does the bailer contain excessive amounts of silt or rust? Y	N	N/A		
Does water appear discolored or have an unusual odor or appearance? Y	N	N/A	56	
Is the lock on the well cover/cap clean and fully functional?	N	N/A		
NOTES AND OBSERVATIONS:		_	_	
	_			

G:\APROJECT\Chevron\B0047270.0002 - Fuller\4 Project\HASP\2017\2017 2Q Groundwater Sampling\Forms\Well Inspection Forms.doc

Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B0047270.0</u>	007			
She Name, Estation <u>Enterior Funct</u> Floject Number <u>B0047270.0</u>	007			
Well Identification MW-2H Inspection Date 04/13/19 Inspect	or U	3	_	_
Measured Well Depth 142, 47 Measuring Point TU Depth to	water_	174	43	_
VISUAL INSPECTION				
		10		
1) Is protective sleeve/cover in place and secure?	•••••	Y	Ν	N/A
2) Are hinges, latches, or locks functional and in good condition?		Y	Ν	N/A
<ul> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well norme on other identification</li> </ul>	•••••	Y/	N	N/A
<ul><li>4) Is well name or other identification marked clearly on or near the well?</li><li>5) Is well cap in place and in good condition?</li></ul>		Y Y Y	N	N/A
$\varphi$	•••••	(Y)	N	N/A
<ul><li>6) Is measuring point marked or readily recognized?</li><li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>	•••••		N	N/A
7) Does wen opening/stickup show signs of damage of deterioration?	•••••	Y	N	N/A
PHYSICAL INSPECTION				
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)		Y	N	N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)		Y/	N	N/A
Does bailer/pump travel freely to and from bottom of well?	Y	N	N/.	A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in			$\sim$	
the well?	Y 1	v (1	V/A	
Does the bailer contain excessive amounts of silt or rust?	Y	N	N/1	4
Does water appear discolored or have an unusual odor or appearance?	Y	N	N//	4
Is the lock on the well cover/cap clean and fully functional?	Ŷ	N	N/A	4
NOTES AND				
OBSERVATIONS:				
				_

Well Inspection Checklist and Report	ing Form
Site Name/ Location Cceper Jey <u>Cceper Jey</u> <u>Chevron Fuller</u> Project Number <u>B</u>	
Well Identification <u>Mw-3</u> Inspection Date <u>OW113119</u>	Inspector <u>B</u>
Measured Well Depth 171.93 Measuring Point TOC	Depth to water 132,24
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           Y         N         N/A
PHYSICAL INSPECTION	100
Does water-level indicator/measuring device travel freely down well case (Enter depth to water in the space provided above.)	ing? Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

Site Name/ Location	Chevron Fuller	Project Number B	0047270 0007		
Well Identification W	IW . H	Inspection Date OLE 113/14	_ Inspector _	.ß	_
Measured Well Depth	141.81 N	Aeasuring Point TOL	Depth to water	135.2	1
		VISUAL INSPECTION			
1) Is protective sleeve	e/cover in place and	d secure?		Y N	N/A
<ol> <li>Are hinges, latches</li> <li>Is concrete pad in s</li> </ol>	s, or locks function	al and in good condition?		Y' N	
4) Is well name or oth	salistaciory condini ver identification m	on?arked clearly on or near the we	.110	V N	•
5) Is well cap in place	e and in good condi	ition?		Y N Y N	) N/A N/A
6) Is measuring point	marked or readily	recognized?	••••••	Y N	N/A
7) Does well opening	/stickup show sign	s of damage or deterioration?	••••••	Y N	
	H	PHYSICAL INSPECTION		y=	
Does water-level indica (Enter depth to water in	ator/measuring dev the space provided above	ice travel freely down well casi	ng?	Y N	N/A
(Total depth may be fo	ntor/measuring devi und on drilling logs, well ter total depth in the space	ice travel to bottom of well? completion diagrams, or previous well provided above.)		Y N	N/A
Does bailer/pump trave	l freely to and from	bottom of well?	Y	N N	/A
cuts, scrapes) su	ll, does bailer show ggestive of well da	v evidence of damage (gouges, mage from foreign objects in			
the well?			Y	N N/A	>
Does the bailer contain	excessive amounts	of silt or rust?	Y	N N	/A)
Does water appear disco	olored or have an u	nusual odor or appearance?	Y	N N	/A)
Is the lock on the well c	over/cap clean and	fully functional?	Y	) n n/	'A
NOTES AND					
OBSERVATIONS:					_

Well Inspection Checklist and Reporting For	
Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B004727</u>	70.0007
Well Identification MW - 4A Inspection Date 02/13/19 Insp	pector_LB
Measured Well Depth 145,55 Measuring Point ToL Depth	n to water 134,98
VISUAL INSPECTION	
1) Is protective sleeve/cover in place and secure?	
2) Are hinges, latches, or locks functional and in good condition?	Y N N/A
3) Is concrete pad in satisfactory condition?	
<ul><li>4) Is well name or other identification marked clearly on or near the well?</li><li>5) Is well cap in place and in good condition?</li></ul>	X N N/A
<ul><li>5) Is well cap in place and in good condition?</li><li>6) Is measuring point marked or readily recognized?</li></ul>	
<ul><li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>	YNN/A YNN/A
· · · · · · · · · · · · · · · · · · ·	Y (N) N/A
PHYSICAL INSPECTION	100
Does water-level indicator/measuring device travel freely down well casing?	Y N N/A
(Enter depth to water in the space provided above.)	Y N N/A
Does water level indicator/many ring device travel to better of 110	/
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well	Y N N/A
inspection forms. Enter total depth in the space provided above.)	
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges,	
cuts, scrapes) suggestive of well damage from foreign objects in	
the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND	
OBSERVATIONS:	

Site Name/ Location       Chevron Fuller       Project Number       B0047270.0007         Well Identification       Mw - 5       Inspection Date       Inspector       Inspector         Measured Well Depth       Ith <ith< td="">       Measuring Point       Depth to water       Ith       Ith         VISUAL INSPECTION       VISUAL INSPECTION       Y       N       N/A         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A</ith<>	Site Name/ Location       Chevron Fuller       Project Number       B0047270.0007         Well Identification       Nw - 5       Inspection Date       us 118119       Inspector       UR         Measured Well Depth       143,17       Measuring Point       Depth to water       118.05         VISUAL INSPECTION         1)       Is protective sleeve/cover in place and secure?       Y       N       N/A         2)       Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3)       Is concrete pad in satisfactory condition?       Y       N       N/A         4)       Is well cap in place and in good condition?       Y       N       N/A         5)       Is well opping/stickup show signs of damage or deterioration?       Y       N       N/A         7)       Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         9       Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         9       Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         9       Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A	Well Inspection Checklist and Reporting Form	
Measured Well Depth       143.12       Measuring Point       Ture       Depth to water       1312.603         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well cap in place and in good condition?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A <th>Measured Well Depth       143.12       Measuring Point       Ture       Depth to water       1312.603         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well cap in place and in good condition?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       V       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y</th> <th>Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B0047270.000</u></th> <th><u>97</u></th>	Measured Well Depth       143.12       Measuring Point       Ture       Depth to water       1312.603         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well cap in place and in good condition?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       V       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y	Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B0047270.000</u>	<u>97</u>
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Crotal depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N	VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Y       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3) Is concrete pad in satisfactory condition?       Y       N       N/A         4) Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5) Is well cap in place and in good condition?       Y       N       N/A         6) Is measuring point marked or readily recognized?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION       Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel freely down well casing? (Crotal depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the	Well Identification Mw - 5 Inspection Date willing Inspector	LB
1)       Is protective sleeve/cover in place and secure?       Y       N       N/A         2)       Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3)       Is concrete pad in satisfactory condition?       Y       N       N/A         3)       Is well name or other identification marked clearly on or near the well?       Y       N       N/A         4)       Is well cap in place and in good condition?       Y       N       N/A         5)       Is well cap in place and in good condition?       Y       N       N/A         6)       Is measuring point marked or readily recognized?       Y       N       N/A         7)       Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7)       Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         9)       Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         10       Oes water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         11       Inspection forms. Enter total depth in the space provided above.)       N       N       N/A         12       Does bailer/pump travel fr	1)       Is protective sleeve/cover in place and secure?       Y       N       N/A         2)       Are hinges, latches, or locks functional and in good condition?       Y       N       N/A         3)       Is concrete pad in satisfactory condition?       Y       N       N/A         3)       Is concrete pad in satisfactory condition?       Y       N       N/A         4)       Is well name or other identification marked clearly on or near the well?       Y       N       N/A         5)       Is well cap in place and in good condition?       Y       N       N/A         6)       Is measuring point marked or readily recognized?       Y       N       N/A         7)       Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7)       Does water-level indicator/measuring device travel freely down well casing?       Y       N       N/A         9)       Does water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         10       Oes water-level indicator/measuring device travel to bottom of well?       Y       N       N/A         11       Inspection forms. Enter total depth in the space provided above.)       N       N       N/A         12       Does bailer/pump travel fre	Measured Well Depth $173.7\nu$ Measuring Point $\tau \omega$ Depth to w	rater 136.65
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does welter-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does welter-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	VISUAL INSPECTION	
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does welter-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does welter-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	1) Is protective sleeve/cover in place and secure?	X N N/A
<ul> <li>4) Is well name or other identification marked clearly on or near the well?</li></ul>	<ul> <li>4) Is well name or other identification marked clearly on or near the well?</li></ul>	2) Are hinges, latches, or locks functional and in good condition?	Y N N/A
<ul> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) PHYSICAL INSPECTION</li> <li>7) Does water-level indicator/measuring device travel to bottom of well?</li> <li>7) Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) Y N N/A</li> <li>7) Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>7) Y N N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) Y N N/A</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	<ul> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) PHYSICAL INSPECTION</li> <li>7) Does water-level indicator/measuring device travel to bottom of well?</li> <li>7) Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) Y N N/A</li> <li>7) Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>7) Y N N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) Y N N/A</li> <li>7) N/A</li> <li>7) N/A</li> </ul>		
<ul> <li>6) Is measuring point marked or readily recognized?</li></ul>	<ul> <li>6) Is measuring point marked or readily recognized?</li></ul>	4) Is well name or other identification marked clearly on or near the well?	<u>Y</u> (N) N/A
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>	<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>	5) Is well cap in place and in good condition?	Y N N/A
PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       M       M/A       M/A	PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       M       M/A       M/A		
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)YNN/ADoes water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)YNN/ADoes bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?YNN/ADoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/ANOTES ANDNN/AN/A	Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)YNN/ADoes water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)YNN/ADoes bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?YNN/ADoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/ANOTES ANDNN/AN/A	7) Does well opening/stickup show signs of damage or deterioration?	Y N N/A
(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         NOTES AND       Y       N       N/A	(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         NOTES AND       Y       N       N/A	PHYSICAL INSPECTION	
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) Does bailer/pump travel freely to and from bottom of well? Y N N/A Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A Does the bailer contain excessive amounts of silt or rust? Y N N/A Does water appear discolored or have an unusual odor or appearance? Y N N/A Is the lock on the well cover/cap clean and fully functional? Y N N/A NOTES AND	(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) Does bailer/pump travel freely to and from bottom of well? Y N N/A Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A Does the bailer contain excessive amounts of silt or rust? Y N N/A Does water appear discolored or have an unusual odor or appearance? Y N N/A Is the lock on the well cover/cap clean and fully functional? Y N N/A NOTES AND		Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A Does the bailer contain excessive amounts of silt or rust? Y N N/A Does water appear discolored or have an unusual odor or appearance? Y N N/A Is the lock on the well cover/cap clean and fully functional? Y N N/A NOTES AND	Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A Does the bailer contain excessive amounts of silt or rust? Y N N/A Does water appear discolored or have an unusual odor or appearance? Y N N/A Is the lock on the well cover/cap clean and fully functional? Y N N/A NOTES AND	(Total depth may be found on drilling logs, well completion diagrams, or previous well	Y N N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?YNDoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/AIs the lock on the well cover/cap clean and fully functional?YNN/ANOTES ANDXXXX	cuts, scrapes) suggestive of well damage from foreign objects in the well?YNDoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/AIs the lock on the well cover/cap clean and fully functional?YNN/ANOTES ANDVNN/A	Does bailer/pump travel freely to and from bottom of well?	Y N N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?YNDoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/AIs the lock on the well cover/cap clean and fully functional?YNN/ANOTES ANDXXXX	cuts, scrapes) suggestive of well damage from foreign objects in the well?YNDoes the bailer contain excessive amounts of silt or rust?YNN/ADoes water appear discolored or have an unusual odor or appearance?YNN/AIs the lock on the well cover/cap clean and fully functional?YNN/ANOTES ANDVNN/A	Upon removal from well, does bailer show evidence of damage (gouges,	
Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Y       N       N/A	Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Y       N       N/A		$\bigcirc$
Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Y       N       N/A	Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       Y       N       N/A	the well?	Y N N/A
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A NOTES AND	Is the lock on the well cover/cap clean and fully functional? (Y) N N/A NOTES AND	Does the bailer contain excessive amounts of silt or rust?	Y N N/A
NOTES AND	NOTES AND	Does water appear discolored or have an unusual odor or appearance?	Y N N/A
		Is the lock on the well cover/cap clean and fully functional?	Y N N/A
OBSERVATIONS:	OBSERVATIONS:	NOTES AND	
		OBSERVATIONS:	

	Well Inspec	ction Checklist and Reporti	ing Form			
Site Name/ Location	Chevron Fuller	Project Number <u>B</u>	0047270.0007			
Well Identification	u-JA	Inspection Date um 114	Inspector L	B	_	_
Measured Well Depth	144.05	Measuring Point <u>Tu</u>	Depth to water	176	.711	_
		VISUAL INSPECTION				
<ol> <li>Are hinges, latches,</li> <li>Is concrete pad in st</li> <li>Is well name or other</li> <li>Is well cap in place</li> <li>Is measuring point in</li> </ol>	or locks function atisfactory condit er identification n and in good cond marked or readily stickup show sign	d secure? aal and in good condition? ion? narked clearly on or near the we lition? recognized? s of damage or deterioration? PHYSICAL INSPECTION	911?	Y Y Y Y Y Y Y	NNZZZZ	N/A N/A N/A N/A N/A N/A
Does water-level indicat (Enter depth to water in	tor/measuring dev the space provided above	vice travel freely down well casi	ing?	Y	N	N/A
(Total depth may be fou	tor/measuring dev and on drilling logs, well er total depth in the space	vice travel to bottom of well? completion diagrams, or previous well e provided above.)		V	N	N/A
Does bailer/pump travel	freely to and from	m bottom of well?	Y	N	N/A	4
		w evidence of damage (gouges, amage from foreign objects in	Y	n (	N/A	-
Does the bailer contain e	excessive amount	s of silt or rust?	Y	N	N/A	•
Does water appear disco	lored or have an	unusual odor or appearance?	Y	Ν	N/A	¥
Is the lock on the well co	over/cap clean and	d fully functional?	Y	) N	N/A	L .
NOTES AND OBSERVATIONS:					_	_
					-	

Site Name/ Location	Chevron Fuller	Project Number	B0047270.0007	
Well Identification Y	NW-7	Inspection Date 0411311	Inspector	ß
Measured Well Depth	162.60	Measuring Point TUL	Depth to water	135.48
		VISUAL INSPECTION		
<ol> <li>Are hinges, latche</li> <li>Is concrete pad in</li> <li>Is well name or ot</li> <li>Is well cap in plac</li> <li>Is measuring point</li> </ol>	s, or locks function satisfactory condi- her identification e and in good condi- t marked or readil	nd secure? nal and in good condition? tion? marked clearly on or near the w dition? y recognized? ns of damage or deterioration?	ell?	Y N N/A Y N N/A
		PHYSICAL INSPECTION		
Does water-level indic (Enter depth to water	ator/measuring de	vice travel freely down well cas	sing?	Y N N/A
(Total depth may be fe	ator/measuring de bund on drilling logs, we tter total depth in the spa	vice travel to bottom of well? Il completion diagrams, or previous well cc provided above.)		Y N N/A
Does bailer/pump trave	el freely to and fro	om bottom of well?	Y	N N/A
Upon removal from we cuts, scrapes) su the well?	ell, does bailer sho aggestive of well of	w evidence of damage (gouges, lamage from foreign objects in		N N/A
Does the bailer contain	excessive amoun	ts of silt or rust?	Y	N N/A
Does water appear disc	olored or have an	unusual odor or appearance?	Y	N N/A
Is the lock on the well of	cover/cap clean an	d fully functional?	Ŷ	N N/A
NOTES AND OBSERVATIONS: <u>v</u>	mething th	well when optimit	j conduct	
				-

Well Inspection Checklist and Reporting F	
Site Name/ Location Chevron Fuller Project Number B0047	270.0007
Well Identification mw - 8 Inspection Date Toc In	1.8
inspection Date Insp	nspector LB
Measured Well Depth 146.85 Measuring Point Toc Dep	pth to water 133.87
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           Y         N         N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS: doutruction @ 1361, 0101 Hudrauterie aut preur to call fing.	war pulled

Well Inspection Checklist and Reporting Form	
Site Name/ Location Cceper Jal <u>Chevron Fuller</u> Project Number <u>-B0047270.0007</u>	
Well Identification Mw -9 Inspection Date cellalla Inspector LB	_
Measured Well Depth 161, 46 Measuring Point TOC Depth to water 131,95	
VISUAL INSPECTION	
	N/.
	N// N//
	N/2
	N/2
	N/A
	N//
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? Y N I (Enter depth to water in the space provided above.)	N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	V/A
Does bailer/pump travel freely to and from bottom of well? Y N N/A	>
Upon removal from well, does bailer show evidence of damage (gouges,	
cuts, scrapes) suggestive of well damage from foreign objects in	
the well? Y N N/A	
Does the bailer contain excessive amounts of silt or rust? Y N N/A	>
Does water appear discolored or have an unusual odor or appearance? Y N N/A	>
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A	
NOTES AND	
OBSERVATIONS:	_
	_
	_
	-

Well Inspection Checklist and Repo	rting Form
Site Name/ Location Chevron Fuller Project Number	-B0047270 0007
Well Identification Mw-GA Inspection Date OU 112 1	
Measured Well Depth 141,72 Measuring Point 10C	Depth to water 131.44
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           Well?         Y         N         N/A           Y         N         N/A
	?Y (N) N/A
PHYSICAL INSPECTION Does water-level indicator/measuring device travel freely down well c	asing? Y N N/A
(Enter depth to water in the space provided above.) Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouge cuts, scrapes) suggestive of well damage from foreign objects in the well?	es, n Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

Wall Ingraction Checklist and Departing Form	
Site Name/ Location Chevron Fuller Project Number <u>B0047270.0007</u>	
Well Identification Mw-10 Inspection Date Old 112/19 Inspector LR	-
Measured Well Depth 160.12 Measuring Point TOL Depth to water 136, 28	_
VISUAL INSPECTION	
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> </ul>	N/A N/A N/A N/A N/A N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? Y N N (Enter depth to water in the space provided above.)	V/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	J/A
Does bailer/pump travel freely to and from bottom of well? Y N N/A	)
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N N/A	
Does the bailer contain excessive amounts of silt or rust? Y N N/A	)
Does water appear discolored or have an unusual odor or appearance? Y N N/A	)
Is the lock on the well cover/cap clean and fully functional? (Y) N N/A	
NOTES AND OBSERVATIONS: Junething in well can't vet hydravleeve.	-

Well Insp	ection Checklist and Report	ing Form
Site Name/ Location -Chevron Fuller-	Project Number	30047270.0007
Well Identification mw - 11	Inspection Date Out 113 /19	Inspector LR
Measured Well Depth 105171	Measuring Point TOC	Depth to water 136113
	VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place a</li> <li>Are hinges, latches, or locks function</li> <li>Is concrete pad in satisfactory condition</li> <li>Is well name or other identification</li> <li>Is well cap in place and in good com</li> <li>Is measuring point marked or readily</li> <li>Does well opening/stickup show signal</li> </ol>	nal and in good condition? ition? marked clearly on or near the we dition? y recognized?	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	PHYSICAL INSPECTION	
Does water-level indicator/measuring de (Enter depth to water in the space provided abo	vice travel freely down well casi	ing? Y N N/A
Does water-level indicator/measuring de (Total depth may be found on drilling logs, we inspection forms. Enter total depth in the space	Il completion diagrams or previous well	Y N N/A
Does bailer/pump travel freely to and fro	m bottom of well?	Y N N/A
Upon removal from well, does bailer sho cuts, scrapes) suggestive of well o the well?	w evidence of damage (gouges, lamage from foreign objects in	Y N N/A
Does the bailer contain excessive amount	s of silt or rust?	Y N N/A
Does water appear discolored or have an	unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean an	d fully functional?	Y N N/A
NOTES AND OBSERVATIONS:		

Site Name/ Location <u>Chevron Fuller</u> Project Number <u>B0047270</u> .	0007
Well Identification MW -12 Inspection Date Le [13 / 14] Inspec	ctor_LB
Measured Well Depth 171.02 Measuring Point TOC Depth to	o water 139, 72
VISUAL INSPECTION	
1) Is protective sleeve/cover in place and secure?	
2) Are hinges, latches, or locks functional and in good condition?	
<ul><li>3) Is concrete pad in satisfactory condition?</li></ul>	
<ul><li>5) Is well cap in place and in good condition?</li></ul>	<u>Y</u> <u>N</u> N/A <u>Y</u> N N/A
<ul><li>6) Is measuring point marked or readily recognized?</li></ul>	
7) Does well opening/stickup show signs of damage or deterioration?	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges,	
cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND	
OBSERVATIONS:	

Well Identification MW - CU       Inspection Date CU 113114       Inspector         Measured Well Depth 173, TU       Measuring Point TUC       Depth to w         VISUAL INSPECTION       1) Is protective sleeve/cover in place and secure?       20         2) Are hinges, latches, or locks functional and in good condition?       31       15 concrete pad in satisfactory condition?       32         3) Is concrete pad in satisfactory condition?       33       15 well cap in place and in good condition?       34         4) Is well aname or other identification marked clearly on or near the well?       35       15 well cap in place and in good condition?       36         5) Is well cap in place and in good condition?       36       15 well cap in place and in good condition?       36         6) Is measuring point marked or readily recognized?       37       10       10       10       10         7) Does well opening/stickup show signs of damage or deterioration?       36       10       11       11         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel to bottom of well?         (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       10       10       10       10       10       10       10       10       10       10		
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?	LB	_
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	ater 134.39	3
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li></ul>		
<ul> <li>Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> </ul>	Y N N Y N Y N Y N Y N	N/A N/A N/A N/A N/A
<ul> <li>(Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> </ul>	Ú	
<ul> <li>(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> </ul>	Y N	N/A
<ul> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> </ul>	Y N	N/A
cuts, scrapes) suggestive of well damage from foreign objects in         the well?         Does the bailer contain excessive amounts of silt or rust?         Does water appear discolored or have an unusual odor or appearance?         Is the lock on the well cover/cap clean and fully functional?	Y N N	/A
Does water appear discolored or have an unusual odor or appearance? Is the lock on the well cover/cap clean and fully functional?	Y N N/A	
Is the lock on the well cover/cap clean and fully functional?	Y N N	
	Y N N	/A
NOTES AND	Y N N/	/A
OBSERVATIONS:		

	Well Inspec	ction Checklist and Repor	ting Form			
Site Name/ Location	Leeper Jal	Project Number				
Well Identification	LW-1	Inspection Date us 113/19	Inspector	R		_
Measured Well Depth	164.03	Measuring Point Toc	_ Depth to water	133.	لوب	_
		VISUAL INSPECTION				
<ol> <li>Are hinges, latches</li> <li>Is concrete pad in</li> <li>Is well name or ott</li> <li>Is well cap in place</li> <li>Is measuring point</li> </ol>	s, or locks function satisfactory condition her identification me and in good cond marked or readily	d secure? al and in good condition? ion? narked clearly on or near the w ition? recognized? s of damage or deterioration?.	vell?	Y Y Y Y Y Y Y	N N N N N N N	N/A N/A N/A N/A N/A N/A
	]	PHYSICAL INSPECTION		20		
Does water-level indica (Enter depth to water i	ator/measuring dev n the space provided abov	ice travel freely down well cas	sing?	Y	N	N/A
(Total depth may be for	ator/measuring devound on drilling logs, well ter total depth in the space	ice travel to bottom of well? completion diagrams, or previous well provided above.)		Y	N	N/A
Does bailer/pump trave	el freely to and from	n bottom of well?	Y	N (	N/A	$\mathbf{D}$
		v evidence of damage (gouges amage from foreign objects in	-	N N	/A)	
Does the bailer contain	excessive amounts	s of silt or rust?	Y	N	N/A	5
Does water appear disc	olored or have an u	nusual odor or appearance?	Y	N	N/A	
Is the lock on the well c	over/cap clean and	I fully functional?	Y	) N	N/A	
NOTES AND OBSERVATIONS:						
					-	
					-	

	Well Inspec	tion Checklist and Reporti	ng Form
Site Name/ Location	Chevron Fuller	Project NumberB	
Well Identification	W-2	Inspection Date us 112 119	Inspector Lß
Measured Well Depth	156,50 N	Aeasuring Point TUC	Depth to water 135,23
		VISUAL INSPECTION	
<ol> <li>Are hinges, latches</li> <li>Is concrete pad in s</li> <li>Is well name or oth</li> <li>Is well cap in place</li> <li>Is measuring point</li> </ol>	e, or locks function satisfactory condition are identification more and in good cond marked or readily	I secure? al and in good condition? on? arked clearly on or near the wel ition? recognized? s of damage or deterioration?	Y         N         N/A           Y         N         N/A           Y         N         N/A           II?         Y         N         N/A           Y         N         N/A
	1	PHYSICAL INSPECTION	
	tor/measuring dev the space provided above	ice travel freely down well casis	ng? Y N N/A
(Total depth may be for		ice travel to bottom of well? completion diagrams, or previous well provided above.)	Y N N/A
Does bailer/pump trave	l freely to and from	n bottom of well?	Y N N/A
		v evidence of damage (gouges, mage from foreign objects in	Y N N/A
Does the bailer contain	excessive amounts	of silt or rust?	Y N N/A
Does water appear disco	olored or have an u	nusual odor or appearance?	Y N N/A
Is the lock on the well c	over/cap clean and	fully functional?	Y N N/A
NOTES AND OBSERVATIONS:			

Site Name/ Location       Chevron Fuller       Project Number       B0047270.00         Well Identification       Rw - 2R       Inspection Date       Inspector         Measured Well Depth       Image: Site Name       Depth       Image: Site Name         Measured Well Depth       Image: Site Name       Depth       Depth       Image: Site Name         VISUAL INSPECTION       Neasuring Point       Image: Site Name       Depth       Image: Site Name         1)       Is protective sleeve/cover in place and secure?       Image: Site Name       Depth       Image: Site Name         2)       Are hinges, latches, or locks functional and in good condition?       Image: Site Name       Depth       Image: Site Name         3)       Is concrete pad in satisfactory condition?       Image: Site Name       Image: Site Name       Site Name       Site Name         4)       Is well name or other identification marked clearly on or near the well?       Image: Site Name       Site Name	vater 136.79
Measured Well Depth ITLE Measuring Point Depth to v         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?         2) Are hinges, latches, or locks functional and in good condition?         3) Is concrete pad in satisfactory condition?         4) Is well name or other identification marked clearly on or near the well?         5) Is well cap in place and in good condition?         6) Is measuring point marked or readily recognized?         7) Does well opening/stickup show signs of damage or deterioration?         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	vater 136.79
<ul> <li>VISUAL INSPECTION</li> <li>1) Is protective sleeve/cover in place and secure?</li></ul>	Y N N/A
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li></ul>	
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li></ul>	
<ul> <li>4) Is well name or other identification marked clearly on or near the well?</li></ul>	····· I IN IN/2
<ul> <li>5) Is well cap in place and in good condition?</li></ul>	
<ul> <li>6) Is measuring point marked or readily recognized?</li></ul>	Y N N/A Y N N/A
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>PHYSICAL INSPECTION</li> <li>Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> </ul>	Y N N/A
PHYSICAL INSPECTION Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.) Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
<ul> <li>Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> </ul>	Y (N N/A
(Enter depth to water in the space provided above.) Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
524 Y V V A A .	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND	
OBSERVATIONS:	

Site Name: Cupu	rjul	Date: (13/19	
Well Identification:	$m\omega - 1$	Personnel:	-
Static Water Level:	134.56	Total Depth: 1+1 + 14	-
Stop Time:		Start Time:	-

Depth (record in two feet	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
intervais)		
1314	1.126	20,13
136	1.115	19.80
136	1.113	19:85
140	1-113	19.721
142	1.113	19,24
144	1.115	19,25
146	1,116	19.25
146	1.122	19,25
150	Lx Het	19,26
152	1.812	19,2+
154	1,536	19,27
190	4,100	19,26
1-6	4,07+	19,29
100	4,20	19,80
162	4,221	19.81
164	4,268	19.81
100	4,004	19,91
168	4, 827	19,95
	-	

Site Name:	er jai	Date:	ac113/19
Well Identification:	mw-2	Personnel:	JLILB
Static Water Level:	134.27	Total Depth:	168.39
Stop Time: 1058		Start Time:	1041

	Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
	134	0,312	20.51
	136	0:310	20,30
	136	0.318	20.10
13	140	0,348	20.13
	142	0,289	20113
	144	0.415	20113
	140	01452	20,13
П	148	01447	20114
1	150	0,474	20114
	152	61480	20.15
1	154	0,499	20,16
1	150	01490	20117
	158	0,41	20117
1	160	0,507	20,18
1	102	0,575	20,19
1	104	1,110	20,00
٤[	140	1,774	10121
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Site Name: Cce u	Jul	Date:	cie/12/19
Well Identification:	MW-LH	Personnel:	JLILB
Static Water Level:	134.43	Total Depth:	142.47
Stop Time: 1036		Start Time:	10:30

<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
134	01773	20141
136	0,762	20,31
136	0,762	
140	01768	20,10
	1	
		-
	P	
	-	

Site Name:	er Jai	Date:	04/13/14
Well Identification:	111W - 3	Personnel:	JLILB
Static Water Level:	132,24	Total Depth:	132.171.93
Stop Time: 1107		Start Time:	1100

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
132	01635	20.25
134	01032	20107
136	0,029	19.91
138	0,1018	19.83
tHD	01627	19.82
142	01026	19.81
144	6,626	19.61
146	0,1027	19.81
148	0,1027	19.81
ICD	0,627	19.81
152	01627	19.82
154	Gilez+	19.82
156	01627	19.80
158	01624	19.83
100	0.424	19.83
162	0102+	19.84
164	01427	19.84
العلم	01626	19,85
100	01625	19.85
1+0	0.424	19.87
172	0,048	

Site Name: Caper	Jal	Date:	OLe/13/19
Well Identification:	MED-4	Personnel:	JLILB
Static Water Level:	135,21	Total Depth:	171.81
Stop Time: 3: 21 pm		Start Time:	31.15 pm

DepthConductivity(record in two feet intervals)(Denote Us/cm or MS/cm for each recording)		Temperature (Fahrenheit or Celsius	
146	6.353	20.101	
130	10:343	20:42	
140	10,310	20,10	
114r	6.326	20.09	
144	6,426	20.00	
146	6.999	20:07	
146	7,910	20,100	
JU I	9,014	20,00	
152	10:03	20:04	
154	10,00	20:00	
156	11,100	20,00	
155	13,31	20,127	
100	15.37	20,07	
162	19,44	20:07	
LLeH	2-420 24,20	20107	
Lele	35.20	20:08	
168	36.93	20:08	
140	39.50	20:08	
170	39.92	2011	

e: <u>3 1,10 pm</u>	16         Total Depth:           Start Time:         Start Time:	145.55 31.00 HM
<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsiu
134	1.500	20,72
136	1.502	20163
136	1.502	20,24
140	1.519	2011
K 142	1,762	20.08
1		

Site Name: Cooper	Jal	Date:	cul 13/19
Well Identification:	mu -5	Personnel:	JLILD
Static Water Level:	136.65	Total Depth:	138.134
Stop Time: 0817		Start Time:	0756

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
130	5,315	20145
136	5,301	20,711
140	5,362	20,20
142	5, 302	20,18
144	5 303	20.17
(40	5, 361	20.17
148	5,301	20117
160	5, 22	20117
152	5, 303	20,10
154	5 300	20115
150	5. 21	20,19
156	5.30	20:18
100	5, 11	20119
162	533	20,19
164	5.341	20,20
166	5 375	20,20
168	5.375	20,20
170	6 375	20.20
172	10.32	20.24
1.1.1		
	-	

er Le	tion: <u>130-51</u> wel: <u>130.7</u>		JL / LR 144.05 0832
	<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsiu
1	134	0,922	20,20
1	138	01997	20.24
I	140	01111	20:20
14	142	0,770	20.18
-	HHUR		
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E			
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Site Name: (ee,	er Jul	Date:	DLe 113/19
Well Identification:	MW-7	Personnel:	JLILS
Static Water Level:	135,48	Total Depth:	142,40
Stop Time: OIIS PM		Start Time: 🕖	IOH IM

<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	Temperature (Fahrenheit or Celsius
5.234	20,79
5.227	20,100
5.236	20.48
5, 184	20.24
5.731	20.17
10.1107	20.15
Le . & TLO	20.15
7,709	20,14
8.715	20,14
9.779	20114
11.09	20,14
	20114
	(Denote Us/cm or MS/cm for each recording) 

Site Name: Caper	1101	Date:	04113/19
Well Identification:	mw-8	Personnel:	JLILB
Static Water Level:	133.67	Total Depth:	144.85
Stop Time: 1128		Start Time:	1126

Depth (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
134	01452	20162
136	0.448	0,23
136	AL/H	
140		1
141		
(44	XV	
146	V	
	Land not 10 aut	
	Isit' w conductivity	
	pube clue to	
	blocker	
		1
	1	

Site Name:	Jui	Date:	01113/19
Well Identification:	ww-ci	Personnel:	JUILB
Static Water Level:	131.95	Total Depth:	161,46
Stop Time: 1240		Start Time:	1275

<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
132	1.430	20.00
131	1.433	714124
134	1.475	20121
130	1:560	20,19
(4D	1,952	20,18
146	2,110	20117
144	2,416	20.17
46	2,599	20,16
146	2,674	20116
190	2,754	20,16
182	2.235	20116
154	2.857	20,14
154	2,854	20116
158	2.849	20,14
160	2,460	20.16

e:	1232	Start Time:	tal Depth: 141.72 Int Time: 1228		
	<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius		
	130	0.095	20.35		
	132	1,209	20,24		
	134	1.750	20:20		
*	136	2,254	20:20		
-					
E					
E					
-					
-					
F					
-					
	_				

Water Level: ime:	136.2 30 pm	5 Total Depth: Start Time:	
-			
(re	<b>Depth</b> cord in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
136		1.190	20.07
136		1.201	20,55
140	)	1.255	20.27
142		1,279	20:20
×	plocillage in	Lell; can't out inyara	leve
1			
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-			
-			

Site Name:	er Jal	Date:	04/13/19
Well Identification:	11-WW-11	Personnel:	JLILB
Static Water Level:	130.13	Total Depth:	165171
Stop Time: 115 Le	-	Start Time:	1150

	<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius)
t	130	0,000	20,52
t	132	0.597	20.31
t	134	0.597	20,20
t	1310	6,596	20,19
ľ	136	61596	20,18
t	140	0.396	20,18
t	142	0.594	20:17
t	(44)	0,596	20,17
t	140	6,596	20,110
t	146	01598	20:17
t	150	0,600	20,17
t	152	01403	20,16
t	154	0,007	20117
t	156	0,61	20,16
t	154	0,017	20117
t	140	01622	20,17
t	142	01626	20.17
ŀ	164	0:630	20,17
ľ	144	0:032	20,18
t			25770
t	1		
t			1
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Site Name:	r Jal	Date:	04/13/19
Well Identification:	mu - 12	Personnel:	JLILB
Static Water Level:	139.92	Total Depth:	171.62
Stop Time: 1047		Start Time:	1040

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
140	1.078	20,107
142	1.069	20.36
(44	1.044	20.27
140	1,129	20,23
148	1.178	20,21
150	1,276	20,20
152	1,294	20.19
154	1,355	20.19
156	1,289	20.18
159	1.426	20,18
lied	1.495	20,18
162	1,514	20.18
164	1.5121	20,18
166	1.519	20.16
168	1,521	20.12
170	1:350	20,23

Date: 01/13/19
Personnel: JL/LB
Total Depth: 173,74
Start Time: 11 22 m

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
134	0,440	20.240
136	0,1,210	20119
1360	0.1023	20119
140	0.1023	20.07
142	01623	20:07
144	UILOL3	20.07
146	0.1024	20:07
146	0,624	20:07
150	0.424	20:07
152	0.623	20107
154	0.1023	20:07
156	0,1023	20.07
150	0,1022	20.07
(100)	0,1023	LUID7
162	0,1026	20.08
164	01645	20,00
1 Lole	0.1046	20.09
168	0 1 664	20.10
170	0.044	20.10
172	0.647	20.11
		_

Site Name: Cupier Jul	Date: 06/13/19
Well Identification: RW-1	Personnel: JL/LR
Static Water Level: 133, Le4	Total Depth: 164.03
Stop Time: 3' 45 m	Start Time: 3135 pm

	<b>Depth</b> (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
I	134	1.3360	20,36
[	136	1.336	20111
I	130	1.3260	20.00
I	140	1.330	20,05
I	142	1,307	20,05
I	144	1,087	10:04
ſ	146	1(99)	20.04
I	140	2,997	20:04
ſ	150	3,998	20.04
I	152	15,70	20.05
I	154	23,1010	20,05
Ī	156	27,52	20,06
ſ	158	27.87	20,06
I	160	27.94	20:07
Ī	162	27,95	20.07-
t	164	27.95	20:07

Depth (record in two feet intervals)	<b>Conductivity</b> (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius	
136	1.1024	20.37	
130	1. Lole7	20120	
140	1,997	20116	
142	2,336	20117	
144	2,423	20,16	
146	2. 439	20,110	
146	3,957	20,110	
150	10.50	20,16	
152	14,20	20,16	
154	16.16	20,14	
156	14,53	20119	
158	14.52	20,20	
160	14.52	20,20	
Site Name:	pursul	Date:	04/13/19
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Well Identification:	rw-lr	Personnel:	JLILB
Static Water Level:	136,79	Total Depth:	170,82
Stop Time: 2121	pm	Start Time:	2:15 pm

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
136	1,479	70.42
136	1.483	20.33
140	1.747	20,22
142	5.598	20,21
144	13,41	20117
146	14119	20,18
146	18,95	20,10
150	20113	20,10
152	20,34	20,10
154	20140	20,10
150	20,44	20118
150	20:47	20,12
160	20,49	20,10
162	20,50	20.18
164	20.52	20119
1.66	20,101	20,19
168	20180	20,19
110	20192	20119
172	20:99	20,20
174	21.01	20120
176	20,54	20121

4

Site Name:	r Jai	Date:	66/17/19
Well Identification:	MW-6R	Personnel:	CRIJL
Static Water Level:	116.15	Total Depth:	171.02
Stop Time:		Start Time:	0936

<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
134	0,707	20.00
136	01701	2010
140	01704	20,05
142	01903	20104
144	0,703	20,03
146	0.7W	20103
148	DITES	20.03
150	0,700	20103
152	UITOLI	20103
154	01704	20:03
156	61 1010	20.04
156	0,707	20104
160	0,705	20105
142	01708	20,05
164	017/17	20:05
Jula.	DATHE	20,05
144	DIJUTIO	20105
10	01703	20,06
172	01723	20107
174	01769	20:08
179	0:941	20,09
HADLA	O PHILB	
	/	
	-	

Project:	CVX	HEU TRU	noter	_		Project No.	_			Page 1 of 1
Site Location:	LELVE	rdal			_					Date 120/19
Site/Well No.	mw-			-		Replicate No.		and .	Co	de No.
Weather:	1-14,1	sunny	_	-		Sampling Time:	Begin	9:35 0	_m	End 9:38 a.M
Evacuation Da	ata						Field Paramet	ters		
Sounded Well I	Depth (ft bmp)	171.17				-	Color	LUCIUS	and	nut
Depth to Water	r (ft bmp)	134.54	)				Odor		- r	
Sallons Pumpe Prior to Sampli		FULL H	MAN	THOUR			Appearance	scalim	ent-c	botton . CILL
ample Pump I	-	Thur it	Juner			-	*IRON, ferrou		-	
)epth (ft bmp)	Intake	1	110				*SULFIDES	-		
ample Pump o ettings (cpm/p		1	HIH	T			Data Frame			
Purge Time	,51)	Beats	1	E-4		-	Remarks	M		
Pumping Rate (	(0000)	Begin		End		-	_	Ý		
vacuation Met		Hujara	steer	L	-		Sampling Perso	onnel	JL	LB
Time	Water Level	Volume Purged	DO (mg/L)	ORP	pH	Temp	COND	Turbidity		
1:30		-	2.20	173.0	7.32	20.49	3,941	NTU	-	
		1.1								
		111			-				-	
	1.00		-							
	1		2				1	-	-	
			1							
						-		-		1
Constituents	Sampled	1	Cont	ainer Descrip	otion		Number	1	P	reservative
	-				_				_	
	_		_		_	2		2		
						8 13			-	
			_	_	_					
	_		_							
			_	_	_	2				
	elow measuring	point	-	mi	mililiter		s.u.	standard units		
P 0							····.	someand units		
d	egrees Celsius eet				milisiemens pe microsiemens			milivoits Nephelometric Tu		

Micropu	rge Samp									
Project:	LVX	HES TRU	nuter	- 11		Project No.			Page 1	of _1
Site Location:	Capel	r Jal							Date U	1201
Site/Well No.	mw.2			_		Replicate No.		- Magazina (	Code No.	
Veather:	Hoti	sunny		-		Sampling Time:	Begin	9:47	End C	1.47-
vacuation D	ata						Field Parame	iters		
ounded Well	Depth (ft bmp)	108.30	9				Color	clear	1 taun	
pth to Wate	er (ft bmp)	134.1	17			100	Odor			
allons Pumpe ior to Sampli		FULL MI	Actual	LEVE			Appearance	custer	1	
mple Pump pth (ft bmp)		~					*IRON, ferror *SULFIDES	us NIA		_
ample Pump ettings (cpm/		)	6m				Data Frame	1		-
urge Time	. /	Begin	1	End		-	Remarks	V		
Imping Rate		Hyara	SHEVE	-	-	-	Sampling Pers	sonnel	JLILB	
Time (min)	Water Level	Volume Purged	DO (muL)	ORP (mv)	pH /su	Temp	COND	Turbidity		
:49an	(		2.16	146.7	7 38	21.21	1.121	-		
		1.0		1						_
		-				1				
		-			1.12					
			1					1		
Constituents	Sampled		Cont	ainer Descri	ption		Number		Preservativ	/e
_				_	-	2		2 3		_
			-			2		2 3		
-								3 3		
						5 2				
					_	2 13		3 3		
								structure of contin		
	below measuring	point		ml	mililiter		s.u.	standard units		
	below measuring degrees Celsius feet mililiters per minu			ml mS/cm mS N/A	mililiter milisiemens p microsiemens	er centimeter	mv NTU	milivolts Nephelometric Tu	rbidity Units	

Site Location: Site/Well No.	Comes					Project No.			Page <u>1</u> of <u>1</u>
Site/Well No.		r Jal							Date 04/201
	mw -	- LA				Replicate No.			Code No.
Weather:	1101	army				Sampling Time:	Begin	<u>q                                    </u>	End 9:44
Evacuation Da	ta						Field Paramet	ers	
Sounded Well [	Depth (ft bmp)	14214	1				Color	clear	tun
Depth to Water	(ft bmp)	134.40	5		_		Odor		
Gallons Pumpe Prior to Samplin		FULL H	yara	sterve			Appearance	claudy	
Sample Pump Ii Depth (ft bmp)	ntake	1	NIW	1			*IRON, ferrou	s MIA-	
Sample Pump c Settings (cpm/p		1	14th				Data Frame		
Purge Time		Begin		End			Remarks	V	
	Water Level	Volume Purged	DO	ORP	рН	Temp	Sampling Perso	Turbidity	LILB
(min)	(feet)		(mg/L)	(mv)	(su)	0	1 )	(NTU)	
9:44am			2.42	1471	7.71	20.88	6,743		
			-				-		
			-			-	_		
	-		_	-		-			
			_						
	-								
			-						
Constituents	Sampled		Cont	tainer Descrip	otion		Number		Preservative
						2 1			
_	_	-							
		-				8 S	-		
				_		3		=	
		-							
	elow measuring	noint		mi	mililiter		s.u.	standard units	

Project:	CVX	HEU TRU	nutur	- 		Project No.			Page	1 of
Site Location:									Date	120/14
Site/Well No.	mw -1			-		Replicate No.		- un		
Weather:	HOT, J			-		Sampling Time:	Begin	9:32 ar		9.32.01
TTOULIOI.	1.0.10	beingt				Gumping Time.	Bogin		End,	
Evacuation Da	ata						Field Paramet	ters		
Sounded Well	Depth (ft bmp)	171.9	3			-	Color			
Depth to Water	r (ft bmp)	132.	24			-	Odor			
Gallons Pumpe		FULL HI	1 Mans	TRIVE			Appearance	citau	(	
Prior to Sampli	-	<u>Inca m</u>	120000	1000		-	*IRON, ferrou	IS NIA		
Sample Pump Depth (ft bmp)		1	11 10				*SULFIDES			
Sample Pump		1	n In				Data Frame			
Settings (cpm/	psi)		1	-		5.1	Remarks	AV		
Purge Time		Begin		End		_		Y		
Pumping Rate	(gpm)		4			-	Sampling Pers	onnel	JLIL	3
Evacuation Me	thod	Myaraus	atev (	2	_	-				
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP	pH (su)	Temp	COND	Turbidity (NTU)	-	
9:32am			2.43	108.0	1.109	20.00	0-1033			
		1								
	1		-		-	1				
-					-	and the second sec				-
					· · · · · ·					
					-					
			-							
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
Constituents	a Sampled		Con	tainer Descrip	ption		Number		Preser	vative
mp	below measuring		Con	m	mililiter		s.u.	standard units	Preser	vative
			Con		mililiter	per centimeter s		standard units milivolts Nephelometric Tu		vative

Project:	CVX	HEU TRU	noter			Dente 111				
Site Location		er sal		-		Project No.			Page	
Site/Well No				-						04/201
Weather:		niny				Replicate No.			Code No.	
_				_		Sampling Time:	Begin	10:22 am	End	10 . 22
Evacuation	Data						Field Param	eters		-
Sounded We	ill Depth (ft bmp)					-	Color	tan		_
Depth to Wa	ter (ft bmp)	135.2	1		_	-	Odor			
Gallons Pum Prior to Sam		FULL H	udraut	teve			Appearance	cioude	-	
Sample Pum		~	-		-	-	*IRON, ferro	us MIA		
Depth (ft bmp	))		SWIT	4	_	-	*SULFIDES			
Sample Pump Settings (cpm			Sec.				Data Frame	_		
Purge Time		Begin	10	End		5	Remarks			
oumping Rate	e (gpm)			-			_	AV		
vacuation Me	ethod	Hydra	Steve				Sampling Pers	onnel <u>JL</u>	ILB	
Time min	Water Level	Volume Purged	DO m_/L	ORP	pH	Temp	COND	Turbidity	-	
10:22an	n —		1.13	168.4	7.15	21.57	9.462	(NTU)		
			1.1						-	
		1	1				-			
				I					-	
				1						
							1			
1										
Constituente	s Sampled		Cont	ainer Descrip	tion		Number	LL	Deserves	
								-	Preserva	uve
-			_		-	2 3				
			_			2		2		
		-				2 G			_	
-					-			<		_
		-	_		_		-		_	
	below measuring p	oint		ni irr	nilliter		u.	standard units		
	degrees Celsius			nS/cm r	nilisiemens per					

Project:	rge Samp	HEU True	noter	2		Project No.			Page 1	_ of _1
Site Location:	Carpe	( Jai							Date OL	1201
ite/Well No.	mw-1	AF				Replicate No.	and the first second se		Code No.	
leather:	1-107 1	unn		2		Sampling Time:	Begin	10:24	End LD	24
vacuation D	ata						Field Paramete	978		
ounded Well	Depth (ft bmp)	145.50	5			-	Color	tan		
epth to Wate	er (ft bmp)	134.9	6				Odor			
allons Pump		FULL MU	Idrun	ur			Appearance	clandy	9	_
ior to Sampl		1000010				-	*IRON, ferrous	NIN		
ample Pump epth (ft bmp)			VIIL		_	_	*SULFIDES			
ample Pump			1				Data Frame			_
ettings (cpm/	psi)				-	-	Remarks	110		
urge Time		Begin		End		-		V		
imping Rate		Hijan	Wern	e			Sampling Perso	nnel <u>J</u>	LILB	_
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP	pH (su)	Temp	COND	Turbidity		
0:24	~		1,45	134.5	7.99	21.64	1.822			
				1		1		· · · · · ·	_	
			-			1	·			
		A Contraction of the				1				
				_						-
Constituent	s Sampled		Cont	ainer Descrij	ption		Number		Preservative	
			_					1 a		
	_			_				1 2		
_			_		_					
						1		-		
						S < 2				
-		-	-	-		2	_			
	below measuring	point		ml	mililiter		s.u.	standard units		
p	degrees Celsius			mS/cm	milisiemens p	er centimeter	mv	milivolts		

Project:	CVX	HES TRA	nster			Project No.			Page 1 of 1
Site Location:		y Jal							Date 10/20 11
		5				Replicate No.		and a cost of	Code No.
Weather:		sunny		2		Sampling Time:	Begin	10 ESDAN	End 10:05 Q
Evacuation D	ata						Field Parame	ters	
Sounded Well	Depth (ft bmp)	173,9	v				Color	cley	
Depth to Wate	r (ft bmp)	134.10	5				Odor		
Gallons Pumpe		FULL H	unitari	HAUA			Appearance		
Prior to Sampli	-	Full H	Neway	TOCVC			*IRON, ferrou	AIN a	
Sample Pump Depth (ft bmp)		/					*SULFIDES		
Sample Pump	controller		Lian	,			Data Frame		
Settings (cpm/	psi)			_		-	Remarks		
Purge Time		Begin		End			Remarko	V	
Pumping Rate	(gpm)		_		-	-	Compline Dom	oppol	JUILIN
Evacuation Met	thod	Hyclina	sterve	_		_	Sampling Pers	onnei —	02123
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity	
10:05 am	-		1.03	161.3	00×F	2149	5.174		
		1.							
					1			1	
	1		1	1		1		1	
				1			£		
Constituents	Sampled		Cont	ainer Descrip	otion		Number	1	Preservative
_								2 2	
								3 2	
								-	
	_				_	3 8			
				-		2			
	below measuring degrees Celsius	point			mililiter	er centimeter	s.u. mv	standard units milivolts	

Carrent mw ~		11 elveuste 11 + 14	End		Project No. Replicate No. Sampling Time:	Begin Field Parameter Color Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks		Date Code No. End	1 of 1 4 (20/14 10:08
mu Hut , n A appth (ft bmp) ft bmp) /(Balled a take ontroller i) pm) od Water Level	IUUIO INUIO INUITU FUUITU Begin Hujalrau	1) clraste 1) 14 steeve	End			Field Parameter Color Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks	s N/A		10:08
A a a a a a b b h (ft b m p) (ft	СШМИЦ 1014.0 176.71 FULL PUL Begin HULCKAU	1) clraste 1) 14 steeve	End			Field Parameter Color Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks	s N/A	End	
a apth (ft bmp) ft bmp) /Bailed a take take ontroller i) pm) pd Nater Level	100000 17617 Full Mu Begin Hujalrau	1) clraste 1) 14 steeve	End		Sampling Time:	Field Parameter Color Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks	s N/A		
epth (ft bmp) ft bmp) /Bailed ) take ontroller i) pm) od Nater Level	HULCKAN	1) clraste 1) 14 steeve	End			Color Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks		)	3
ft bmp) /Bailed /Bailed /take take ontroller i) pm) pm) pd Nater Level	HULCKAN	1) clraste 1) 14 steeve	End			Odor Appearance *IRON, ferrous *SULFIDES Data Frame Remarks	LINIDU MIA	)	3
/Bailed take ontroller i) pm) od Water Level	Begin	U H	End			Appearance *IRON, ferrous *SULFIDES Data Frame Remarks	s M/A	JLIL	3
) take ontroller i) pm) pd Water Level	Begin	11 14	End			*IRON, ferrous *SULFIDES Data Frame Remarks	s M/A	JLIL	3
take ontroller i) pm) od Water Level	Begin	11 14	End			*SULFIDES Data Frame Remarks	$\overline{\mathbf{V}}$	JLIL	3
pntroller i) pm) od Water Level	Hydrau					Data Frame Remarks	unnel	JLIL	3
i) pm) od Water Level	Hydrau			- <u></u>		Remarks	unnel	JULI	3
pm) od Water Level	Hydrau						onnel	JLIL	3
od Water Level						Sampling Perso	nnel	JLIL	3
od Water Level					_	Sampling Perso	nnel	JUILI	5
	Volume Purged	DO							
		(mg/L)	ORP	pH (su)	Temp	COND	Turbidity NTU		
-		2.37	146.7	451	21,54	0.811			
		1			1				
			1			1.000			
		1							
								1	
Sampled		Cont	ainer Descrij	ption		Number		Preser	vative
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		-							
							-		
	5 6 3			_	S 8		5 3		
						_		_	
elow measuring egrees Celsius	point		ml mS/cm	mililiter milisiemens	oer centimeter	8.U. mv	standard units milivolts		
et	te		mS	microsiemen	\$	NTU	Nephelometric Tur		
el	iow measuring grees Celsius it iiiters per minu	low measuring point grees Celsius	low measuring point grees Celsius it liiters per minute	low measuring point ml grees Celsius mS/cm it mS liitters per minute N/A	low measuring point ml mililiter grees Celsius mS/cm milisiemens p it mS microsiemen iliters per minute N/A not applicable	low measuring point ml miliitter grees Celsius mS/cm milistemens per centimeter it mS microsiemens liitters per minute N/A not applicable	iow measuring point ml mililiter s.u. grees Celsius mS/cm milisiemens per centimeter mv th mS microsiemens NTU liliters per minute N/A not applicable umhos/cm	iow measuring point ml mikiliter s.u. standard units grees Celsius mS/cm milisiemens per centimeter mv milivoits it mS microsiemens NTU Nephelometric Tur liiters per minute N/A not applicable umhos/cm Micromhos per cert	low measuring point ml milliter s.u. standard units grees Celsius mS/cm millicitemens per centimeter mv milivolts litters per minute N/A not applicable umhos/cm Micromhos per centimeter

Project:	CVK	HES TWO	whiter	-		Project No.	-		Page	e <u>1</u> of <u>1</u>
Site Location	Coby 4	er lai				_			Date	6120/1
Site/Well No.	mw-	7	_			Replicate No.		et tak	Code No	
Weather:	HUF	vunny	_			Sampling Time:	Begin	11:20	_ End	11 20
Evacuation I	Data						Field Parame	ters		
Sounded We	I Depth (ft bmp)	102.0	)				Color	tan		_
Depth to Wat	er (ft bmp)	135,0	18				Odor			
Gallons Pump		1 Proventier	urb (Cire	Et a a Pra			Appearance	ciou	ele,	
Prior to Samp		Full	III COLO	517084		-	*IRON, ferrou	IS NIP	+ /	
Sample Pump Depth (ft bmp		1	500				*SULFIDES			
Sample Pump		/	-15-F-1 #1				Data Frame			
Settings (cpm			1	_				-		
Purge Time		Begin		End		_	Remarks		_	
Pumping Rate	(gpm)			1						
Evacuation Me	ethod	Hydru	Sheve				Sampling Pers	onnel	LILI	5
Time (min)	Water Level	Volume Purged	DO (m_/L)	ORP	pH Isu	Temp ©	COND	Turbidity (NTU)	1	
1:20 UN	n		0.86	189.5	4.98	21.70	11.41	-		
					1	1				
-	in the				-					1
		1				-				
-			11		-					
							-			
Constituent	Camalad				-		1	1 1		
Constituent	s Sanipieu		Cont	ainer Descrij	ption		Number		Preser	vative
								2 8		_
				-				2		_
	_		_							
_								e		
					_			2	_	
	below measuring	point		ml	mililiter		8.Ų.	standard units		_
	degrees Celsius			mS/cm	milisiemens pe microsiemens		mv NTU	milivolts	ubidite 1 bette	
	feet							Nephelometric Ti	-	
np : /min g/L.	mililiters per minu miligrams per liter				not applicable not recorded		umhos/cm VOC	Micromhos per c Volatile Organic (		

ARCADIS Micropu	rge Sampl	ling Log								
roject:	CVX	HEU THU	inuter			Project No.			Page	e <u>1</u> of <u>1</u>
te Location:	Licycl	Jal	_	_			-		Date	06/20/1
te/Well No.	1110-8					Replicate No.			Code No	
leather:	Hor,	chandid	_			Sampling Time:	Begin	0000	- En	d
vacuation D	ata						Field Paramete	ers		
ounded Well	Depth (ft bmp)	144.8				-	Color	All		
epth to Wate	er (ft bmp)	133,8	F				Odor	-		
allons Pump		NIA					Appearance			
ior to Sampl		- MINT				-	*IRON, ferrous			
ample Pump apth (ft bmp)		1					*SULFIDES	-		
ample Pump		1					Data Frame	1		
ettings (cpm/	'psi)		1				Remarks	te		
urge Time		Begin		End		-		1		
Imping Rate		-		1			Sampling Perso	nnel	JE ILB	
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)		1
			(11(g/12)							1
no	ample	Collector	d. Lu	able	to la	er 401	l'ine n	block	an a	
		Contraction	~	~						
			-		1					
			-	1						
_						1				1
					1					1
Constituent	s Sampled		Cont	ainer Descri	ption		Number		Prese	ervative
			_		- 3			5113	-	
		5					_			
			_							
		< 0							-	
			_		-					
					-			-		
qr	below measuring degrees Celsius	point		ml mS/cm	mililiter milisiemens p		s.u. mv NTU	standard units milivolts Nephelometric	Turbidity Linite	
/min g/L	feet milliters per minu miligrams per lite			mS N/A NR	microsiemens not applicable not recorded	•	umhos/cm VOC	Micromhos per Volatile Organic	centimeter	

ARCADIS Micropur	ge Samp	ling Log								- sources
roject:	-	TEU JUL	ister			Project No.			Page	1 of 1
ite Location:	COUPLE		· · · · ·					_	Date	6/20/19
ite/Well No.	mw-					Replicate No.			Code No.	
Veather:	HUTIN	man-				Sampling Time:	Begin	11 30 am	End	11:30
vacuation Da	ita						Field Paramete	ers		
ounded Weil (	Depth (ft bmp)	161.41	0	_			Color	tan		
epth to Water	(ft bmp)	131.9	5				Odor			
allons Pumpe ior to Sampli		Fun M	yara	here			Appearance	s MIII	1	
mple Pump	Intake	~					*IRON, ferrou	s <u>M</u>		
epth (ft bmp)			- HATE		-	-	*SULFIDES	-	_	
ample Pump ( ettings (cpm/p			1	_			Data Frame	t		
urge Time		Begin	1	End			Remarks			
umping Rate	(gpm)			1					JL/LY	
vacuation Met	thod	Hydra	STEEVE				Sampling Perso	onnei –	00101	•
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp ©	COND	Turbidity NTU		1
30am			1.73	169.4	7.26	22.48	2.297			
	1.			-						
			_			1				4
						-				
					1					
	1.00	h		-			-			
									(	
Constituents	s Sampled		Con	tainer Descrip	otion		Number		Preser	<i>rative</i>
	_	2 3						21 I 2		
					_			5 5		
		201						5   A		
				_	_			2		
		-				-				
np ;	below measuring degrees Celsius		_	mł mS/cm	mililiter milisiemens p		s.u. mv NTU	standard units milivolts Nephelometric Tu	urbidity   Inite	
i/min Ig/L	feet mililiters per min miligrams per lite			mS N/A NR	microsiemens not applicable not recorded	•	umhos/cm VOC	Micromhos per ce Volatile Organic C	entimeter	

ARCADIS Micropur	ge Samp	ling Log								
Project:	CVXI	HIV TRUM	uter	-		Project No.			Page 1	of
Site Location:	U- DUr	al						_	Date _	0 20/19
Site/Well No.	mw-	an				Replicate No.		_	Code No.	
Veather:	Hut,	Junn				Sampling Time:	Begin	11:34	End	1:34
Evacuation Da	ta						Field Paramet			
Sounded Well C	Depth (ft bmp)	141.7			-		Color	tan		
epth to Water	(ft bmp)	131.00	)		_		Odor			
allons Pumpe rior to Samplir		FUI H	ydru	sheve			Appearance	Claude s M A		
ample Pump I epth (ft bmp)	ntake	~					*IRON, ferrou *SULFIDES	s M M		
Sample Pump o Settings (cpm/p			W.	t			Data Frame			
Purge Time		Begin		End		-	Remarks			_
Pumping Rate (		Hydru	sterve			-	Sampling Perso	onnel	JLILB	_
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp ©	COND	Turbidity (NTU)		
1:14am	_		1.68	108 4	7.33	2274	1. 297			
					1.1	1				
-			1		1		-			
-		-	1				1			-
					1111			1-1		
Constituents	Sampled		Соп	tainer Descrij	ption		Number	4	Preserva	tive
		2	_					2 I 2		
-			_			-	_	5 3		
_		5			-		_	: 2		
_		< r >				-	_			
								5 5		
	_			_		-	-			
	below measuring degrees Celsius feet			ml mS/cm mS	mililiter milisiemens microsiemen	per centimeter	s.u. mv NTU	standard units milivolts Nephelometric Tu	rbidity Units	
l/min	mililiters per min miligrams per lite			N/A NR	not applicabl not recorded	e	umhos/cm VOC	Micromhos per ce Volatile Organic C		

Project:	CVX	HEJ THON	uter			Project No.			Page	1 of
Site Location:	C	Jac	_	_			_		Date	010 2011
Site/Well No.	mw-	10				Replicate No.			Code No.	
Weather:	HOF ,	cioudy	-			Sampling Time:	Begin	<u> </u>	End	
Evacuation Da	ata						Field Paramete	rs		
Sounded Well [	Depth (ft bmp)	140,92	_		_		Color	NIA		
Depth to Water	(ft bmp)	1310,28					Odor	-		
Gallons Pumpe Prior to Sampli		NIA					Appearance			
Sample Pump I	-	1					*IRON, ferrous			
Depth (ft bmp)		1	-	-		-	Data Frame	1		
Sample Pump ( Settings (cpm/p			<u></u>				Remarks	11		
Purge Time		Begin	1	End		_	Remarks	-1-		
Pumping Rate	(gpm)			5			Ourseller Dr	anal	ILILB	
Evacuation Met	thod		_	<i>.</i>			Sampling Perso	nnei	<u>artico</u>	
Time (min)	Water Level	Volume Purged	DO (mi/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)	-	1
										1
no 150	mple	ellectra	L. un	lible	the the	124 751	due to	block	even	
			~	/		Total III	to see a			1
					/	-				
-	1	1			11.11					
-				-	1-1					
I			1							1
Constituents	s Sampled		Cont	tainer Descr	iption		Number		Preserv	vative
		2 3							_	
		5				-				
		5 3								
							-			
	-	1			_					
						-		-		
bmp °C	below measuring			ml mS/cm	mililiter	per centimeter	s.u. mv	standard units milivolts		

Project:	CVV	HEU TRU	Inci.			Designet Ma			0	. 1
	Caru		GIUTI	<u></u>		Project No.	-			e <u>1</u> of <u>1</u>
te Location:								_		e 06 / RO/1
te/Well No.	MW-			-		Replicate No.		11:41	Code No	
eather:	HUF	JUNN-		-8		Sampling Time:	Begin	11/211	En	a <u>  :4 </u>
acuation Da	ita						Field Paramete	ers		
unded Well [	Depth (ft bmp)	165.7	1				Color	clear		
pth to Water	(ft bmp)	130112					Odor			
llons Pumpe		FULL M	UNRUG	1-22-117			Appearance			
or to Samplir		Tourn	0/201-01			-	*IRON, ferrous	NIA		
mple Pump I pth (ft bmp)	ntake	~	ALLA.				*SULFIDES	1		
imple Pump o		/					Data Frame	W		
ttings (cpm/p	isi)		1			-	Remarks	EB-1	CONCE	jeci
irge Time		Begin		End			at 11	150 0	0.	
Imping Rate (		A& 07 1	153		_	-	Sampling Perso	nnel	JL/LI	3
acuation Met	hod	ruidru	UHEVE			_	_			
Time min	Water Level feet	Volume Purged	DO mo/L	ORP	pH su	Temp ©	COND	Turbidity (NTU)		
L. Altaina			2.13	172.2	1.68	21.51	0.1025			-
						-	1-0-1			
	1									
	-						1.		-	
		_					1			
onstituents	Sampled		Con	tainer Descrip	otion		Number		Prese	rvative
			-		_	51.3		5 5		
_	-				_		_	1 1		
			_		_	5				
		-				~		-		
			_			5		-		
	_					2				-
2	below measuring	point		ml	mililiter		s.u.	standard units		
	degrees Celsius feet				milisiemens p microsiemens		mv NTU	mitivolts Nephelometric Tu	rbidity Units	
	mililiters per minu				not applicable		umhos/cm	Micromhos per ce		

	0.1011	HE ETTIN	n chan								
roject:		HES Tra	nura	-		Project No.				Page 1	
ite Location:	COULE	1						_		Date Olo	120/14
ite/Well No.	mw -					Replicate No.				de No.	
leather:	H4 . SU	nnej		-		Sampling Time:	Begin	8:52 a	M.	End 😣	252 an
acuation Da	ita						Field Paramete	ers			
ounded Well [	Depth (ft bmp)	171.00					Color			_	
pth to Water	(ft bmp)	119,7	L				Odor	_			
llons Pumpe		FULL H	MARAN	leve			Appearance	clear			
or to Samplin		Juca II	view				*IRON, ferrous	NIA			
mple Pump I opth (ft bmp)	ntake	1	KI IN				*SULFIDES	2			
Imple Pump o		1	14/11				Data Frame				
ettings (cpm/p	osi)		1			-	Remarks	_			
irge Time		Begin	2	End		-		V			
mping Rate (						-	Sampling Perso	nnel	ULI	10	
acuation Met	hod	Hydraw				_					
Time min	Water Level (feet)	Volume Purged	DÖ (mg/L)	ORP (mv)	ρH (su)	Temp ©	COND	Turbidity (NTU)	×		-
S LEHT			2.35	192.1	8.23	20 58	1.226		_		
			·*		-						
constituents	Sampled		Cont	ainer Descri	ption		Number		P	reservativ	/e
									-		
			-					3 3			
	_					S 2					_
						2					
	_			-	_	÷				_	-
p	below measuring	point	-	ml	mililiter		8.U.	standard units			
	degrees Celsius	·		mS/cm	milisiemens p	er centimeter	mv	milivolts	ubidity I lette	P	
	feet mililiters per mine			mS N/A	microsiemen: not applicable		NTU umhos/cm	Nephelometric Te Micromhos per ce		3	

Project:	CVXF	ted Thunk	ter			Project No.			Page	• <u>1</u> of <u>1</u>
Site Location:	00014	jal							Date	10/20/19
Site/Well No.	mw -	14				Replicate No.	<u> </u>	Approved to	Code No	
Weather:		sunny				Sampling Time:	Begin	11:05		11:05 24
Evacuation Da	ata						Field Parame	tom		
	Depth (ft bmp)	178,74					Color	lead	-	
Depth to Water		134,75		-			Odor	Licry		
Gallons Pumpe							Appearance			
Prior to Sampli		Juli n	dru	treve		-	*IRON, ferrou	IS NIA		
Sample Pump Depth (ft bmp)		~					*SULFIDES	1411	_	_
Sample Pump		/	NI	A-		-	Data Frame			
Settings (cpm/j			1		_	-	Remarks	t.		
Purge Time		Begin		End	··	-	- Contanto	V		
Pumping Rate	(gpm)					- C	Sampling Pers	oppel	JLJLY	2
Evacuation Met	thod	Hydra	JIECUT	L			oumping room			
Time	Water Level	Volume Purged	DO	ORP	pН	Temp	COND	Turbidity		1
min	feet		(mg/L)	(mv)	(SU)	©	1.0	(NTU)		
			(m./L)	(mv) 146 2	(su)	0	6.714	(NTU)		
min				1	1	-	0,714			
min				1	1	-	6,714	(NTU)		
min				1	1	-	6, 714			
min				1	1	-	6, 714			
min				1	1	-	6, 714			
min				1	1	-	6, 714			
min			1.40	1	8,21	-	Number		Presei	vative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Prese	vative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Prese	rvative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Presei	rvative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Prese	rvative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Prese	vative
(min) 11 - DS Δ.ΑΥ			1.40	1462	8,21	-			Prese	rvative
II : DS A.M			1.40	146 x	8,21	-		standard units	Presei	rvative

dt.

Project:		Hts Tra	nster	-		Project No.	_		Pag	e <u>1</u> of <u>1</u>
Site Location:		rial							Dat	e unol
Site/Well No.	Kow -	1		10		Replicate No.	Dup-1		Code No	
Weather:	H04 1	sunny				Sampling Time:		10-14 am		10. ma
Evacuation [	Data						Field Parame	ters		
Sounded Wel	Depth (ft bmp)	104.03	3			-0	Color	Ling		
Depth to Wate	er (ft bmp)	133.64	4				Odor			
Gallons Pump		-	100.0	C. A. L. M.			Appearance	And the second design of the s		
Prior to Samp	ling	FUIL H	1 clean	LEVE		-	*IRON, ferror	us NIA		
Sample Pump Depth (ft bmp)		1					*SULFIDES	1		
Sample Pump		1	HI D	-				11		
Settings (cpm			1				Data Frame	-V/	1 4 H - D	
Purge Time		Begin	1	End			Remarks	1-19-2	Factor	ar
Pumping Rate	(gpm)			~			10:1	loan		
Evacuation Me	ethod	Hydra	Ulceve				Sampling Pers	onne!	JLILI	ß
Time (min)	Water Level (feet)	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp	COND	Turbidity (NTU)		-
10:1400			0.83	193,0		21.31	24.20			
				1						
	1									
			-	-						
-			-				-			
				-						
			_							
Constituents	s Sampled		Cont	tainer Descrip	tion		Number		Prese	vative
					_	2 3		1 1		
					_	5.13		81 8		
			-			5 13		3 9	-	
		2			_	- S		2 9		
			_							
					_					
	below measuring (	point		ml	milikiter		8.U.	standard units		
	below measuring j degrees Celsius feet	point		mS/cm	mililiter milisiemens per	rcentimeter	s.u. mv NTU	standard units milivolts Nephelometric Turk		

Project:	LVX	HEU Tru	noter	-		Project No.			P	age <u>1</u> of
Site Location:		r Jal	-							Date 10/20/
Site/Well No.	140-2	,				Replicate No.	-		Code	No
Weather:	HUST , C	MAYNE		-		Sampling Time:	Begin	10.01	-	End 10:51
Evacuation Da	ata	-					Field Paramet	ers		
Sounded Well I	Depth (ft bmp)	156,50	o l				Color	eleer	v	
Depth to Water	r (ft bmp)	138.23					Odor			
Gallons Pumpe	ed/Bailed		a contract of	(l. a. 0a			Appearance	CILLIA	lat	
Prior to Sampli	ng	FUILA	yarac	steeve		-	*IRON, ferrou	s NIA	1	
Sample Pump I Depth (ft bmp)		1					*SULFIDES			
Sample Pump o			Ca 14				Data Frame			
Settings (cpm/p			1					11		
Purge Time		Begin		End			Remarks		_	
umping Rate (	(gpm)			~	-		Complian Deser		aL)	10
			Ch				Sampling Perso	onnei	1-1	
vacuation Met	lhod	Hicku	newe							
Evacuation Met Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP	pH (su)	Temp	COND	Turbidity (NTU)		
Time (min)	Water Level		DO				COND 1 9,319			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level		DO (mg/L)	(mv)	(su)	C	1 1			
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv)	(su) 9, 16	C	1 1		Pre	servative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	servative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	servative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	servative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	servative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	Bervative
Time (min)	Water Level (feet)		DO (mg/L) 0.99	(mv) 1265	(su) 9, 16	C	9,319		Pre	servative
Time (min) NO: ST CLM Constituents	Water Level (feet)	Volume Purged	DO (mg/L) 0.99	(mv) 1965	(su) 9, 16	© 1.1.99	9,319		Pre	servative

roject:	CVX+	HERAHE	is trun	ster		Project No.			Pag	e <u>1</u> of <u>1</u>
ite Location:	COUL			_					Dat	· Le 120/14
ite/Well No.	mw-					Replicate No.	cup-1		Code No	
leather:	HUTIN			-		Sampling Time:	Begin	4:53 cup		d 91.53
acuation D	ata						Field Paramet	ers		
unded Well	Depth (ft bmp)			_	_		Color	Clear		_
pth to Wate	r (ft bmp)						Odor	<u> </u>		
illons Pumpe	d/Bailed			4.5			Appearance			
or to Sampli		FUU H	LICEVER	recve	_	-	*IRON, ferrou	, MLA		
mple Pump		N. 1					*SULFIDES	T		
epth (ft bmp)			NM	1		<		1		
ample Pump attings (cpm/j			1				Data Frame		6	
urge Time		Begin	1	End			Remarks	Dup-1 Sam	COLLEL	TEAE
umping Rate	(gpm)		-				Sampling Pers	onnel	JLIL	-B
vacuation Me	thod	Mydra	olecve	-		-			-	
Time (min)	Water Level	Volume Purged	DO (mg/L)	ORP (mv)	pH (su)	Temp ©	COND	Turbidity NTU		
1:53 am	-	-	2.15	141.2	7.51	21.16	0.695		1.22.24	1
										1 to
		1	1							1
			1							11
		-	-				-			
	-	-		-						
			-		-					1
	1 1	1	1	1				7		
Constituent	s Sampled		Con	tainer Descrij	ption		Number		Pres	ervative
			_							
								8 - S		
_			-				_	2 3		
					-		-			
		-			_	- C		1.1		
				_	-		_	2		_
ip qi	below measurin	a point		ml	mililiter	_	\$.U.	standard units		
				mS/cm		per centimeter	mv	milivolts		
F	degrees Celsius	,		mS	microsiemen		NTU	Nephelometric Tu		

Micropur	ge Sampl	ling Log								
roject:	LVX	HEU Tra	nster			Project No.			Page	e <u>1</u> of <u>1</u>
ite Location:	Cole	cal	_		_				Date	66/20/14
ite/Well No.	RW-	Lor				Replicate No.	Announcements - devised by the second	per c	Code No	
leather:	Hot , UL	iang				Sampling Time:	Begin	10:49 a.1	n En	toug an
vacuation Da	ita						Field Paramet	ers		
ounded Well I	Depth (ft bmp)					1.0	Color	clear		_
epth to Water	(ft bmp)						Odor			
allons Pumpe ior to Sampli		FULL IN		heve			Appearance	claid	4	
imple Pump		~					*IRON, ferrou	s NIA		
epth (ft bmp)			NI			-	*SULFIDES		_	
ample Pump ettings (cpm/j			La				Data Frame			
urge Time	<i>J</i> 31/	Begin	1	End		-	Remarks	-11-		
umping Rate	(000)	Degin		LIIG		-		V		
vacuation Me		HUNCHVA	Ulterc				Sampling Perso	onnel	JL/L	R
Time (min)	Water Level	Volume Purged	DO m=/L	ORP (mv)	pH (su)	Temp	COND	Turbidity	A	1
0:44 Cm	-	1	0.94	185.4	16.108	23.91	20.24	1-1		
		1	1			1			N	+
				1	1				1.1	
	1								1	11
	1				1.000					
							_			
Constituent	s Sampled		Cont	tainer Descri	ption		Number		Pres	ervative
					_	-		2112		
		2 3		-		2		2		
		2 3				2		5 3		
_		< ?				-				
		÷					_	2 2		
	_	-	-			-	-			
np	below measuring			ml	mililiter		s.u.	standard units		
•	degrees Celsius feet			mS/cm mS	milisiemens microsiemer	per centimeter 18	mv NTU	milivolts Nephelometric T	urbidity Units	
	millijters per min			N/A	not applicab		umhos/cm	Micromhos per c	entimeter	

Design & Consultancy for natural and built assets
S
9
5
R
2
<b>U</b>

onitoring Well	Monitoring Well Date Cauged	DTW (ft btoc)	Total Dep n (ft btoc)	Notes
MW-1	11/20/19	134.45	174.Z	
MW-2	11/20/19	12.72	168.57	
MW-2A	11/20/19	134.24	142.23	
MW-3	P 11/19/14	132.50		
MW-4	11/19/19	Aller Market	HOTEL + SALANDA	the the
MW-4A	11/19/19	134.95		
MW-5	NAMES .	136.91	05 TH	
MW-5A	HONOR AND	146.46	139.18	
9-MM	}		1	No las r exists lo de la Ier L.
MW-6R	11/19 19	136,04	[21.FO	
7-WM	11/20/19	35.5	62.58	
MW-8	11/20/13	133,-4	26.0	
6-MM	11/20	151.50	162.0	
MW-9A	11201	131.63	145.66	
MW-10	11/20/1	136.36	60.	
MW-11	11/20/19	1 0.04	£.24	
MW-12	11/20/9	139.65	1=4.57	
MW-14	1 20/19	12.00	1-8-1	
RW-1	11/20 9	133.63	95.2	
RW-2	11 19	1.5.08	172.60	
RW-2R	11 19 01	1210.71	TP. 221	

MW-3 132.5

10

Site Name: Level: Well Identification: Static Water Level: Stop Time:

Date:	11/17/19	
Personnel:	CFJCH	
Total Depth:	175.90	
Start Time:	333	

Depth (record in two feet	Conductivity (Denote Us/cm or MS/cm for each	Temperature
intervals)	recording)	(Fahrenheit or Celsius
33	0.709	20,67
135	6.693	20.53
137	681	20.4
131	0.179	10.40
Les l'	0,578	20.38
113	0,678	4738
45	5,70	0.38
147	Deb79	20.38
14	0.4579	10.11
19	a la HS	0.31
153	678	20.39
155	0.618	20.40
157	0.675	10.40
159	0.678	20,41
181	0.54	20,41
115	0.637	20.42
105	0,679	20.3
167	.679	20.43
161	0.171	Le alle
171	0.580	20.15
1192	. 679	20.4
		*

ite Name/ Location 52 Project Number	
Vell Identification MW-3 Inspection Date 11/19/19	Inspector C
Measured Well Depth 9 Measuring Point 17 De	epth to water 132.5
VISUAL INSPECTION	
<ul> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?.</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ul>	Y D N/A randed Y D N/A randew M N/A paint pe
PHYSICAL INSPECTION	
oes water-level indicator/measuring device travel freely down well casing (Enter depth to water in the space provided above.)	Y N N/A
Oces water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	(Y) N N/A
oes bailer/pump travel freely to and from bottom of well?	V N N/A
pon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y (N) N/A
oes the bailer contain excessive amounts of silt or rust?	Y N/A
oes water appear discolored or have an unusual odor or appearance?	Y N/A
the lock on the well cover/cap clean and fully functional?	Ŷ N N/A
OTES AND BSERVATIONS: Now & sol which play	<u>à</u>

MW-GR

Site Name: Well Identification: Static Water Level: Stop Time:

Depth (record in two feet intervals)	Conductivity (Denote <del>العارية) (Denote) (Us/cm</del> or MS/cm for each recording)	Temperature (F <del>ahrenheit</del> ar Celsiu
137	0 60	202.69
12/16/	0.458	20.03
41	P. 75 3	10.02
143	0.758	30-61
145	17	11
147	4	U.
144	44	11
131	0, 759	0
153	0.358	11
155	0.159	20 62
151	0.71	10.62
154	0.360	20.62
181	0.152	20.13
63	121761	0
165	OJAKO	11
167	0.759	12
169	0.754	20-64
171	0.354	20.64
173	0.75	20.65
175	CV 789	20.60
177	0.06	20-67
139	0.961	20.67
181	D. BB4	20.07
183	0,994	20.67
195	0.895	20.67

Date:

Personnel:

11/19/19

CF

Well Inspection Checklist and Reporting Form	
Site Name/ LocationProject Number	_
Well Identification W-IR Inspection Date 11/19/19 Inspector	e cm
00	er 136.04
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	<ul> <li>N N/A</li> <li>N N/A</li> <li>N N/A</li> <li>N N/A</li> <li>N N/A</li> <li>N N/A</li> </ul>
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	(N) N/A
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS:	

Z:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name: Well Identification: Static Water L Stop Time:

on: <u>Mu</u> el: <u>136.4</u>	-5A Personnel: 6 Total Depth: Start Time:	CF, CM 139.98 143-
<b>Depth</b> (record in two feet intervals)	Conductivity (Denote Us/em or MS/cm> for each recording)	Temperature
131		20 3

Well Inspection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification MW-5A Inspection Date 11/19/19 Inspector CF CM
Measured Well Depth 139.98 Measuring Point 157 Depth to water 136.46
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) N N/A</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? $(Y)$ N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y $(N)$ N/A
Does water appear discolored or have an unusual odor or appearance? $(\widehat{Y}) N N/A$
Is the lock on the well cover/cap clean and fully functional? Y $\vec{N}$ N/A
NOTES AND OBSERVATIONS: Did not deploy hydroxileous due to lock of Work where the particular has shall encode to lock of

2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name: Well Identification: Static Water Level: Stop Time:

200-	al	
n: 🕔	MW-5	
el:	136:91	
	1501	

Date:	11/19/1-2	
Personnel:	CE EM	
Total Depth:	177.50	
Start Time:	1440	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
138	5.0	20,83
1415	5-431	
142	5.402	30.77
144	5.403	20.35
166	5.404	2/2 75
148	5.404	the strength of the strength o
· SO	5.604	20.15
152	5. 103	20.75
154	5.02	0.76
156	5.402	20.76
SE	5.400	20.76
60	5.319	20.7
14.2	5.31	20.17
164	5.490	20.77
166	5,319	0.77
- LaH	5.400	20.78
36	21601	20.78
132	7.435	20.79
174	5.535	20.71
136	.618	0.71

Well Inspection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification MW-5 Inspection Date 11/1911 Inspector CM
Measured Well Depth 177.50 Measuring Point 174 Depth to water 136.91
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>Y N N/A</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? Y N N/A
Is the lock on the well cover/cap clean and fully functional? $(Y) N N/A$
NOTES AND OBSERVATIONS:
Page: Z:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name:	C
Well Identificat	tion:
Static Water Le	vel:
Stop Time:	

C	es	Tal	
ation:		MW-4A	
evel:		1 4.95	_
_	_	1522	

Date:	11/1 1
Personnel:	CF CI
Total Depth:	147.60
Start Time:	1516

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	<b>Temperature</b> (Fahrenheit or Celsius
Lie	1.6	20,63
0	1. 0	.63
140	1.626	20.63
2	1.760	20.62
144	1 2 7	22.63
146	.953	20
		-
_		

	+->
Measured Well Depth <u>147.60</u> Measuring Point <u>145</u> Depth to VISUAL INSPECTION 1) Is protective sleeve/cover in place and secure?	o water <u>13-,95</u>
<ol> <li>VISUAL INSPECTION</li> <li>Is protective sleeve/cover in place and secure?</li></ol>	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	+->
<ol> <li>Are hinges, latches, or locks functional and in good condition?</li></ol>	+->
<ul> <li>5) Is well cap in place and in good condition?</li></ul>	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	🔗 N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ý N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N/A
Does the bailer contain excessive amounts of silt or rust?	Y N/N/A
Does water appear discolored or have an unusual odor or appearance?	Ŷ N N/A
Is the lock on the well cover/cap clean and fully functional?	$(\mathbf{\tilde{Y}})$ N N/A
NOTES AND OBSERVATIONS: Slip distance to small amov	nnt st

2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi Janual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

a

54

Depth (record in two feet intervals) 136 1 9 10

14-4 135.06

Site Name:	Coo s
Well Identifica	
Static Water L	evel:
Stop Time:	54

	Date: Personnel: Total Depth: Start Time:	11,19 CF CI 77.64
Conductiv (Denote- <del>Us/c</del> m or M recordin	S/cm for each	<b>Temperature</b> (F <del>ahrenheit</del> or Celsius)
6-616		20 52
618		20.58
6.624		20160
51 52	1	0.62
7.21		20.6)
3,331		20:62
2 = . 4		storks
3		20,63
10.04		0.63
0: =		200

1-0	0.044	- Helt
1-2		0.62
144	7.20	12.61
146	1. 2. 2.	20.62
148	2 = . 4	stere's
156	3	20.63
152	.0.04	0.63
154	0.1	and a
156	1.57	20.64
158	.30	20.6-
1.0	17:32	20.63
162	311-389	20.6
164	2.5	20.65
156	30	20.66
108	41.7	0.66
130	42.3	20.6
172	20157	2017
174	36.2-	20.7
170	3.15	20 -
		11
	-	

Well Identification       MW-L       Inspection Date       All       Inspector       CM         Measured Well Depth       T.64       Measuring Point       FO       Depth to water       F5.06         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Image: N       N/A         2) Are hinges, latches, or locks functional and in good condition?       Image: N       N/A         3) Is concrete pad in satisfactory condition?       Image: N       N/A	Well Identification       MW-       Inspection Date       Massuring Point       Depth       Measured Well Depth       Measuring Point       Depth       Depth       Measured Well Depth       Measuring Point       Depth       Depth       Measured Well Depth       Measured Well Depth       Measuring Point       Depth       Depth       Measured Well Depth       Measuring Point       Depth       Depth       Measured Well Depth       Measured Well Depth       Measured Well Depth       Measured Well Measured Point       Depth       Depth       Measured Well Measured Well Point       Measured Well Point       Measured Well Measured Point       Measured Well Point       Measured Point       Measured Well Point       Measured Well Point       Measured Well Point       Measured Well Point       Measured Point       Measure	Site Name/Leasting	Dupin et Manulaur	
Measured Well Depth       Measuring Point       P       Depth to water       5.06         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       N       N       N         2) Are hinges, latches, or locks functional and in good condition?       N       N       N         3) Is concrete pad in satisfactory condition?       N       N       N         4) Is well name or other identification marked clearly on or near the well?       N       N         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         9) Does water-level indicator/measuring device travel freely down well casing?       N       N/A         10 coes water-level indicator/measuring device travel to bottom of well?       N       N/A         11 of the space provided above.)       N       N/A         12 obes bailer/pump travel freely to and from bottom of well?       N       N/A         13 obes bailer/pump travel freely to and from bottom of well?       Y       N       N/A         14 obes hau	Measured Well Depth       Measuring Point       Point       Depth to water       5.06         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       N       N       N         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         9) Does water-level indicator/measuring device travel freely down well casing?       N       N/A         10 coes water-level indicator/measuring device travel to bottom of well?       N       N/A         10 coes bailer/pump travel freely to and from bottom of well?       N       N/A         10 coes bailer/pump travel freely to and from bottom of well?       Y       N       N/A         10 coes the bailer contain excessive amounts of silt or rust?       Y       N       N/A	Site Name/ Location	Project Number	
VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Image: Normal Norman Norma Normal Normal Normal Normal Normal Normal Nor	VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Image: Normal Norma Norma Normal Normal Normal Normal Normal Normal Nore	Well Identification MW-	Inspection Date 4	Inspector CIM
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>A N N/A</li> <li>A Is well name or other identification marked clearly on or near the well?</li> <li>Y N N/A</li> <li>S measuring point marked or readily recognized?</li> <li>N N/A</li> <li>PHYSICAL INSPECTION</li> <li>Does water-level indicator/measuring device travel freely down well casing?</li> <li>(Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well?</li> <li>(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>(Y N N/A</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Y N/A</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Y N/A</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> <li>Y N N/A</li> </ul>	<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>A N N/A</li> <li>A Is well name or other identification marked clearly on or near the well?</li> <li>Y N N/A</li> <li>S measuring point marked or readily recognized?</li> <li>N N/A</li> <li>PHYSICAL INSPECTION</li> <li>Does water-level indicator/measuring device travel freely down well casing?</li> <li>(Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well?</li> <li>(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>(Y N N/A</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Y N/A</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Y N/A</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> <li>Y N N/A</li> </ul>	Measured Well Depth 77.64	Measuring Point 170 D	Depth to water 15.06
<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>7) M N/A</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>7) Toreat depth may be found on driling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> <li>7) N/A</li> </ul>	<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>8) N/A</li> <li>9) Does water-level indicator/measuring device travel freely down well casing?</li> <li>7) Tose water in the space provided above.)</li> <li>9) Does water-level indicator/measuring device travel to bottom of well?</li> <li>7) (Total depth may be found on driling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>9) Does bailer/pump travel freely to and from bottom of well?</li> <li>9) N/A</li> <li>9) Does the bailer contain excessive amounts of silt or rust?</li> <li>9) N/A</li> <li>9) Does water appear discolored or have an unusual odor or appearance?</li> <li>9) N/A</li> <li>9) N/A</li> <li>9) N/A</li> <li>9) N/A</li> </ul>		VISUAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? $\widehat{V}$ NN/ADoes water level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) $\widehat{V}$ NN/ADoes bailer/pump travel freely to and from bottom of well? (upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? $\widehat{V}$ NN/ADoes the bailer contain excessive amounts of silt or rust?Y $\widehat{V}$ N/ADoes water appear discolored or have an unusual odor or appearance?Y $\widehat{V}$ N/AIs the lock on the well cover/cap clean and fully functional? $\widehat{V}$ NN/ANOTES ANDHorizonal $\widehat{V}$ NN/A	Does water-level indicator/measuring device travel freely down well casing? $\widehat{V}$ NN/ADoes water level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) $\widehat{V}$ NN/ADoes bailer/pump travel freely to and from bottom of well? cuts, scrapes) suggestive of well damage from foreign objects in the well? $\widehat{V}$ NN/ADoes the bailer contain excessive amounts of silt or rust?Y $\widehat{V}$ N/ADoes water appear discolored or have an unusual odor or appearance?Y $\widehat{V}$ N/AIs the lock on the well cover/cap clean and fully functional? $\widehat{V}$ NN/A	<ol> <li>Are hinges, latches, or locks funct</li> <li>Is concrete pad in satisfactory con</li> <li>Is well name or other identification</li> <li>Is well cap in place and in good con</li> <li>Is measuring point marked or read</li> </ol>	tional and in good condition? dition? n marked clearly on or near the well? ondition? fily recognized?	
Image: Center depth to water in the space provided above.)       Image: Center depth to water in the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast	Image: Center depth to water in the space provided above.)       Image: Center depth to water in the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast of the space provided above.)       Image: Contrast of the space provided above.)         Image: Contrast		PHYSICAL INSPECTION	
<ul> <li>(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>(Y) N N/A</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Y (N) N/A</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Y (N) N/A</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Y (N) N/A</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> <li>(Y) N N/A</li> </ul>	<ul> <li>(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well?</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Poes water appear discolored or have an unusual odor or appearance?</li> <li>Y N/A</li> <li>Is the lock on the well cover/cap clean and fully functional?</li> <li>NOTES AND</li> </ul>			? (y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A Does the bailer contain excessive amounts of silt or rust? Y N/A Does water appear discolored or have an unusual odor or appearance? Y N/A Is the lock on the well cover/cap clean and fully functional? (Y N N/A NOTES AND	Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A Does the bailer contain excessive amounts of silt or rust? Y N/A Does water appear discolored or have an unusual odor or appearance? Y N/A Is the lock on the well cover/cap clean and fully functional? (Y) N N/A NOTES AND	(Total depth may be found on drilling logs,	well completion diagrams, or previous well	(v) n n/a
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N         Does the bailer contain excessive amounts of silt or rust?       Y       N         Does water appear discolored or have an unusual odor or appearance?       Y       N         Is the lock on the well cover/cap clean and fully functional?       Y       N         NOTES AND       NOTES AND       N	cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N         Does the bailer contain excessive amounts of silt or rust?       Y       N         Does water appear discolored or have an unusual odor or appearance?       Y       N         Is the lock on the well cover/cap clean and fully functional?       Y       N         NOTES AND       NOTES AND       N	Does bailer/pump travel freely to and	from bottom of well?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional? $Y$ N       N/A         NOTES AND $Y$ $N$ $N/A$	Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional? $Y$ N       N/A         NOTES AND $Y$ $N$ $N$	cuts, scrapes) suggestive of we		Y N N/A
Is the lock on the well cover/cap clean and fully functional? $(Y \ N \ N/A$ NOTES AND	Is the lock on the well cover/cap clean and fully functional? $(Y \ N \ N/A$ NOTES AND	Does the bailer contain excessive amo	unts of silt or rust?	Y N/A
NOTES AND	NOTES AND	Does water appear discolored or have	an unusual odor or appearance?	Y N/A
		Is the lock on the well cover/cap clean	and fully functional?	Y N N/A

Site Name: Well Identification Static Water Level: Stop Time:

C,	er Jal	
ion:	IMI-2R	
vel:	136.71	
6	2-11	

Date:	11 19	
Personnel:	1. 8 0. 10V	
Total Depth:	188.97	
Start Time:	161	

Depth (record in two feet	Conductivity (Denote <del>Us/cm</del> or MS/cm for each	Temperature
intervals)	recording)	(+ahrenheit-or Celsius)
137	1.578	20.72
139	. 58	2:.73
141	.735	125.7×
43	= 21	.74
45	5-81	0.14
47		2.75
14	1.03	1/
151	20 195	11
15	. 99	11
125	2.00	II
157	2.03	20.76
159	2.5	(1
161	.06	11
63	-2.07	11
65	22.09	2001-
	and the second sec	11
169	2.17	<i>U</i>
17	.20	Ð
13	- 2	11
145	22.63	20. 8
11=7	Į l	()
170	10	ti .
181	]/	μ
3	22.45	207
192	22-44	2016
14	43	20.78
2	22.43	C2.75
	15	
Well Inspection Checklist and Reporting Form		
---	--	
Site Name/ Location Jal Project Number		
Well Identification RW-2K Inspection Date 11/19/19 Inspector	p.	
Measured Well Depth 188.97 Measuring Point 18 Depth to water	71	
VISUAL INSPECTION		
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	N N/A N N/A N N/A N N/A N N/A N N/A	
PHYSICAL INSPECTION		
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	N N/A	
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	N N/A	
Does bailer/pump travel freely to and from bottom of well?	N/A	
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N/A	
Does the bailer contain excessive amounts of silt or rust? Y $(N)$	N/A	
Does water appear discolored or have an unusual odor or appearance? Y	N/A	
Is the lock on the well cover/cap clean and fully functional? $(\vec{Y} \ N$	N/A	
NOTES AND OBSERVATIONS:	_	
	_	

2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

20110	n
n:	1º W-2
l:	35.08
	-53

Date:	HUDIO	
Personnel:	CHILRY	-
Total Depth:	172.60	
Start Time:	26	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
13:	1.8.2	2000
0	2 001	2.29
0		20.70
12	3	12.71
14	54	25.71
4-	2.553	112 72
198	- 3	20.73
150	0	20.73
52	36	20.70
156	5.91	36.74
176	27	21.74
153	.52	74
0	15-66	22.74
-1+2	5 - 3	20.74
1.94	16.11	20,-

Well Inspection Checklist and Reporting Form	
Site Name/ Location Project Number	
Well Identification	tor_Cf/
Measured Well Depth 172.60 Measuring Point 64 Depth to	water 135.08
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	X N N/A X N N/A X N N/A X N N/A X N N/A X N N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	V N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y (i) n/a
Does the bailer contain excessive amounts of silt or rust?	Y N/A
Does water appear discolored or have an unusual odor or appearance?	Y N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
OBSERVATIONS: Mar chips on the stand	

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Mu-

Site Name:	ner
Well Identificat	tion:
Static Water Le	vel:
Stop Time:	F

0821	Start Time:	0806
Depth (record in two feet	Conductivity (Denote Us/em or MS/cm for each recording)	Temperature
intervals)	1.277	
35	.264	2.4
137		7.46
1.7	:263	7.42
14	2	7.4
143	.266	739
-45		5.8F
147	1,275	21
49	17-6	11
131	28-	7.47
53	332	7.+6
15	55	Fou
157	8	7.83
15	1.246	7.33
- 6		7.34
-3	4,335	1.3
15	4,349	7.35
1.7	L 130	7.34
145-1		21724
71	4.8	20.39
175	4, 73	20.38

Date:

Personnel:

1120 .0

CM

CF

Well Inspection Checklist and Reporting Form	L
Site Name/Location er er Jal Project Number	
Well Identification W-1 Inspection Date 11/ 1/1 Inspec	tor CLAN
	0 1 1
Measured Well Depth 4.2 Measuring Point 1 Depth to	water 54,47
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> </ol>	
7) Does well opening/stickup show signs of damage or deterioration?	Y / N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Ý N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	(Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Ý N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N/A
Does the bailer contain excessive amounts of silt or rust?	$Y(\hat{N}) N/A$
Does water appear discolored or have an unusual odor or appearance?	Ý N N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSER ATIONS: THE ISSUE OF A	Small and and

Page: 2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Seminal\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

ation:	1-12	-
	- Will	_
Level:	1-7.6	

Date:	1120 9
Personnel:	CF CH
Total Depth:	174.57
Start Time:	0833

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or 1/15/cm for each recording)	Temperature
141	.201	20.49
43	201	20.57
4	.200	Tele be
47	213	15 32
11-11	1.248	20=3
15	,29	20.75
153	.383	61
105	.442	L
1-7	1.511	10
159	1, 514	11
16	1.620	11
13	1.651	10
165	.663	le
6	66	(f
161	- Neige	11
131	1.671	075
173	- 409	20.72
	1	

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification MW-12 Inspection Date 11/20/19 Inspector CF, CM
Measured Well Depth 4.57 Measuring Point 17 Depth to water 139.65
VISUAL INSPECTION
1) Is protective sleeve/cover in place and secure?       Image: Normal State in
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Y) N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well? $\begin{pmatrix} Y \\ Y \end{pmatrix}$ N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y $\begin{pmatrix} n \\ N \end{pmatrix}$ N/A
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional? $(Y)$ N N/A
NOTES AND OBSERVATIONS:

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M

Site Name: Well Identification: Static Water Level: Stop Time:

34.		
0921	Start Time:	7
Depth (record in two feet intervals)	Conductivity (Denote <del>-Us/e</del> m or MS/cm for each recording)	Temperature
135	. 817	20.3
177	× 809	2.51
129	. 813	.63
141	, 325	70.64

Date:

Personnel:

1120/19

DA.

CE

Well Inspection Checklist and Reporting Form
Site Name/ Location Project Number
Well Identification 1 W-2 A Inspection Date 1/20/19 Inspector CM
Measured Well Depth 12.23 Measuring Point 139 Depth to water 0921
VISUAL INSPECTION
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>N N/A</li> <li>Is measuring point marked or readily recognized?</li> <li>N N/A</li> <li>N N/A</li></ol>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y N N/A
Does water appear discolored or have an unusual odor or appearance? $Y (N) N/A$
Is the lock on the well cover/cap clean and fully functional? $(Y) N N/A$
NOTES AND OBSERVATIONS:
Page:

ation:	H 2-7	-
Level:	124.21	-

Date:	1209
Personnel:	CF. CM
Total Depth:	68.7
Start Time:	0928

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
intervals)		
7	0.415	15.53
7	2.41	.63
154	1.00	5.0.66
181	5.431	202.69
143	12 1455	0.70
145	0.917	20.7
7	0.2i91	20,72
149	3,50	20.73
15		
158		
155		
157		
159		
16.1	1	
-3		
15		
167		
	2	
		-

Site Name/ Location Project Number	
Well Identification MW-2Inspection Date 11/20/19Inspec	otor NFCM
Measured Well Depth 168.57 Measuring Point 14 Depth to	water 134.21
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	
PHYSICAL INSPECTION	_
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Y N N/A
Does bailer/pump travel freely to and from bottom of well?	Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	y (n) n/a
Does the bailer contain excessive amounts of silt or rust?	Y (N) N/A
Does water appear discolored or have an unusual odor or appearance?	Y N/A
Is the lock on the well cover/cap clean and fully functional?	Y N N/A
NOTES AND OBSERVATIONS: C2	

1.73	ir al	
on:	MW-10	
vel:	136.36	
	1004	

Date:	20 4	
Personnel:	CF. M	
Total Depth:	166-31	
Start Time:	0 - 6	

Depth (record in two feet	Conductivity (Denote <del>Us/cm</del> or MS/cm for each	Temperature
intervals)	recording)	(Fahrenheit or Celsius
138	. 310	20.02
140	1.331	20.07
142	1.356	2268
144	1.383	20.7
146	1.4(1	20,71
148	1.456	20.72
150	1.406	U U
152	1.548	4
154	1-515	11
156	10 656	t i
158	1-6-12	11
Rel IC	1-015	()

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification MW-10 Inspection Date 11/20/19 Inspector 12.1M
Measured Well Depth 0.71 Measuring Point 156 Depth to water 136.36
VISUAL INSPECTION
<ul> <li>1) Is protective sleeve/cover in place and secure?</li> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) N</li> </ul>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y $(N = N/A)$
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional?
NOTES AND OBSERVATIONS:

Page: 2:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi-annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Site Name:	er Jal
Well Identification:	MW-14
Static Water Level:	130.49
Stop Time:	01

Date:	11/20/19
Personnel:	CF CM
Total Depth:	178.92
Start Time:	01

Depth (record in two feet	Conductivity (Denote-Us/cm or MS/cm for each	Temperature
intervals	recording)	
132	6.65	20.56
134	5-664	20.60
136	O. Kette	20.61
133	61	20.62
140	1	20.63
142	11	i (
144	6.665	20.64
146	0.664	u u
148	11	20.65
150		4
152	11	(1
154	0.663	11
150	11	20.66
159	0.662	20.66
10	Jakhiz	20.50
12	0-053	20,67
165	4	ti -
60		ti
168	11	Ц
170	1	4
472		11
175		
174		4
1712	110	10.000

Well Inspection Checklist and Reporting Form
Site Name/ Location
Well Identification Murile Inspection Date 11/26/14 Inspector CM
Measured Well Depth 190.92 Measuring Point 14 Depth to water 170.48
VISUAL INSPECTION
1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       V       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       V       N       N/A         6) Is measuring point marked or readily recognized?       V       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y (N) N/A
Does water appear discolored or have an unusual odor or appearance? Y $\vec{N}$ N/A
Is the lock on the well cover/cap clean and fully functional? $(Y) N N/A$
NOTES AND OBSERVATIONS:
Dara

Page: Z:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Seminal\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

Phon I

13-.5

Date:	11/20/19	
Personnel:	CF M	
Total Depth:	1-2.58	
Start Time:	1050	

Conductivity (Denote Us/em or MS/cm for each recording)	Temperature
5.295	20.76
	20.72
	30.71
- 212	12.70
6.720	"(
1	11
	и
9 : 092	21
91	71
14.7	L)
12.51	4
12.50	11
12.61	10
12,67	i (
	recording) 5.495 5.13 .05 .212 6.720 7.20

<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li></ul>	1	-
Measured Well Depth 162.53       Measuring Point 60       Depth to water 135.5         VISUAL INSPECTION         1) Is protective sleeve/cover in place and secure?       Image: Normal State	Well Identification	FCM
1) Is protective sleeve/cover in place and secure?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional and in good condition?       Image: Statches, or locks functional good condition?       Image: Statches, or locks, statches, statches, or locks, statches, or lock, statches, statches, or lock, statches, statches, or lock, or lock, statches, statches, or lock, or lock, statches, or lock, or lock, or lock, statches, statches, or lock, or l		
1) Is protective sleeve/cover in place and secure?       Image: Normal State Sta		1 00
2) Are hinges, latches, or locks functional and in good condition?       N       N/         3) Is concrete pad in satisfactory condition?       N       N/         3) Is concrete pad in satisfactory condition?       N       N/         4) Is well name or other identification marked clearly on or near the well?       N       N/         5) Is well cap in place and in good condition?       N       N/         6) Is measuring point marked or readily recognized?       N       N/         7) Does well opening/stickup show signs of damage or deterioration?       N       N/         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/         7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Poes water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       <	VISUAL INSPECTION	
<ul> <li>3) Is concrete pad in satisfactory condition?</li></ul>		
<ul> <li>4) Is well name or other identification marked clearly on or near the well?</li></ul>		-
<ul> <li>5) Is well cap in place and in good condition?</li></ul>		
<ul> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>PHYSICAL INSPECTION</li> <li>Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)</li> <li>Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)</li> <li>Does bailer/pump travel freely to and from bottom of well? (Y) N N/A</li> <li>Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?</li> <li>Does the bailer contain excessive amounts of silt or rust?</li> <li>Y N N/A</li> <li>Does water appear discolored or have an unusual odor or appearance?</li> <li>Y N N/A</li> <li>NOTES AND</li> </ul>		
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>		
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Y       N       N/A         Does bailer/pump travel freely to and from bottom of well?       Y       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       H       Y       N       N/A		
(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?         Does the bailer contain excessive amounts of silt or rust?         Poes water appear discolored or have an unusual odor or appearance?         Y       N         N/A         NOTES AND	PHYSICAL INSPECTION	
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.) Does bailer/pump travel freely to and from bottom of well? Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Does the bailer contain excessive amounts of silt or rust? Does water appear discolored or have an unusual odor or appearance? Is the lock on the well cover/cap clean and fully functional? NOTES AND		Y N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       N       N       N       N	(Total depth may be found on drilling logs, well completion diagrams, or previous well	Y N N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N       N/A         NOTES AND       N       N       N	Does bailer/pump travel freely to and from bottom of well?	/ /N N/A
Does water appear discolored or have an unusual odor or appearance? Y $\stackrel{\frown}{N}$ N/A Is the lock on the well cover/cap clean and fully functional? $\stackrel{\frown}{Y}$ N N/A NOTES AND	cuts, scrapes) suggestive of well damage from foreign objects in	) <b>N/A</b>
Is the lock on the well cover/cap clean and fully functional?	Does the bailer contain excessive amounts of silt or rust? Y	N N/A
NOTES AND	Does water appear discolored or have an unusual odor or appearance? Y	N N/A
	Is the lock on the well cover/cap clean and fully functional?	N N/A
OBSERVATIONS:	NOTES AND	
	OBSERVATIONS:	
		Page: and Semi-jannual\Owen,

Mui-B

Site Name: Well Identification: Static Water Level: Stop Time:

ec

26	왕 년 Total Depth: Start Time:	146-92
Depth (record in two feet intervals	Conductivity (Denoted/s/cm-or * S/cm for each recording)	Temperature (Fahrenheit or Ceblu
34	0a 516	
136		0.99
138	.500	20.75
140	2493	20.7
142	0.48	
144		20.64
144		(1
140	.481	10
		0
	7	
	Y A.	
	1	
		1

Date:

Personnel:

11/20/2019

CM

CF

Site Name/ Location	
	pector CM
Measured Well Depth 146.92 Measuring Point 136 Depth	to water 133,84
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Ø N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	(y) n n/a
Does bailer/pump travel freely to and from bottom of well?	Ý n n/a
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y (Ñ) N/A
Does water appear discolored or have an unusual odor or appearance?	Y (N) N/A
s the lock on the well cover/cap clean and fully functional?	X N N/A
NOTES AND DESERVATIONS: MINOR AND MELSON CON 190 Br	Cularity

	5 a	
ation:	MW-9	
_evel:	13186	
2.	N-	

Date:	11/2020	
Personnel:	CF M	1
Total Depth:	162.0	
Start Time:	1145	

Depth (record in two feet intervals)	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
132	10	20.82
134	7	20.
136	a 5-8	20.00
8	1. 22	20.75
40	. 3	30.75
122	2.2	20.75
4	-672	20.75
146	.849	0.76
148	2-178	
(50	30077	20.76
152	20-	20.75
154	1308	20.75
156	3.280	20.75
158	3- 1=6	20.75
160	.245	20:76
1:2	3.058	.76

<ul> <li>2) Are hinges, latches, or locks functional and in good condition?</li> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> </ul>	Site Name/ Location Project Number		
1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N         N/A       Y       N       N/A         PHYSICAL INSPECTION       Y       N       N/A         Does water-level indicator/measuring device travel to bottom of well?       N       N/A         (Total depti may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depti in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N/A         Oces the bailer contain excessive amounts of silt or rust?       Y       N/A       N/A         Oces water appear discolored or have an unusual odor or appearance?<	Well Identification March Inspection Date 11/20/2019 Inspection	ector F (	CM
1) Is protective sleeve/cover in place and secure?       N       N/A         2) Are hinges, latches, or locks functional and in good condition?       N       N/A         3) Is concrete pad in satisfactory condition?       N       N/A         4) Is well name or other identification marked clearly on or near the well?       N       N/A         5) Is well cap in place and in good condition?       N       N/A         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N/A       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N/A       <	Measured Well Depth 162 Measuring Point 3-86 Depth	to water 31	.86
2)       Are hinges, latches, or locks functional and in good condition?       Image: Source of the source	VISUAL INSPECTION		
<ul> <li>3) Is concrete pad in satisfactory condition?</li> <li>4) Is well name or other identification marked clearly on or near the well?</li> <li>5) Is well cap in place and in good condition?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does well opening/stickup show signs of damage or deterioration?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>6) Is measuring point marked or readily recognized?</li> <li>7) Does water-level indicator/measuring device travel freely down well casing?</li> <li>7) To depti may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depti may be found on drilling logs, well completion diagrams, or previous well</li> <li>7) Does bailer/pump travel freely to and from bottom of well?</li> <li>7) N/A</li> <li>7) Does the bailer contain excessive amounts of silt or rust?</li> <li>7) N/A</li> <li>7) Does water appear discolored or have an unusual odor or appearance?</li> <li>7) N/A</li> <li>7) N/A</li> </ul>			
5) Is well cap in place and in good condition?       N       N         6) Is measuring point marked or readily recognized?       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         7) Does well opening/stickup show signs of damage or deterioration?       Y       N       N/A         PHYSICAL INSPECTION         Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N/A         X       N       N/A         NOTES AND       N       N/A	3) Is concrete pad in satisfactory condition?		
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>			
<ul> <li>7) Does well opening/stickup show signs of damage or deterioration?</li></ul>			
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)       M       N       N/A         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       M       N/A         Does bailer/pump travel freely to and from bottom of well?       M       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       M       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       M       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       M       N/A         Is the lock on the well cover/cap clean and fully functional?       N       N/A         NOTES AND       N       N       N/A			~
(Enter depth to water in the space provided above.)         Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       N       N/A         Does bailer/pump travel freely to and from bottom of well?       N       N/A         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N       N/A         Is the lock on the well cover/cap clean and fully functional?       N       N/A	PHYSICAL INSPECTION		
(Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)       Image: Completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)         Does bailer/pump travel freely to and from bottom of well?       Image: Completion diagrams, or previous well         Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?       Image: Completion diagrams, or previous well         Does the bailer contain excessive amounts of silt or rust?       Y       Image: N/A         Does water appear discolored or have an unusual odor or appearance?       Y       Image: N/A         Is the lock on the well cover/cap clean and fully functional?       Image: N/A       Image: N/A         NOTES AND       Image: N/A       Image: N/A		Ð	N N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A Does the bailer contain excessive amounts of silt or rust? Y N/A Does water appear discolored or have an unusual odor or appearance? Y N/A Is the lock on the well cover/cap clean and fully functional? (Y N/A NOTES AND	(Total depth may be found on drilling logs, well completion diagrams, or previous well	(E)	N N/A
cuts, scrapes) suggestive of well damage from foreign objects in the well?       Y       N/A         Does the bailer contain excessive amounts of silt or rust?       Y       N/A         Does water appear discolored or have an unusual odor or appearance?       Y       N/A         Is the lock on the well cover/cap clean and fully functional?       Y       N/A         NOTES AND       Y       N/A	Does bailer/pump travel freely to and from bottom of well?	BY N	N/A
Does water appear discolored or have an unusual odor or appearance? Y N/A Is the lock on the well cover/cap clean and fully functional? Y N/A NOTES AND	cuts, scrapes) suggestive of well damage from foreign objects in	Y N	N/A
Is the lock on the well cover/cap clean and fully functional?	Does the bailer contain excessive amounts of silt or rust?	YN	) N/A
NOTES AND	Does water appear discolored or have an unusual odor or appearance?	Y N	N/A
	s the lock on the well cover/cap clean and fully functional?	Ŷ N	N/A
OBSERVATIONS:		6	
	DBSERVATIONS:	A labor	ha .
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ie:	r Ja	
ntification:	MW-9A	
ater Level:	13.63	
e: 12	20	

11/20/2019	
FCM	
1 5.66	1
12/2	1
	1-5.66

Depth (record in two feet	Conductivity (Denote Us/sm or MS/cm for each	Temperature
intervals)	recording)	Pannenheit or Celsius
1.2	. 966	20.86
134	6	20.78
136	.221	· 0, 7
2	«T-2	- 76
140	2.253	0.77
142	2.27	20.73
146	2.2	20.77

Well Inspection Checklist and Reporting Form	
Site Name/ Location	_
Well Identification MW-94 Inspection Date 12019 Inspector	
Measured Well Depth 145.66 Measuring Point 142 Depth to water_	3.63
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>	Y         N         N/A           Y         N         N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	D N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	YN N/A
Does bailer/pump travel freely to and from bottom of well?	⊃ <sub>N N/A</sub>
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y	N/A
Does the bailer contain excessive amounts of silt or rust? Y	N/A
Does water appear discolored or have an unusual odor or appearance? Y	N N/A
Is the lock on the well cover/cap clean and fully functional?	Dn n/a
NOTES AND OBSERVATIONS: AND A AND A AND A	
:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring C ooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc	Page: 24 and Semi-annual\Owen,

Site Name: Well Identification: Static Water Level: Stop Time:

10.	OL Total Depth: Start Time:	172.3
Depth record in two feet intervals	Conductivity (Denote Us/cm or MS/cm for each recording)	Temperature
(30	0-6-2	20.85
32	0.6-0	20,79
134		20.76
136	Card St.	20.75
192	0.639	20,75
140	-63	11
142	6.633	81
44	. 3	С(
146	.6	(
148	5-641	(1
150	0-642	(1
152	0.646	(I
154	,650	(I
156	4154	ti
158	0.660	دا
160	Cite	(i
162	+ 1 7	11
64	7	11
166	5,673	11
68	C. 6-1-	(1
170	11	11
172	<i>u</i> 1	20.76

1	
1, 1	
1	
	1

Well Insuection Checklist and Reporting Form
Site Name/ Location Jal Project Number
Well Identification Inspection Date Inspector Inspector
Measured Well Depth 172. Measuring Point 8 Depth to water 30.04
VISUAL INSPECTION
<ol> <li>Is protective sleeve/cover in place and secure?</li> <li>Are hinges, latches, or locks functional and in good condition?</li> <li>Is concrete pad in satisfactory condition?</li> <li>Is well name or other identification marked clearly on or near the well?</li> <li>Is well cap in place and in good condition?</li> <li>Is measuring point marked or readily recognized?</li> <li>Does well opening/stickup show signs of damage or deterioration?</li> </ol>
PHYSICAL INSPECTION
Does water-level indicator/measuring device travel freely down well casing? N N/A (Enter depth to water in the space provided above.)
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)
Does bailer/pump travel freely to and from bottom of well?
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well? Y N/A
Does the bailer contain excessive amounts of silt or rust? Y N/A
Does water appear discolored or have an unusual odor or appearance? Y N/A
Is the lock on the well cover/cap clean and fully functional? $(Y N N/A)$
NOTES AND OBSERVATIONS: Sign Sign 1
Pager

Page: Z:\Houston-TX\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\2019\1 - Field Prep\Work Request Packages\November 2019 Groundwater monitoring Q4 and Semi annual\Owen, Cooper and Erwin\Cooper Jal\Forms\Well Inspection Forms.doc

BU-L
.63

Date:	11/2011
Personnel:	F, CI-L
Total Depth:	9
Start Time:	1403

Depth (record in two feet intervals)	(Denote Us/em or MS/cm for each recording)	Temperature (Fahrenheit o Celsius
134	. 450	20, 8
136	1	
130	1	- 18
140	1425	20.13
-2	.48-	20-2
(4br	.615	20.62
146	2.0-8	20.62
148		0.62
150	4 8	20.62
152		20.62
	6. 183	
156	11.0	20.63
	26.53	2:.63
<u>(5%</u>	27.00	20.00
62	23.5	20.64

Well Inspection Checklist and Reporting Form	3
Site Name/ Location Project Number	
Well Identification AW-1 Inspection Date 11 20 [ Inspec	tor Gr CM
Measured Well Depth 63.79 Measuring Point 68 Depth to	water 133.63
VISUAL INSPECTION	
<ol> <li>Is protective sleeve/cover in place and secure?</li></ol>	Y         N         N/A           M         N/A         N/A           N         N/A         N/A
PHYSICAL INSPECTION	
Does water-level indicator/measuring device travel freely down well casing? (Enter depth to water in the space provided above.)	Y N N/A
Does water-level indicator/measuring device travel to bottom of well? (Total depth may be found on drilling logs, well completion diagrams, or previous well inspection forms. Enter total depth in the space provided above.)	Ŷ N N/A
Does bailer/pump travel freely to and from bottom of well?	YN N/A
Upon removal from well, does bailer show evidence of damage (gouges, cuts, scrapes) suggestive of well damage from foreign objects in the well?	Y N N/A
Does the bailer contain excessive amounts of silt or rust?	Y N N/A
Does water appear discolored or have an unusual odor or appearance?	Y N N/A
Is the lock on the well cover/cap clean and fully functional?	YN N/A
NOTES AND OBSERVATIONS: added and manufations and a	nduy]

# **APPENDIX C**

**Cumulative Summary of Groundwater Analytical Results** 



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
		ater Standar			250	1.60	10	600.00					1,000
MW-1	9/16/97			280.00	8,500.00			1,100.00	520.00	630.00	50.00	4,300.00	15,000.00
	2/25/98 2/14/01	 <1.00	306.00	280.00 306.00	5,600.00 11,000.00	4.40	7.70	570.00 1,000.00	285.00 374.00	520.00 780.00	116.00 236.00	2,900.00 5,236.00	9,300.00 20,000.00
	5/17/02	<1.00	208.00	208.00	237.00	5.83	3.28	86.90	45.70	20.10	11.90	184.00	784.00
	10/23/02				168.00			96.80					696.00
	5/21/03	<1.00	290.00	290.00	6,600.00	<8.00	10.90	875.00	238.00	475.00	96.50	3,410.00	13,200.00
	11/25/03	<1.00	250.00	250.00	402.00	7.03	2.72	125.00	19.20	22.00	18.50	294.00	1,158.00
	5/12/04	<1.00	264.00	264.00	504.00	7.31	2.70	136.00	17.20	23.10	22.40	355.00	1,328.00
	11/16/04	<1.00	232.00	232.00	384.00	4.94	3.30	103.00	29.20	22.70	25.40	373.00	952.00
	11/16/05	<10.00	262.00	262.00	1,210.00	3.00	2.40	215 D1	85.40	92.60	23.00	847.00 172.00	<b>2,640.00</b> 624.00
	11/14/06 11/16/07	<10.00 <10.00	200.00 255.00	200.00 255.00	96.00 4,250.00	4.20 3.70	2.00 3.90 D1	76.00 602 D1	13.20 154.00	6.49 187.00	15.60 54.00	2,100 D1	624.00 10,900.00
	11/4/08	<5.00	190.00	190.00	110.00	6.30	1.60	83.00	10.00	5.80	7.90	180.00	590.00
	11/3/09	<10.00	270.00	270.00	4,100.00	4.10	2.80	640.00	190.00	250.00	61.00	2,300.00	8.000.00
	11/10/10	<10.00	223.00	223.00	2,670.00	1.92	2.62	373.00	138.00	196.00	21.50	1,480.00	5,020.00
	11/10/11	<5.00	209.00	209.00	3,220.00	1.02	2.37	275.00	169.00	176.00	22.50	1,340.00	5,250.00
Dup	11/10/11	<5.00	213.00	213.00	2,930.00	1.05	2.35	240.00	183.00	197.00	22.60	1,480.00	4,640.00
	10/11/12	<5.00	190.00	190.00	2,190.00	6.74	4.52	301.00	132.00	145.00	17.90	1,140.00	1,880.00
	10/8/13	<6.00	211.00	211.00	1,890.00	1.46	2.39	247.00	131.00	114.00	15.30	914.00	2,380.00
	10/7/14	<4.00	205.00	205.00	1,700.00	0.46 <4.00	2.37	277.00	118.00	126.00	14.90	860.00	3,690.00
	10/21/15 10/18/16				182.00 1,320.00	<4.00		78.10 221.00					559.00 2,700.00
	10/24/17				148.00	2.57		79.40					594.00
	10/18/18				1,290.00	0.79		215.00					2,360.00
	6/20/19				1,110.00	-							2,510.00
	11/24/19				1,110.00			222.00					2,190.00
MW-2	2/25/98			210.00	5,900.00	-		760.00	840.00	380.00	30.00	2,650.00	9,400.00
2	4/9/98			290.00	8,200.00			990.00	1,100.00	490.00	29.00	3,430.00	15,000.00
	2/14/01	<1.00	184.00	184.00	7,400.00	2.30	4.10	870.00	1,025.00	488.00	48.50	3,189.00	15,000.00
	5/17/02	<1.00	160.00	160.00	3,200.00	1.72	3.18	483.00	587.00	239.00	35.60	1,160.00	6,040.00
	10/23/02				2,920.00			451.00					6,770.00
	5/22/03	<1.00	158.00	158.00	2,550.00	2.04	3.87	386.00	448.00	176.00	20.00	1,020.00	5,880.00
	11/25/03	<1.00	160.00	160.00	3,330.00	<4.00	5.63	446.00	555.00	227.00	32.00	1,120.00	6,760.00
	5/12/04	<1.00 <1.00	146.00 120.00	146.00 120.00	1,750.00 430.00	<2.00 <1.00	2.78 2.13	246.00 56.90	308.00 104.00	112.00 29.40	29.70 22.40	549.00 158.00	3,965.00 832.00
	11/16/04 11/16/05	<10.00	171.00	120.00	430.00	0.72	2.13	645 D1	594.00	29.40	22.40	3,290.00	10,000.00
	11/14/06	<10.00	160.00	160.00	3,500.00	0.72 0.78 N	2.00	470.00	535.00	212.00	21.00	15,400.00	8,260.00
	11/14/07	<10.00	178.00	178.00	3,280.00	0.76	1.93	462 D1	449.00	152.00	16.20	1310 D1	9,110.00
	11/4/08	<5.00	150.00	150.00	2,900.00	<1.0	1.10	430.00	380.00	160.00	26.00	1,200.00	5,600.00
	11/16/09	<10.00	150.00	150.00	2,000.00	1.10	1.60	340.00	290.00	120.00	20.00	750.00	4,300.00
	11/12/10	<10.00	186.00	186.00	1,890.00	0.73	1.86	327.00	326.00	120.00	9.80	795.00	3,680.00
	11/10/11	<5.00	175.00	175.00	1,480.00	0.81	1.31	150.00	227.00	83.20	9.75	668.00	2,860.00
	10/11/12	< 5.00	149.00	149.00	524.00	0.55	1.92	231.00	119.00	31.70	8.78	286.00	1,090.00
	10/8/13 10/7/14	<6.00 <4.00	269.00 196.00	269.00 196.00	1,180.00 695.00	1.20 0.52	<0.10 <0.023	169.00 147.00	178.00 143.00	64.70 47.50	8.16 7.30	505.00 343.00	2,520.00 1,310.00
	10/21/15	~4.00			27.10	<2.00		58.60		47.50	7.30		388.00
	10/18/16				26.70	<0.50		34.40					352.00
	10/25/17				35.80	1.00		36.30					331.00
	10/18/18				65.90	0.66		48.50					384.00
	6/20/19				283.00								960.00
	11/23/19				27.70			42.00					274.00
MW-2A	2/26/98			190.00	280.00			330.00	144.00	36.00	5.70	215.00	1,200.00
	2/14/01	<1.00	162.00	162.00	44.00	1.30	2.30	76.00	64.40	16.70	7.02	45.50	390.00
	5/15/02	<1.00	176.00	176.00	36.60	<1.00	2.34	79.10	57.60	13.90	4.35	43.80	435.00
	10/23/02				44.30			97.00					425.00
	5/22/03	<1.00	168.00	168.00	40.50	<1.00	2.18	75.50	67.20	14.30	3.76	47.90	418.00
	11/25/03	<1.00	166.00 176.00	166.00	43.10 44.80	1.00	2.23	77.40	51.70	14.40	3.98	43.80	452.00
	5/12/04 11/16/04	<1.00 <1.00	164.00	176.00 164.00	52.50	<1.00 1.22	2.24 2.78	76.50 75.40	62.90 68.80	15.00 15.30	3.66 3.98	43.60 49.10	440.00 428.00
	11/16/04	<10.00	151.00	151.00	56.80	0.60	2.78	75.1 D1	157.00	18.00	4.20	49.10	428.00 630 N
	11/14/06	<10.00	180.00	180.00	49.00	0.55	1.60	76.00	69.80	15.60	3.47	49.90	488.00
	11/14/07	<10.00	170.00	170.00	74.60	0.58	1.51	66.8 D1	666.00	15.30	<5.00	45.40	504.00
	11/4/08	<5.00	220.00	220.00	68.00	0.49	1.40	74.00	67.00	15.00	3.20	42.00	470.00
	11/3/09	<10.00	230.00	230.00	62.00	0.59	1.60	81.00	66.00	15.00	3.40	50.00	480.00
	11/11/10	<10.00	158.00	158.00	86.10	0.45	1.73	74.00	53.90	14.90	2.86	42.80	474.00
	11/10/11	< 5.00	175.00	175.00	129.00	0.28	1.25	101.00	92.50	23.30	4.17	64.70	614.00
	10/11/12	< 5.00	173.00	173.00	76.50	0.46	1.60	79.40	69.20	15.70	3.62	45.30	500.00
	10/8/13	<6.00	248.00	248.00	78.60	0.41	0.62	75.40	92.60	18.70	4.06	51.20	496.00
	10/7/14 10/21/15	<4.00	188.00	188.00	72.50 76.70	0.20 <4.00	1.55	79.40 77.50	77.10	17.20	3.00	44.30	496.00 441.00
	10/21/15				84.60	<4.00		83.40					441.00
	10/18/10				83.10	1.23		77.30					512.00
	10/18/18				103.00	0.67		88.30					491.00
	6/20/19				86.50	-							554.00
	11/23/19				88.00			76.50					414.00
1		i		i					1		1	1	



NHW         Construint         Test         P26         F1.0         P1.0         P20.0         P1.0         P21.0         P20.0         P2	Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
214-00         158.00         198.00<	NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
Siring         Siring<	MW-3				190.00				406.00		50.00	11.00	237.00	
Image         Image <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>														
522:00         11:00         156:00         156:00         157:00         157:0														
H1250G         +1.00         H60.00         18.00         13.00         <														
97/264           1160.00         192.00         193.00														
1111004         -1100         10500         16500         1530         277         95.40         95.30         23.00         12.70         85.60         42.40           1117502         -11000         170.00         170.00         170.00         170.00         170.00         12.00         12.00         150.00         170.00         43.00         72.00         43.00         72.00         43.00         72.00         43.00         72.00         43.00         77.00         4.20         75.00         43.00         77.00         4.20         75.00         43.00         77.00         4.20         75.00         43.00         77.00         4.20         75.00         43.00         77.00         4.20         75.00         43.00         75.00         43.00         77.00         4.20         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00         43.00         75.00														
Intrace         Intrace <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<>														
1111506         11000         170.00         170.00         30.00         0.92 N         170         96.00         153.0														
HT1607           170.00         170.00         197.00         197.00         197.00         197.00         197.00         490.00														
11309          11000         16000         16000         35.00         11.00         1600         14.00         48.00         17.00         4.20         55.00         4100           111011         <         64.00         164.00														
H1/10/10          164.00         164.00         184.00         38.40         0.84         17.77         0.90         4.880         182.00         3.42         45.10         38.00         448.00           1001112         <0.00         162.00         162.00         168.00         10.00         61.20         18.00         44.00 <t< th=""><th></th><th>11/6/08</th><th>&lt;5.00</th><th>150.00</th><th>150.00</th><th>36.00</th><th>1.10</th><th>1.40</th><th>97.00</th><th>50.00</th><th>17.00</th><th>4.00</th><th>48.00</th><th>430.00</th></t<>		11/6/08	<5.00	150.00	150.00	36.00	1.10	1.40	97.00	50.00	17.00	4.00	48.00	430.00
11/10/11         65.00         165.00         186.00         38.40         0.88         1.35         67.90         67.90         180.00         3.76         63.20         480.00         488.00		11/3/09	<10.00	160.00	160.00	35.00		1.60	110.00	49.00		4.20	56.00	410.00
10111/12         50.00         162.00         36.60         1.01         1.74         100.00         51.20         43.80           107/14         4.00         184.00         184.00         185.0         0.37         1.39         62.80         43.80         42.80         43.80         32.00           107/14         -4.00         187.00         185.00         0.37         1.39         62.80         43.81         32.00           1002417         -         -         -         -         35.50         1.50         -         -         -         -         -         -         445.00           1002417         -         -         -         -         0.50         -         -         -         -         -         -         442.00           102219         -														
108/13         60.00         194.00         194.00         33.40         10.2         11.7         95.70         65.60         43.30         94.80         45.00           1021/16           25.60         -2.20          74.80            44.10           1021/16            44.00            44.20           6201/17            40.00            44.20           11/22/19           60.00           96.00           44.20           11/22/19           20.00         12.000           43.000         23.000         23.000         23.000         23.000         23.000         94.00         53.000         23.000         23.000         24.000         54.00         33.000         54.00         33.000         54.00         33.000         25.000         25.00         43.000         22.00         55.000         25.00         43.000         25.00         43.000         22.00         <														
107/14         44.00         197.00         197.00         197.00         130         0.237         1.30         0.828         22.40         38.80         332.00           10118116         -         -         -         -         37.10         0.666         -         109.00         -         -         -         -         37.00           1012117         -         -         -         -         -         -         -         -         -         442.00           1012117         -         -         -         -         -         -         -         -         -         -         -         442.00           102119         -         -         -         -         -         450.00         -         -         -         -         -         450.00         22.00.00         -         -         -         -         -         -         450.00         23.00.00         2.01         13.00.00         17.00         150.00         450.00         53.00.00         2.01         13.00.00         17.00         150.00         450.00         33.00.00         2.01         13.00.00         17.00.00         150.00         150.00         150.00         150.00														
1021/15         -         -         -         25.00         +2.00         -         74.80         -         -         -         -         -         -         442.00           102417         -         -         -         35.90         15.0         -         98.70         -         -         -         442.00           101018         -         -         -         -         440.00         5.35         -         -         -         -         -         442.00           62010         -														
10/18/16         -         -         -         -         -         -         -         -         -         -         442.00           10/18/18         -         -         -         200.00         6.35         -         667.00         -        <			<4.00	167.00	167.00									
10/24/17         -        -         -         - </td <th></th> <td></td>														
10/18/16         -        -         -         - </td <th></th> <td></td>														
6/20/19         -         -         -         -         -         -         -         -         448.00           XIV4         227/86         -         -         220.00         12.000.00         -         -         130.00         174.00         880.00         480.00         530.00         12.000.00         230.00.00         230.00.00         -         -         -         -         -         -         230.00.00         22.00.01         130.00.00         174.00         840.00         42.00.00         43.00.00         22.00.00         13.00.00         -         -         -         -         23.00.00         13.00.00         12.30         1.70.00         14.00.00         85.00         17.20.00         14.00.00         12.30         1.73.00         1.40.00         4.25.00.00         4.80.00         14.10.00.00         12.30         1.73.00         1.40.00         4.25.00.00         4.80.00         14.40.00         12.30         1.74.00.00         85.00         6.20.00         4.85.00.00         6.54.50.00         1.11.11.11.11.11.11.11.11.11.11.11.11.1														
NH-4         227708           23000         120000           130000         88000         4800         4800         5200         52000														
44998         -         -         240.00         13,000.00         -         -         -         1500.00         1740.00         140.00         240.00         5400.00           5/7702          1.00         232.00         11,300.00         -         -         -         -         23,000.00           10/2302         -         -         -         -         11,300.00         -         -         -         -         23,200.00           11/2003         1.00         221.00         121,000.01         43.00         123.01         1450.00         889.00         65.200.0         54.200.00         54.00.01         140.00         120.00         43.00         123.01         140.00         120.00         45.00         140.00         120.00         45.80.00         65.490.00         111.1706         54.00         140.00         220.00         13.00.00         120.00 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>96.60</th> <th></th> <th></th> <th></th> <th></th> <th></th>									96.60					
44998         -         -         240.00         13,000.00         -         -         -         1500.00         1740.00         140.00         240.00         5400.00           5/7702          1.00         232.00         11,300.00         -         -         -         -         23,000.00           10/2302         -         -         -         -         11,300.00         -         -         -         -         23,200.00           11/2003         1.00         221.00         121,000.01         43.00         123.01         1450.00         889.00         65.200.0         54.200.00         54.00.01         140.00         120.00         43.00         123.01         140.00         120.00         45.00         140.00         120.00         45.80.00         65.490.00         111.1706         54.00         140.00         220.00         13.00.00         120.00 <th>MW-4</th> <th>2/27/98</th> <th></th> <th></th> <th>230.00</th> <th>12.000.00</th> <th></th> <th></th> <th>1.300.00</th> <th>1,700.00</th> <th>880.00</th> <th>48 00</th> <th>5,300.00</th> <th>22.000.00</th>	MW-4	2/27/98			230.00	12.000.00			1.300.00	1,700.00	880.00	48 00	5,300.00	22.000.00
21401 <th></th>														
10/23/02         -         -         -         11/30.00         -         -         -         -         -         -         220.00           1/22603         210.00         220.00         12/00.00         1370.00         14/00.00         650.00<			<1.00	232.00			1.80	6.80						
52203         <1.00         220.00         11.30.00         <10.00         12.30         1.370.00         1.450.00         659.00         47.30         4.140.00         659.00         420.00         54.450.00           511104         <1.00         214.00         214.00         14.200.00         <80.00         8.97         1.560.00         1300.00         629.00         73.60         59.000         252.00.00           1117706         <1.00         221.00         14.00.00         0.82.00         972.00.00         972.00         73.60         59.000         252.00.00           1117706         <1.00.0         280.00         280.00         14.00.00         >5.00         5.20         1.400.00         387.00         281.00         88.00         12.00         281.00         88.00         12.00         281.00         88.00         12.00         281.00         88.00         12.00         281.00         88.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         13.00.00         15.00.00         11.00         40.00         5.49.00         25.00         25.00         25.00         25.00         25.00         25.00         12.00         12.00 <t< th=""><th></th><th>5/17/02</th><th>&lt;1.00</th><th></th><th></th><th>11,300.00</th><th></th><th></th><th></th><th>1,610.00</th><th>814.00</th><th>60.90</th><th>4,310.00</th><th></th></t<>		5/17/02	<1.00			11,300.00				1,610.00	814.00	60.90	4,310.00	
11/2803 <th<< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<<>														
5/11/04         <10.0														
11/17/04         <1.00														
11/17/05         <10.00														
11/15/06          280.00         280.00         14,000.00          14,000.00														
11/14/07         <10.00         255.00         12,60.00         0.54         7:15 D1         1.410 D1         1.710.00         382.00         48.00         4.760 D1         382.300.00           11/1208         <5.50         220.00         12,00.00         1.00         0.33         1.300.00         1.000.00         1.000.00         5.800.00         30.00.00           11/11/10         <5.50         226.00         12,00.00         <1.000.00         1.800.00         1.800.00         1.800.00         9.40.0         4.00         6.50.00         2.800.00         2.110         6.16         1.680.00         1.800.00         4.00         2.820.00         1.800.00         1.800.00         4.80.00         1.800.00         4.00.00         2.820.00         1.800.00         1.800.00         4.80.00         1.800.00         4.00.00         2.820.00         1.800.00         1.800.00         4.00.00            7.770.00         3.830.00         1.002.01         1.800.00            7.770.00         3.830.00         1.002.01            7.770.00         3.830.00         1.002.01            7.770.00         3.830.00         1.002.01														
11/12/08         <														
114/09         <5:00														
11/11/10         <5.00														
10111/12   <														
10/8/13         -6.00         294.00         294.00         162.00.00         -72         6.79         1.460.00         1.680.00         441.00         4.250.00         32.400.00           10/2/14         -4.00         291.00         291.00         40.00         -         1.740.00         1.350.00         1.060.00         44.10         4.250.00         32.400.00           10/22/15         -         -         -         17.900.00         <1.00         -         1.480.00         -         -         -         7.77.00         35.00         .         .         -         -         -         7.77.00         35.00         .         .         -         -         -         7.77.00         .         .         -         -         .         .         .         1.23.00.00         .         -         -         -         .			<5.00		277.00		0.11	6.16			1,110.00	40.00	6,490.00	
107/14         <4.00		10/11/12	<5.00	256.00	256.00	5,850.00	2.10	4.58	629.00	434.00	334.00	21.20	2,620.00	12,000.00
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$										1,350.00	1,060.00		4,250.00	
10/25/17           6.830.00         <														
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														
11/24/19           3,050.00           420.00            5,960.00           MW-4A         2/27/98           180.00         1,600.00           410.00         470.00         130.00         11.00         620.00         3300.00           2/14/01         <1.00         156.00         156.00         577.00         <1.00         2.23         210.00            4,000.00           5/15/02         <1.00         156.00         577.00         <1.00         2.23         121.00         200.00         49.50         10.30         125.00         1,610.00           10/23/02           -         478.00           114.00           -         1,430.00           11/26/03         <1.00         154.00         156.00         984.00         <2.00         3.30         179.00         29.00         5.285.00         11.10         248.00         2.200.00         11.170/4         <1.00         152.00         3.20.02         2.320.50         11.170/4         <1.00         12.20         3.20.02         2.320.50									1,510.00					
MW-4A         2/27/98           180.00         1,600.00           410.00         470.00         130.00         11.00         620.00         3,300.00           2/14/01         <1.00         154.00         154.00         154.00         1,600.00         1.40         2.80         210.00             4,000.00           5/15/02         <1.00         156.00         156.00         577.00         <1.00         2.23         121.00         200.00         49.50         10.30         125.00         1,610.00           10/23/02         -         -         -         478.00         -         -         11.40.00         -         -         -         -         1,430.00           5/22/03         <1.00         156.00         158.00         1,060.00         <4.00         5.82         182.00         337.00         79.30         15.20         2,200.00         2,300.00           5/11/04         <1.00         164.00         1,110.00         <2.00         4.62         186.00         369.00         75.40         14.90         413.00         2,235.00           11/14/05         <10.0         181.00         845 D1									420.00					
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$														
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	WW-4A					,		2 00			130.00			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $											49.50			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$														
11/26/03         <1.00         158.00         1,060.00         <4.00         5.82         182.00         337.00         79.30         15.20         329.00         2,585.00           5/11/04         <1.00														
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $														
11/17/04         <1.00														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				164.00	164.00		<2.00	4.62	186.00	369.00		14.90	413.00	2,235.00
11/14/07         <10.00														
11/12/08         < 5.00														
11/4/09         <5.00														
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$														
11/10/11         <5.00														
10/11/12         < 5.00														
10/8/13       <6.00       199.00       199.00       512.00       2.63       2.47       100.00       47.70       9.93       3.64       410.00       1,170.00         10/7/14       <4.00       186.00       186.00       387.00       1.69       2.54       102.00       37.10       7.78       3.17       276.00       962.00         10/20/15          328.00       <4.00        83.30          81.90         10/18/16          440.00       1.49        97.60         1,150.00         10/25/17          341.00       2.83        93.40         960.00         10/18/18          366.00       1.29        99.60          901.00         6/20/19             1,040.00														
10/7/14         <4.00														
10/20/15         328.00       <4.00        83.30          819.00         10/18/16          440.00       1.49        97.60          1,150.00         10/25/17          341.00       2.83        93.40          901.00         10/18/18         366.00       1.29        99.60          901.00         6/20/19          336.00          1,040.00														,
10/18/16         440.00       1.49        97.60         1,150.00         10/25/17         341.00       2.83        93.40         960.00         10/18/18         366.00       1.29        99.60         901.00         6/20/19          336.00          1,040.00														
10/18/18            366.00         1.29          99.60            901.00           6/20/19            336.00             1,040.00						440.00								
6/20/19 336.00 1,040.00														
11/24/19 321.00 94.50 824.00														
		11/24/19				321.00			94.50					ŏ∠4.UU

Released to Imaging: 9/13/2021 1:48:45 PM



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-5	2/26/98			180.00	6,600.00			910.00	1,400.00	470.00	31.00	2,400.00	12,000.00
	2/14/01	<1.00	166.00	166.00	7,700.00	1.80	4.10	910.00					18,000.00
	5/17/02	<1.00	156.00	156.00	4,040.00	1.53	4.56	586.00	757.00	319.00	60.90	1,260.00	<b>8,340.00</b> 422.00
	10/23/02 5/22/03	<1.00	158.00	158.00	3,900.00 3,170.00	<4.00	6.52	94.80 550.00	644.00	215.00	49.90	1,240.00	7,860.00
	11/25/03	<1.00	168.00	168.00	5,120.00	<4.00	6.77	739.00	978.00	365.00	54.90	1,680.00	11,940.00
	5/11/04	<1.00	160.00	160.00	6,760.00	<3.00	4.65	1,030.00	1,180.00	417.00	40.30	2,120.00	20,380.00
	11/17/04	<1.00	172.00	172.00	6,750.00	<10.00	16.60	786.00	1,210.00	486.00	40.60	2,300.00	11,980.00
	11/17/05	<10.00	161.00	161.00	2,140 D1	0.79	0.16	334 D1	339.00	126.00	10.80	791.00	7,120 N
	11/14/06	<10.00	160.00	160.00	2,000.00	0.60	1.50	300.00	437.00	173.00	14.20	918.00	4,420.00
	11/14/07	<10.00	161.00	161.00	5,790 D1	0.37	4.01 D1	668 D1	812.00	240.00	23.30	1,850 D1	16,300.00
	11/6/08	<5.00	160.00	160.00	4,900.00	0.78	0.32	540.00	660.00	310.00	35.00	1,600.00	9,700.00
	11/3/09 11/11/10	<10.00 <5.00	160.00 176.00	160.00 176.00	5,100.00	0.51 0.16	2.30 2.37	<b>710.00</b> 554.00	860.00 687.00	320.00	<13.00 17.30	1,800.00	11,000.00 8.890.00
	11/10/11	<5.00	178.00	178.00	4,200.00 4,340.00	0.16	0.55	411.00	944.00	250.00 326.00	17.30	1,400.00	7,840.00
	10/11/12	<5.00	164.00	164.00	3,630.00	0.24	2.26	474.00	671.00	239.00	17.00	1,360.00	8,300.00
	10/8/13	<6.00	176.00	176.00	3,730.00	0.37	1.56	425.00	659.00	253.00	15.40	1,440.00	8,060.00
	10/7/14	<4.00	172.00	172.00	2,830.00	<0.10	2.19	398.00	521.00	195.00	15.10	979.00	5,280.00
	10/21/15				2,480.00	<40.00		362.00					5,510.00
	10/18/16				2,260.00	<0.50		326.00					5,380.00
	10/25/17				2,090.00	<5.00		318.00		-			3,780.00
Dup	10/25/17				2,010.00	<5.00		300.00					3,240.00
1	10/18/18				1,890.00	<0.10		323.00					3,420.00
1	6/20/19 11/23/19				1,700.00 1,530.00			250.00					4,280.00 3,900.00
MW-5A	2/26/98			170.00	190.00			180.00	107.00	23.00	3.50	117.00	740.00
1	2/15/01 5/15/02	<1.00 <1.00	164.00 182.00	164.00 182.00	140.00 53.50	1.20 <1.00	2.10 2.23	130.00 84.40	90.20 63.20	27.90 16.10	8.70 4.69	74.60 43.60	670.00 475.00
	10/23/02		162.00		50.00			616.00			4.09	43.00	<b>8,670.00</b>
	5/22/03	<1.00	158.00	158.00	32.50	<1.00	2.10	69.90	55.50	13.80	3.41	41.50	416.00
	11/25/03	<1.00	332.00	332.00	34.10	1.05	2.20	75.50	60.90	14.60	4.08	45.00	422.00
	5/11/04	<1.00	164.00	164.00	38.80	<1.00	2.25	75.80	60.90	15.00	3.40	43.20	484.00
	11/17/04	<1.00	152.00	152.00	39.60	1.37	2.66	74.30	58.10	13.60	3.83	48.50	430.00
	11/16/05	<10.00	191.00	191.00	40.20	0.82	2.10	75.2 D1	176.00	17.80	4.22	45.30	570 N
	11/14/06	<10.00	240.00	240.00	47.00	0.64	1.50	79.00	90.40	16.10	3.58	51.40	588.00
	11/14/07	<10.00	227.00	227.00	54.40	0.66	1.45	68.7 D1	73.70	14.00	< 5.00	44.20	528.00
	11/6/08 11/3/09	<5.00 <10.00	350.00 710.00	350.00 710.00	53.00 47.00	0.70	1.30 1.50	72.00 79.00	76.00 65.00	15.00 14.00	3.40 3.30	43.00 50.00	450.00 440.00
	11/11/10	<5.00	182.00	182.00	49.60	0.72	1.61	73.60	55.70	12.90	2.79	42.00	606.00
	11/10/11	<5.00	170.00	170.00	131.00	0.49	1.15	116.00	83.80	29.90	5.16	85.70	594.00
	10/11/12	<5.00	163.00	163.00	68.00	0.63	1.57	69.80	60.60	15.30	3.96	49.20	534.00
	10/8/13	<6.00	182.00	182.00	80.20	0.57	1.60	67.50	69.30	16.20	3.29	53.40	462.00
	10/7/14	<4.00	168.00	168.00	73.60	0.29	1.56	64.90	66.20	15.70	2.76	45.20	432.00
	10/21/15				84.90	<4.00		65.60					499.00
	10/18/16				101.00	<0.50		65.40					466.00
	10/25/17				99.60	1.14		59.30					537.00
	10/18/18				132.00	0.79		67.50					477.00
1	6/20/19 11/23/19				118.00 116.00			 61.10					650.00 502.00
MNA/ C													
MW-6	2/26/98 2/14/01	<1.00	158.00	200.00 158.00	260.00 59.00	 1.70	2.20	400.00 99.00	180.00 67.50	44.00 22.10	6.20 7.67	205.00 52.30	<b>1,200.00</b> 470.00
1	5/17/02	<1.00	162.00	162.00	37.80	1.62	2.20	99.00	67.50	19.60	5.12	48.60	470.00
1	10/23/02				46.10		Z. 14 	109.00			J.12 	40.00	331.00
1	5/22/03	<1.00	162.00	162.00	40.30	1.24	2.13	94.40	61.70	17.40	4.23	51.90	464.00
1	11/25/03	<1.00	154.00	154.00	53.60	1.40	2.18	98.00	53.60	18.70	4.97	51.70	482.00
1	5/11/04	<1.00	156.00	156.00	54.40	1.23	2.19	97.00	59.00	18.10	4.22	47.80	506.00
1	11/16/04	<1.00	162.00	162.00	57.90	1.64	2.68	99.80	66.60	19.60	5.16	57.00	464.00
1	11/17/05	<10.00	201.00	201.00	101.00	0.97	0.35	97.8 D1	103.00	20.20	4.10	59.10	730.00
1	11/15/06	<10.00	750.00	750.00	68.00	0.99	1.50	93.00	64.60	20.40	4.23	57.10	507.00
1	11/15/07	<10.00	284.00	284.00	162.00	51.00	1.35	96.3 D1	84.10	25.20	<5.00	62.10	630.00
1	11/6/08 11/3/09	<5.00 <10.00	220.00 190.00	220.00 190.00	84.00 81.00	1.20 1.20	1.20 1.40	95.00 100.00	67.00 66.00	21.00 20.00	4.30 4.50	53.00 59.00	490.00 550.00
1	11/3/09	< 10.00	190.00	190.00	01.00		3 - Well Dama		00.00	20.00	4.30	59.00	550.00
1	11/10/11						S - Well Dama	5					
1	10/11/12						S - Well Dama						
	9/30/13						ugged and Ab						
MW-6R	10/8/13	<6.00	225.00	225.00	110.00	1.91	<0.10	102.00	69.90	24.40	5.17	85.60	600.00
1	10/7/14	<4.00	182.00	182.00	39.70	0.55	0.68	93.00	59.20	18.20	3.10	48.20	402.00
1	10/21/15				40.70	<2.00		98.60		-			390.00
1	10/18/16				42.30	0.63		105 J					442.00
	10/25/17				49.30	1.46		93.80					465.00
1	10/18/18				69.10	1.05		107.00					442.00
Dup	6/20/19 6/20/19				59.10 64.40								482.00 592.00
Dup	11/23/19				69.40			95.20					384.00
L	11/20/18				00.40			00.20					00-7.00



IMV-7         5/14/98         -         -         230.00         17.0	Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>	
Plane         214011           17.00         2.40         150.00         7.70         1.90         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.27         0.71.40         88.00         2.20         0.66.16         66.16         66.16         66.16         66.16         66.16         67.70         1.10         2.21         88.60         78.70         17.	NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000	
Sri602         et al.         1500         1500         770         159         227         97.40         88.60         32.30         68.31         54.30           52203         -	MW-7	5/14/98			230.00	430.00			340.00	214.00	66.00	13.00	165.00	1,200.00	
102202         -          11100         11000         11		2/14/01		150.00	150.00			2.40	150.00					1,500.00	
52203         *1.00         140.00         173.00         11.7         2.14         88.90         88.90         28.20         6.18         6.48         6.88           51304         *1.00         138.00         138.00         138.00         138.00         138.00         138.00         138.00         138.00         14.11         2.18         94.70         10.00         84.70         6.59         6.20         95.7         31.00         73.0         44.20         48.90         86.1         6.59         6.59         6.59         6.50         13.90         11.00         14.00         13.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00         31.00         16.00 <td></td> <td></td> <td>&lt;1.00</td> <td>150.00</td> <td>150.00</td> <td></td> <td>1.59</td> <td>2.27</td> <td></td> <td>68.60</td> <td>23.20</td> <td>6.63</td> <td>54.30</td> <td>501.00</td>			<1.00	150.00	150.00		1.59	2.27		68.60	23.20	6.63	54.30	501.00	
11/2603         -11.00         136.00         136.00         136.00         129         2.23         93.50         95.70         31.00         79.11         63.60         70           11/1604         -1.00         130.00         130.00         357.00         1.14         2.17         97.30         14.20         44.30         8.61         67.80         87.00         1.11           11/1604         -1.00         124.00         426.01         68.50         0.28         1.06         14.20         44.30         8.61         67.20         7.03         7.43         102.00         1.44           11/1605         -1.00         12.00         14.00         14.00         14.00         14.00         14.00         14.00         14.00         14.00         14.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00         12.00 <td></td> <td>490.00</td>														490.00	
51304         *100         13000         13000         27700         111         2.18         9470         10700         3470         6.59         6220         91           11/1705         *100         130.00         130.00         130.00         130.00         130.00         140.00         142.00         64.70         12.10         100.00         14.00           11/1705         *10.00         120.00         120.00         120.00         120.00         120.00         140.00         100.00         140.00         100.00         140.00         120.00         140.00         120.00         120.00         110.00         120.00														631.00	
Internal         eta         eta<														704.00	
Intrace <th<< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>914.00 870.00</td></th<<>														914.00 870.00	
Internal         end          end <th en<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1,440.00</td></th>	<td></td> <td>1,440.00</td>														1,440.00
11/1507         -10.00         189.00         189.00         189.00         189.00         180.00														2,100.00	
III/2008         <  <         <														1,880.00	
Image: 11/10/10														1,600.00	
HVV-8         11/10/11         <5.00         108.00         109.00         17.10.00         0.30         1.45         147.00         662.00         203.00         12.30         198.00         3.66           108/13         <6.00			<5.00	110.00	110.00	1,100.00	0.63	1.50	160.00	310.00	120.00	11.00	130.00	2,800.00	
Intrin		11/10/10	<5.00	111.00	111.00	1,310.00	0.37	1.64	173.00	415.00	149.00	10.00	150.00	3,130.00	
108/13         66.00         142.00         142.00         2140.00         0.45         2.11         331.00         916.00         228.00         13.30         226.00         7.8           107/14         4.40.00         116.00         160.00         2190.00   2.0         0            16.00         156.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         160.00         16														3,660.00	
Image: 1077/14         <44.00         116.00         12180.00         <0.10         2.03         317.00         682.00         238.00         12.20         227.00         7.82           1018/16         -														5,580.00	
Image: 102015            1420.00         <-20.00          335.00             7.11           102417            400.00         <0.50														7,530.00	
Internal				116.00										7,920.00	
Image:														3,130.00	
Initiality           4,000.00         -0.10          422.00   6.3           1124/19           220.00         270.00           220.00         150.00         150.00         120.00														7,160.00 2,660.00	
6/20/19         -         -         -         -         -         -         -         -         -         -         -         -         15.5           MW-8         5/13/98         -         -         -         200.00         270.00         -         6.0         12.00         15.00         15.00         15.00         15.00         15.00         15.00         15.00         15.00         15.00         15.00         14.00         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         0.0         15.00         16.00         13.00         1.0         0.0         15.00         16.00         15.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00         16.00														6,450.00	
11/24/19         -         -         20000         -         -         272.00         -         -         -         -         6.3           MW-8         5/13/98         -         -         200.00         270.00         -         -         390.01         90.00         60.00         12.00         170.00         1.2           5/16/02         <1.00														15,500.00	
MW-8         5/13/98         -         -         200.00         270.00         -         -         390.00         190.00         80.00         12.00         170.00         12.00         12.00									272.00					6,300.00	
Dup         2/14/01         <1.00         156.00         14.00         1.80         2.50         100.00         59.90         21.50         7.84         52.90         40.80           10/22/02            104.00           104.00	MW-8				200.00	,				190.00	60.00	12.00	170.00	1,200.00	
Srife02         <100         188.00         158.00         32.90         1.57         2.33         101.00         56.60         19.20         5.20         49.50         43.3           10/22/02            104.00														400.00	
Image: 10/22/02           40.80           104.00   <														432.00	
Internal														392.00	
5/12/04         <1.00         154.00         154.00         33.30         1.39         2.38         101.00         53.00         17.30         4.56         48.10         43.3           11/16/04         <1.00		5/22/03	8.00	160.00	168.00	33.20	1.40	2.32	98.30	53.90	18.30	9.31	46.40	410.00	
Dup         11/16/04         <10.0         170.00         170.00         180.0         1.94         2.94         103.00         57.80         18.60         5.63         56.40         43.3           5/17/05         4.00         152.00         156.00         41.00         1.64         2.94         105.00         61.00         18.60         5.78         47.30         43.3           5/17/05         <10.00														443.00	
bit         5/17/05         4.00         152.00         156.00         41.00         1.64         2.94         105.00         61.00         18.60         5.78         47.30         43.3           11/17/05         <10.00														435.00	
Dup         11/17/05         <10.00         171.00         171.00         113.00         1.10         <0.05         115.D1         83.40         21.70         5.74         102.00         75           5/9/06         <10.00														435.00	
byp         59/06         <10.00         160.00         210.00         0.89         1.40         200.00         72.70         33.30         7.12         125.00         89           11/14/06         <10.00														434.00	
Dup         11/14/06         <10.00         150.00         230.00         1.10         1.20         200.00         74.20         38.30         9.61         162.00         91           5/30/07         <10.00														750.00 896.00	
by         5/30/07         <10.00         141.00         141.00         62.00         1.20         1.74         120.00         54.10         19.10         <5.00         59.30         50.00           11/15/07         <10.00														912.00	
Dup         11/15/07         <10.00         159.00         130.0         1.33         1.56         94.2 D1         52.10         17.20         <5.00         49.80         54           51/5/08         <1.53														500.00	
bype         5/15/08         <1.53         151.00         151.00         40.70         1.40         1.78         99.6 D1         51.70         16.80         4.10         54.8 D1         42           11/12/08         <5.00														540.00	
Dup         5/20/09         <5.00         140.00         140.00         39.00         1.30         1.60         110.00         50.00         17.00         4.30         49.00         43           11/4/09         <5.00														427.00	
Dup         11/4/09         <5.00         150.00         41.00         1.40         1.70         110.00         46.00         16.00         3.30         47.00         45.50           Dup         5/7/10         <5.00		11/12/08	<5.00	140.00	140.00	39.00	1.40	1.50	97.00	52.00	17.00	<2.6	46.00	350.00	
Dup         5/7/10         <5.00         <5.00         172.00         34.90         1.09         1.70         97.80         49.50         15.70         3.52         45.50         42           Dup         5/7/10         <5.00														430.00	
Dup         5/7/10         <5.00         <5.00         157.00         34.90         1.09         1.71         98.00         51.00         14.50         3.21         43.60         46           Dup         11/12/10         <5.00														450.00	
Dup         11/12/10         <5.00         172.00         172.00         38.70         1.10         1.77         98.20         48.90         15.70         3.40         45.40         41           11/12/10         <5.00														426.00	
Dup         11/12/10         <5.00         160.00         186.00         1.10         1.76         98.30         50.50         15.30         3.44         44.80         39           5/11/11         <5.00	Dup													466.00 410.00	
5/11/11         <5.00         170.00         185.00         1.20         1.60         93.00         73.00         28.40         5.68         165.00         69           11/10/11         <5.00	Dun													398.00	
11/10/11         <5.00         161.00         161.00         36.90         1.06         1.41         87.40         57.10         17.00         3.46         48.60         40           5/17/12         <5.00	Dup													692.00	
5/17/12         <5.00         173.00         173.00         37.90         1.09         1.59         92.90         53.30         16.40         3.83         56.70         44           10/11/12         <5.00														406.00	
10/11/12         <5.00         158.00         158.00         39.90         1.29         1.83         103.00         49.00         16.60         4.30         49.00         44           5/17/13         <5.00														440.00	
5/17/13         <5.00         167.00         187.00         38.30         1.37         1.70         106.00         55.30         17.50         3.67         45.90         41           10/8/13         <6.00														444.00	
5/1/14         <10.00         165.00         165.00         40.60         1.12 J         1.81         106.00         55.10         19.90         3.82         52.90         43           10/7/14         <4.00			<5.00	167.00	167.00			1.70					45.90	416.00	
10/7/14         <4.00         176.00         176.00         8.14         0.16         1.07         30.50         40.00         4.98         7.81         35.10         25           5/22/15           10.00         <2.00														446.00	
5/22/15           10.00         <2.00          30.10            25           10/20/15            8.03         <2.00														436.00	
10/20/15           8.03         <2.00          32.50            14           5/25/16            30.00         0.85          88.70           43           10/18/16            4.28         <0.50														259.00	
5/25/16            30.00         0.85          88.70            43           10/18/16            4.28         <0.50														252.00	
10/18/16           4.28         <0.50          32.80            26           05/11/17            9.10         <0.02														146.00 434.00	
Dup         05/11/17           9.10         <0.02          32.20            21           Dup         05/11/17           8.62         <0.02														261.00	
Dup 05/11/17 8.62 <0.02 32.20 18														201.00	
	Dup													182.00	
														286.00	
														282.00	
							0.61		19.10					258.00	
														NS	
11/24/19 12.90 27.60 23		11/24/19				12.90			27.60					239.00	



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-9	5/14/98			190.00	350.00			470.00	207.00	61.00	12.00	200.00	1,300.00
	2/15/01	<1.00	156.00	156.00	35.00	2.60	2.40	110.00	60.40	19.80	7.47	47.00	430.00
	5/16/02 10/23/02	<1.00	160.00	160.00	31.70 39.00	2.22	2.28	99.40 102.00	60.80	17.60	5.32	50.10	440.00 436.00
	5/22/03	<1.00	160.00	160.00	31.00	1.75	2.19	93.30	52.20	15.80	4.75	50.20	455.00
	11/26/03	<1.00	150.00	150.00	31.80	1.99	2.34	99.80	57.70	16.60	4.69	46.30	452.00
	5/12/04	<1.00	164.00	164.00	33.60	1.79	2.29	99.20	54.80	16.00	4.27	43.50	467.00
	11/16/04	8.00	154.00	162.00	367.00	1.49	2.72	97.30	63.20	17.80	5.59	55.50	433.00
	5/17/05	4.00	154.00	154.00	44.20	2.43	3.05	117.00	58.80	16.70	5.94	44.10	434.00
	11/17/05 5/9/06	<10.00 <10.00	161.00 170.00	161.00 170.00	83.50 37.00	1.30 1.80	0.14	111 D1 99.00	149.00 52.70	26.20 15.00	7.43 3.21	80.40 45.50	790 N 428.00
	11/15/06	<10.00	150.00	150.00	210.00	1.10	1.20	190.00	70.50	35.80	8.64	152.00	905.00
	5/30/07	<10.00	153.00	153.00	35.00	2.10	1.69	110.00	52.20	15.80	<5.00	44.70	464.00
	11/14/07	<10.00	151.00	151.00	186.00	1.49	1.48	156 D1	74.10	39.40	8.73	141.00	808.00
	5/15/08	<1.53	174.00	174.00	42.50	2.38	1.72	105 D1	55.60	17.00	3.99	54.1 D1	467.00
	11/4/08	<5.00	160.00	160.00	39.00	2.10	1.40	98.00	54.00	16.00	3.70	47.00	440.00
	5/20/09	< 5.00	320.00	320.00	69.00	2.10	1.50	120.00	58.00	19.00	4.60	58.00	520.00
	11/4/09 5/7/10	<5.00 <5.00	160.00 <5.00	160.00 162.00	42.00 50.20	2.20 2.02	1.60 1.66	110.00 97.50	50.00 53.60	15.00 15.70	3.00 3.32	43.00 43.50	460.00 442.00
	11/9/10	<5.00	186.00	186.00	60.70	1.97	1.74	98.00	59.20	18.10	3.64	50.00	446.00
	5/11/11	< 5.00	160.00	160.00	80.30	1.71	1.72	75.70	73.90	25.80	4.61	67.90	518.00
	11/10/11	<5.00	151.00	151.00	138.00	1.66	1.38	107.00	82.70	26.90	4.34	65.40	582.00
	5/16/12	<5.00	162.00	162.00	137.00	1.75	1.61	93.50	83.80	23.20	4.39	60.30	584.00
	10/11/12	<5.00	147.00	147.00	148.00	1.90	1.71	98.70	80.50	25.80	4.94	59.80	644.00
	5/17/13	<5.00	144.00	144.00	246.00	1.86	1.61	99.30	107.00	30.20	4.43	60.20	1,010.00
	10/8/13 5/2/14	<6.00 <10.00	164.00 143.00	164.00 143.00	150.00 382.00	1.88 1.56	1.81 1.77	99.80 103.00	90.00 132.00	25.20 35.70	4.62 5.74	60.80 73.70	620.00 906.00
	10/7/14	<4.00	151.00	143.00	292.00	0.89	1.33	98.10	136.00	41.00	4.65	67.40	1,110.00
	5/22/15				307.00	<8.00		87.70					1,170.00
	10/20/15				202.00	<4.00		93.70					593.00
	5/25/16				404.00	1.61		108.00					1,430.00
Dup	5/26/16				418.00	1.60		111.00					1,430.00
	10/18/16 05/11/17				445.00 481.00	1.34 <0.22		115.00 118.00					1,490.00 1,090.00
	10/24/17				387.00	2.42		102.00					1,030.00
	05/22/18				460.00	1.28		119.00					1,010.00
	10/18/18				381.00	1.41		117.00					903.00
	6/20/19				621.00								2,930.00
	11/24/19				337.00			80.60					1,170.00
MW-9A	5/14/98			280.00	600.00			770.00	338.00	96.00	12.00	334.00	2,200.00
	2/15/01	<1.00	142.00	142.00	85.00	1.40	2.20	71.00	71.60	19.20	6.94	46.00	400.00
	5/15/02 10/23/02	<1.00	136.00	136.00	148.00 168.00	<1.00	2.18	65.30 75.50	62.90	16.10	4.62	46.80	445.00 651.00
	5/22/03	<1.00	126.00	126.00	207.00	<1.00	2.09	62.10	102.00	25.20	4.80	55.70	672.00
	11/26/03	<1.00	118.00	118.00	216.00	1.14	2.26	62.70	107.00	25.10	5.31	53.20	648.00
	5/12/04	<1.00	122.00	122.00	242.00	<1.00	2.10	64.70	105.00	26.20	5.11	26.20	950.00
	11/16/04	<1.00	114.00	114.00	296.00	1.24	2.74	67.50	130.00	33.10	6.24	70.30	826.00
	5/17/05	<1.00	112.00	112.00	354.00	1.04	2.85	77.10	131.00	31.70	6.39	60.50	828.00
	11/17/05 5/9/06	<10.00 <10.00	121.00 670.00	121.00 670.00	310 D1 270.00	0.82	0.31 1.60	74.7 D1 78.00	337.00 111.00	41.40 27.10	8.08 3.88	74.50 58.70	1,520 N 992.00
	11/15/06	<10.00	1,600.00	1,600.00	270.00	0.67	1.60	78.00	126.00	33.40	3.88 4.74	68.40	992.00 1,280.00
	5/30/07	<10.00	586.00	586.00	400.00	0.70	1.69	83.00	153.00	36.90	<5.00	71.80	1,450.00
	11/14/07	<10.00	605.00	605.00	285 D1	0.62	1.52	64.7 D1	153.00	35.40	5.03	70.70	1,430.00
	5/15/08	<1.53	738.00	738.00	380 D1	0.45	1.62	86.8 D1	146.00	35.50	5.45	77.2 D1	1,390.00
	11/4/08	< 5.00	370.00	370.00	330.00	<1.00	1.20	84.00	130.00	32.00	5.10	66.00	1,000.00
	5/20/09 11/4/09	<5.00 <5.00	600.00	600.00 110.00	480.00 430.00	0.49	1.50 1.60	86.00	170.00 160.00	43.00 41.00	6.40 5.30	76.00 71.00	1,600.00 1,500.00
	5/7/10	<5.00	110.00 <5.00	121.00	430.00 510.00	0.49	1.60	82.00 80.50	188.00	41.00	5.30 4.90	73.60	1,500.00
	11/9/10	<5.00	115.00	115.00	529.00	0.21	1.02	86.00	159.00	44.90	5.00	76.10	1,660.00
	5/11/11	< 5.00	146.00	146.00	587.00	1.18	1.90	415.00	166.00	80.60	11.30	211.00	1,850.00
	11/10/11	<5.00	115.00	115.00	841.00	0.19	1.56	125.00	280.00	84.80	7.51	117.00	2,160.00
	5/16/12	<5.00	135.00	135.00	958.00	0.37	1.74	143.00	249.00	62.60	6.50	97.70	3,450.00
Dup	5/16/12	< 5.00	128.00	128.00	882.00	0.31	1.70	134.00	270.00	65.70	6.72	92.30	3,050.00
	10/11/12 5/17/13	<5.00 <5.00	125.00 137.00	125.00 137.00	628.00 754.00	0.37	1.70 1.67	121.00 145.00	235.00 224.00	60.40 53.90	6.72 5.49	94.00 86.80	1,810.00 1,930.00
	10/8/13	< 5.00	153.00	153.00	534.00	0.34	1.67	145.00	185.00	43.10	5.49	81.30	1,210.00
	10/7/14	-0.00	100.00	100.00	00-7.00	0.01	Not Sampleo		100.00	40.10	0.20	01.00	1,210.00
	10/20/2015				232.00	<4.00		95.40					599.00
	10/18/16				337.00	<0.50		113.00		-			1,250.00
	10/24/17				206.00	< 0.50		96.60					681.00
	10/18/18				276.00	0.60		119.00					816.00
	06/20/19 11/24/19				268.00 231.00			83.20					<b>1,220.00</b> 838.00
	11/24/19				201.00			03.20					000.00



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
MW-10	5/14/98			240.00	360.00			450.00	211.00	62.00	11.00	190.00	1,400.00
	2/15/01	<1.00	140.00	140.00	190.00	2.00	2.30	97.00	108.00	32.30	8.20	61.00	660.00
	5/17/02 10/22/02	<1.00	152.00	152.00	204.00 213.00	1.93	2.19	99.10 108.00	109.00	31.70	7.60	62.40	713.00 758.00
	5/22/02	<1.00	152.00	152.00	213.00	 1.45	2.17	96.60	109.00	29.90	8.65	74.20	764.00
	11/26/03	<1.00	152.00	152.00	220.00	1.54	2.26	103.00	120.00	35.70	6.96	64.00	752.00
	5/13/04	<1.00	158.00	158.00	232.00	1.39	2.23	102.00	114.00	31.60	5.95	57.20	802.00
	11/17/04	<1.00	170.00	170.00	245.00	1.73	2.78	104.00	121.00	35.70	7.07	70.30	764.00
	5/17/05	<1.00	150.00	150.00	233.00	1.77	2.80	106.00	113.00	32.30	6.83	60.20	776.00
	11/17/05	<10.00	151.00	151.00	205 D1	1.20	0.26	111 D1	482.00	47.40	13.10	82.40	970 N
	5/9/06	<10.00	190.00	190.00	180.00	1.40	1.60	98.00	93.30	27.10	4.31	60.40	724.00
	11/16/06	<10.00	320.00	320.00	190.00	1.20	1.60	92.00	101.00	30.00	4.75	64.10	900.00
	5/30/07 11/15/07	<10.00 <10.00	340.00 189.00	340.00 189.00	200.00 251 D1	1.40 1.44	1.68 1.44	110.00 152 D1	101.00	28.60 33.40	<5.00 6.01	62.40 84.70	820.00 1,010.00
	5/15/08	<10.00	374.00	374.00	342 D1	1.44	1.44	257 D1	104.00	52.90	11.70	165 D1	1,140.00
	11/6/08	<5.00	150.00	150.00	210.00	1.50	1.30	89.00	110.00	32.00	5.40	64.00	730.00
	5/20/09	<5.00	240.00	240.00	270.00	1.30	1.50	120.00	110.00	35.00	6.20	72.00	960.00
	11/4/09	<5.00	150.00	150.00	240.00	1.50	1.30	130.00	100.00	35.00	5.40	78.00	1,000.00
	5/7/10	<5.00	<5.00	157.00	236.00	1.18	1.62	106.00	111.00	30.70	4.59	60.30	940.00
	11/10/10	<5.00	166.00	166.00	280.00	1.16	1.61	112.00	98.40	36.90	5.63	81.00	812.00
	5/11/11	< 5.00	157.00	157.00	274.00	1.11	1.99	87.20	117.00	32.20	5.63	85.00	930.00
	11/15/11	< 5.00	150.00	150.00	266.00	1.03	6.93	94.90	128.00	32.30	4.58	62.80	1,450.00
	5/16/12	<5.00	163.00	163.00	284.00	1.12	1.58	99.90	132.00	36.80	5.22	72.90	1,120.00
	10/11/12 5/17/13	<5.00 <5.00	151.00 154.00	151.00 154.00	255.00 299.00	1.32 1.34	1.75 1.61	98.70 108.00	113.00 117.00	34.30 33.70	5.68 4.57	67.60 64.60	1,010.00 1,180.00
	10/8/13	<6.00	165.00	165.00	324.00	1.34	1.62	103.00	154.00	41.60	5.36	78.10	1,240.00
	5/1/14	<10.00	156.00	156.00	298.00	1.05 J	1.58	111.00	135.00	41.60	5.30	75.50	1,050.00
Dup	5/1/14	<10.00	158.00	158.00	301.00	<0.10 J	1.66	112.00	134.00	42.50	5.29	79.50	1,080.00
	10/7/14	<4.00	163.00	163.00	249.00	0.71	1.64	108.00	127.00	36.80	4.91	67.20	1,050.00
	5/22/15				298.00	<8.00		102.00					975.00
	10/20/15				250.00	<4.00		108.00					823.00
	5/25/16				307.00	1.44		107.00					1,080.00
	10/18/16				330.00	0.86		103.00					1,350.00
	05/11/17 10/24/17				<b>353.00</b> 240.00	<0.22 1.60		112.00 97.00					<b>1,080.00</b> 742.00
	05/22/18				346.00	0.97		113.00					1,070.00
	10/18/18				351.00	1.10		118.00					892.00
	6/20/19				NS								NS
	11/24/19				230.00			78.00					826.00
MW-11	1/22/99	30.00	<1.00	30.00	46.00	2.30	4.20	94.00	33.00	7.00	9.10	58.00	370.00
	2/15/01	<1.00	156.00	156.00	37.00	2.40	2.40	120.00	64.00	19.10	7.83	50.10	360.00
	5/16/02	<1.00	160.00	160.00	31.90	2.13	2.33	98.80	63.50	17.20	4.83	47.00	444.00
	10/23/02				37.20			102.00					447.00
	5/22/03	12.00	154.00	166.00	32.30	1.74	2.28	96.70	62.30	0.00	4.63	47.60	437.00
	11/26/03 5/12/04	<1.00 <1.00	160.00 164.00	160.00 164.00	32.40 34.60	1.83 1.71	2.23	96.40 97.70	59.20 54.80	16.60	4.67 4.28	48.60	448.00 457.00
	5/12/04	<1.00	160.00	164.00	34.60	2.17	2.38 2.81	100.00	54.80 65.20	15.70 16.80	4.28	46.20 54.30	457.00
	5/17/05	4.00	158.00	162.00	43.10	1.87	2.82	94.60	68.40	16.90	6.45	44.00	434.00
	11/17/05	<10.0	161.00	161.00	58.10	1.50	2.10	91.3 D1	75.00	17.70	4.55	64.70	700 N
	5/9/06	<10.00	180.00	180.00	37.00	1.80	1.70	100.00	54.10	16.20	3.26	46.90	456.00
	11/14/06	<10.00	170.00	170.00	34.00	1.80	1.80	110.00	58.00	18.20	4.13	53.40	532.00
	5/30/07	<10.00	142.00	142.00	36.00	1.90	1.79	120.00	54.00	16.70	<5.00	50.80	456.00
	11/14/07	<10.00	189.00	189.00	42.30	1.98	1.54	95.6 D1	57.20	17.40	<5.000	52.40	452.00
	5/15/08	<1.53	177.00	177.00	72.4 D1	1.86	1.71	141.00	58.00	19.40	4.93	66.5 D1	544.00
	11/4/08 5/20/09	<5.00 <5.00	170.00 360.00	170.00 360.00	49.00 40.00	1.50 2.20	1.30 1.70	90.00 130.00	60.00 51.00	16.00 17.00	3.60 4.50	47.00 53.00	440.00 450.00
	5/20/09	<5.00	150.00	150.00	40.00	1.60	1.60	100.00	51.00	17.00	2.90	42.00	450.00
	5/7/10	<5.00	<5.00	167.00	36.50	1.00	1.78	117.00	49.70	14.90	3.42	42.00	494.00
	11/9/10	<5.00	269.00	269.00	52.50	1.45	1.79	95.40	61.00	16.70	3.56	50.00	438.00
	5/11/11	<5.00	161.00	161.00	133.00	1.43	2.08	140.00	78.10	37.00	6.32	103.00	664.00
Dup	5/11/11	<5.00	161.00	161.00	130.00	1.44	2.01	137.00	77.40	37.00	6.29	104.00	706.00
	11/10/11	<5.00	162.00	162.00	38.80	1.86	1.49	97.10	66.20	17.90	3.62	52.30	420.00
	5/17/12	< 5.00	176.00	176.00	45.80	1.29	1.62	88.50	63.60	16.30	3.66	53.40	456.00
	10/11/12	<5.00	166.00	166.00	44.60	1.49	1.74	95.10	55.80	15.80	3.80	49.30	440.00
	5/17/13 10/8/13	<5.00 <6.00	171.00 178.00	171.00 178.00	43.60 45.20	<b>1.87</b> 1.55	1.67 1.74	106.00 95.50	57.70 60.90	14.80 16.10	3.18 3.33	42.90 52.00	428.00 450.00
	5/1/14	<10.00	173.00	178.00	45.20 63.30	<0.10	2.06	93.30	64.40	17.60	3.38	52.00	430.00
	10/7/14	<4.00	176.00	176.00	34.70	1.10	1.71	101.00	59.20	16.70	3.06	46.50	399.00
	5/22/15				40.40	<4.00		87.20					428.00
	10/20/15				37.60	<2.00		89.30					356.00
	5/25/16				34.30	1.87		103.00		-			475.00
	10/18/16				39.30	0.87		96.40					418.00
	05/11/17				35.10	<0.11		110.00					416.00
	10/24/17				35.10	1.87		95.30					438.00
D	05/22/18				34.60	1.58		110.00					421.00
Dup	05/22/18				34.50	1.64		110.00					415.00
	10/18/18 06/20/19				36.90 34.40	1.69		114.00					413.00 407.00
	11/24/19				45.80			113.00					364.00
L				l			1		1				

\ITX05FP01DatalENVChevronTexacoTX8HES Transferl04 Field Investigations!2019/6 - Annual GWMRiCcoper Jal/2019 GWM Report!2019 Report!Cumulative Tables\_appendix C and E\_reformatted\_02.6.20



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
	C Groundwa				250	1.60	10	600.00	·	1			1,000
MW-12*	5/15/02	<1.00	160.00	160.00	58.30	1.09	2.44	91.30	53.50	15.90	5.52	50.30	462.00
	10/23/02				65.00			102.00					477.00
	5/22/03	<1.00	148.00	148.00	91.10	1.04	2.30	87.70	74.20	21.00	4.89	57.60	516.00
	11/25/03	<1.00	142.00	142.00	93.10	1.18	2.36	90.90	74.70	20.90	5.41	52.50	548.00
	5/12/04	<1.00	458.00	458.00	72.90	1.04	2.35	86.70	58.10	19.00	5.92	51.80	489.00
	11/15/04	<1.00	184.00	184.00	79.80	1.39	2.83	88.80	59.70	21.50	16.50	77.40	512.00
	11/17/05	<10.00	151.00	151.00	109.00	0.93	0.12	94.6 D1	193.00	26.60	13.40	87.50	700.00
	11/16/06 11/16/07	<10.00 <10.00	270.00	270.00	120.00 258.00	0.71	1.70 1.55	84.00 191 D1	82.30 77.20	27.00 42.70	4.82 11.00	62.20 154.00	620.00 1.270.00
	11/6/08	<5.00	130.00	130.00	110.00	0.89	1.55	79.00	61.00	20.00	4.50	52.00	460.00
	11/3/09	<25.00	2.000.00	2.000.00	120.00	0.87	1.60	98.00	68.00	24.00	6.00	79.00	600.00
	11/9/10	<5.00	144.00	144.00	211.00	0.57	1.76	89.80	75.60	27.80	4.60	60.60	712.00
	11/10/11	<5.00	134.00	134.00	179.00	0.46	1.37	92.80	93.80	27.80	4.53	64.00	594.00
	10/11/12	<5.00	145.00	145.00	179.00	0.71	0.79	86.50	80.40	25.40	5.44	62.90	724.00
	10/8/13	<6.00	160.00	160.00	246.00	0.62	1.64	84.50	110.00	30.40	4.92	67.80	944.00
	10/7/14	<4.00	145.00	145.00	200.00	0.29	1.70	86.80	93.10	29.30	5.06	65.00	765.00
	10/21/15				165.00	<4.00		72.60					487.00
	10/18/16				270.00	< 0.50		95.00					888.00
Dup	10/24/17 10/24/17				150.00 149.00	<0.50 <0.50		64.90 64.80					579.00 565.00
Dup	10/24/17				290.00	0.74		106.00					790.00
	06/20/19				254.00								580.00
	11/23/19				337.00			140.00					1,010.00
MW-13*	5/13/02	<1.00	100.00	100.00	517.00	<1.00	1.61	437.00	116.00	76.00	19.40	269.00	1,596.00
	10/23/02				549.00			370.00					1,740.00
	5/22/03	<1.00	186.00	186.00	944.00	<2.00	2.33	361.00	289.00	101.00	15.30	458.00	3,060.00
	11/25/03	<1.00	226.00	226.00	1,460.00	<2.00	2.22	372.00	369.00	117.00	20.00	478.00	3,445.00
	5/12/04	<1.00	234.00	234.00	1,550.00	<4.00	4.58	369.00	384.00	114.00	18.60	485.00	4,240.00
	11/15/04	<1.00	226.00	226.00	1,870.00	<2.00	4.92	384.00	510.00	164.00	16.50	627.00	3,600.00
	11/17/05	<10.00	201.00	201.00	722.00	1.00	2.50	206 D1	786.00	91.60	19.70	276.00	2,350.00
	11/16/06	<10.00	1,500.00	1,500.00	2,000.00	<0.50 N	2.70	500 N	529.00	176.00	14.20	493.00	5,060.00
	11/16/07 11/6/08	<10.00 <5.00	236.00 180.00	236.00 180.00	2,000.00 970.00	0.33	3.05 D1 1.80	312 D1 280.00	361.00 240.00	105.00 96.00	11.40 17.00	553 D1 370.00	6,320.00 2,400.00
	11/3/09	<25.00	15,000.00	15,000.00	2,200.00	<0.50	2.60	440.00	490.00	180.00	22.00	490.00	5,600.00
	11/9/10	<5.00	267.00	267.00	1,680.00	0.22	2.82	405.00	400.00	120.00	10.40	540.00	4,270.00
	11/10/11	<5.00	206.00	206.00	2,110.00	0.18	< 0.50	273.00	690.00	223.00	13.20	472.00	4,870.00
	10/11/12	<5.00	204.00	204.00	2,360.00	0.31	2.70	422.00	706.00	228.00	14.40	423.00	6,290.00
	10/8/13	<6.00	1,780.00	1,780.00	2,710.00	0.30	2.59	448.00	768.00	225.00	14.00	457.00	7,320.00
	10/7/14	<4.00	267.00	267.00	1,430.00	<0.10	1.91	379.00	355.00	109.00	11.30	612.00	3,940.00
	10/21/15				1,400.00	<40.0		353.00					3,260.00
	10/18/16				1,940.00	<0.50		440.00					5,310.00
MW-14	10/8/13	<6.00	267.00	267.00	162.00	lugged and At 3.69	<0.10	127.00	74.40	32.30	8.42	145.00	854.00
Dup	10/8/13	< 6.00	207.00	207.00	162.00	3.69	<0.10	130.00	60.70	26.30	0.42 7.97	145.00	848.00
Bup	5/1/14	<10.00	199.00	199.00	64.00	1.19 J	<0.10	84.90	60.80	21.70	3.82	59.80	468.00
	10/7/14	<4.00	227.00	2,227.00	95.20	0.79	< 0.023	22.90	71.30	24.90	3.99	61.80	460.00
Dup	10/7/14	<4.00	194.00	194.00	55.70	1.36	< 0.023	88.80	59.30	19.10	3.21	49.50	490.00
	5/22/15				77.80	<4.00		45.40					468.00
Dup	5/22/15				77.40	<4.00		49.00					470.00
<b>D</b> .	10/20/15				29.1 J	<2.00		53.5 J					294.00
Dup	10/21/15 5/25/16				58.9 J 79.00	<2.00 1.37		101 J 19.90					407.00 552.00
	5/25/16				79.00 51.80	1.37		19.90					422.00
	10/10/10				61.20	1.07		104.00 108 J					422.00
Dun	10/18/16				020			17.70					
Dup	10/18/16 05/11/17				70.50	< 0.11		17.70					412.00
Dup	10/18/16 05/11/17 10/24/17				70.50 57.40	<0.11 <b>1.77</b>		42.20					412.00 423.00
Dup	05/11/17												
Dup	05/11/17 10/24/17 05/22/18 10/18/18				57.40 54.90 57.20	1.77		42.20					423.00 390.00 401.00
Dup	05/11/17 10/24/17 05/22/18 10/18/18 06/20/19		   		57.40 54.90 57.20 42.10	<b>1.77</b> 1.20 1.35 		42.20 47.80 47.20			  		423.00 390.00 401.00 481.00
Dup Dup	05/11/17 10/24/17 05/22/18 10/18/18	  			57.40 54.90 57.20	<b>1.77</b> 1.20 1.35	  	42.20 47.80					423.00 390.00 401.00



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00			1		1,000
RW-1	5/27/99	0.00	224.00	224.00	8,700.00	2.70	7.00	840.00	679.00	521.00	34.00	3,290.00	14,000.00
	5/22/03	<1.00	190.00	190.00	2,410.00	2.46	4.23	345.00	162.00	145.00	25.40	1,180.00	5,260.00
	11/26/03	<1.00	184.00	184.00	1,990.00	<4.00	20.00	324.00	199.00	147.00	38.60	1,080.00	5,050.00
	5/11/04	<1.00	148.00	148.00	491.00	1.32	2.65	109.00	66.30	23.40	11.20	252.00	1,224.00
	11/17/04	<1.00	160.00	160.00	633.00	1.65	3.23	121.00	89.70	43.50	18.00	382.00	1,314.00
	11/17/05	<10.00	221.00	221.00	895.00	1.00	1.40	166 D1	122.00	70.90	8.40	493.00	2,380.00
	11/16/06	<10.00	380.00	380.00	11,000.00	<0.50	<20.00 HC	1,100.00	539.00	694.00	43.30	5,580.00	22,000.00
	11/15/07	<10.00	359.00	359.00	2,380.00	1.26	3.74 D1	252 D1	141.00	137.00	16.00	1,100 D1	5,280.00
Dum		<10.00											
Dup	11/15/07		208.00	208.00	2,620.00	1.24	3.85 D1	316 D1	136.00	133.00	15.50	1,040 D1	5,360.00
	11/12/08	< 5.00	210.00	210.00	370.00	0.82	1.90	97.00	66.00	34.00	5.00	190.00	920.00
	11/4/09	< 5.00	170.00	170.00	1,700.00	1.10	2.60	250.00	110.00	120.00	22.00	750.00	3,800.00
	11/11/10	<5.00	192.00	192.00	1,340.00	0.72	2.72	204.00	95.50	104.00	12.60	792.00	2,830.00
	11/10/11	<5.00	396.00	396.00	14,000.00	3.32	9.16	1,540.00	942.00	1,260.00	44.60	8,720.00	32,200.00
	10/11/12	<5.00	263.00	263.00	6,530.00	2.19	4.75	625.00	314.00	445.00	28.00	3,490.00	10,100.00
Dup	10/11/12	<5.00	286.00	286.00	2,440.00	0.31	1.23	194.00	128.00	156.00	18.60	1,260.00	17000**
	10/8/13	<6.00	285.00	285.00	6,050.00	0.95	4.29	546.00	760.00	919.00	39.00	6,370.00	11,200.00
Dup	10/8/13	<6.00	216.00	216.00	10,500.00	1.27	5.98	926.00	490.00	581.00	31.40	4,170.00	1870**
	10/7/14	<4.00	207.00	207.00	2,240.00	1.36	3.62	338.00	69.60	106.00	24.00	1,130.00	2,760.00
Dup	10/7/14	<4.00	192.00	192.00	2,570.00	2.51	3.70	363.00	82.30	125.00	26.80	1,350.00	1970**
	10/21/15				9,110.00	<80.00		953 J					15,300.00
Dup	10/20/15				10,200.00	<200.00		1,120 J					21,600.00
	12/15/15				1,130.00								2,290.00
	12/16/15				1,190.00								2,580.00
	12/17/15				1,030.00								2,260.00
	12/18/15				988.00								2,350.00
	1/4/16				1,200.00								2,350.00
	1/5/16				1,080.00								2,190.00
	1/6/16				1,120.00								2,240.00
	1/7/16				1,080.00								2,200.00
	1/8/16				1,310.00								2,370.00
	1/11/16				1,030.00								2,210.00
	1/12/16				1,520.00								2,850.00
	10/18/16				277.00	<0.50		87.50					715.00
Dup	10/18/16				316.00	<0.50		88.9 J					922.00
	10/25/17				254.00	1.02		75.50					2,040.00
	10/16/18***				304.00	0.61		93.40					757.00
	10/18/18				7,870.00	<0.10		807.00					15,400.00
Dup	10/18/18				7,830.00	<0.10		873.00					12,700.00
	6/20/19				9,290.00								22,100.00
Dup	6/20/19				9,200.00								22,800.00
	11/24/19				5,780.00			722.00					12,200.00
514/ 0													
RW-2	5/22/03	324.00	<4.00	780.00	1,580.00	<2.00	2.43	23.90	1,060.00	<0.500	20.20	258.00	4,310.00
	11/26/03	64.00	<4.00	704.00	1,480.00	<5.00	5.81	38.30	988.00	<0.500	23.80	240.00	3,535.00
	11/17/04	104.00	<4.00	692.00	2,280.00	<10.00	<10.00	116.00	1,180.00	<0.500	18.50	415.00	3,915.00
	11/17/05	281.00	<10.00	422.00	1,770.00	0.89	0.60	175 D1	861.00	16.60	13.10	361.00	7,350.00
	11/16/06	49.00	150.00	199.00	2,500.00	0.57	1.90	370.00	978.00	48.80	18.00	437.00	5,270.00
	11/15/07	170.00	37.80	208.00	1,680.00	0.49	1.52	166 D1	586.00	<5.000	11.20	245.00	5,590.00
	11/12/08	150.00	<5.00	390.00	2,500.00	<0.50	0.24	250.00	1,200.00	<0.38	6.00	400.00	4,800.00
	11/4/09	34.00	<5.00	220.00	2,200.00	<0.50	1.70	240.00	940.00	0.18	16.00	420.00	6,300.00
	11/11/10	113.00	<5.00	172.00	2,100.00	<0.50	2.03	233.00	967.00	4.06	8.86	426.00	4,550.00
	11/10/11	36.90	<5.00	384.00	4,330.00	<10.00	2.13	305.00	2,040.00	1.12	18.70	711.00	8,300.00
	10/11/12	27.10	<5.00	202.00	1,920.00	< 0.50	1.93	223.00	842.00	0.46	9.30	385.00	6,680.00
Dup	10/11/12	31.90	<5.00	206.00	2,310.00	<0.50	1.98	228.00	1,090.00	2.42	10.50	430.00	5,250.00
	10/8/13	66.30	<6.00	117.00	2,450.00	0.14	2.36	309.00	1,570.00	2.15	15.30	639.00	4,420.00
	10/7/14	35.20	<4.00	35.20	2,250.00	<0.10	2.52	378.00	995.00	21.60	10.30	408.00	3,090.00
	10/20/15				699.00	<20.00		118.00					2,190.00
	12/15/15				1,130.00	~20.00		110.00					2,190.00
	12/15/15				1,130.00								2,290.00
	12/16/15				1,030.00								2,560.00
	12/17/15				988.00								2,260.00
	1/4/16				1,200.00								2,280.00
	1/5/16				1,080.00								2,190.00
	1/6/16				1,120.00								2,240.00
	1/7/16				1,080.00								2,200.00
	1/8/16				1,310.00								2,370.00
	1/11/16				1,030.00								2,210.00
	1/12/16				1,520.00								2,850.00
	10/18/16				1,450.00	<0.50		270.00					3,910.00
	10/25/17				1,760.00	<5.00		288.00					4,440.00
	10/18/18				3,640.00	<0.10		534.00					6,890.00
	6/20/19				3,180.00			-					10,200 H
	11/24/19				3,510.00			464.00					9,880.00
DH/ CD													
RW-2R	10/8/13	<6.00	146.00	146.00	6,550.00	0.45	1.79	762.00	1,850.00	616.00	25.50	1,350.00	14,600.00
		<4.00	169.00	169.00	5,400.00	1.56	2.17	707.00	1,280.00	470.00	20.90	1,170.00	13,200.00
	10/7/14					<80.00		806.00					16,200.00
	10/20/15				5,990.00								
	10/20/15 10/18/16				6,390.00	<0.50		797.00					15,200.00
	10/20/15 10/18/16 10/25/17				6,390.00 7,030.00	<0.50 <5.00		797.00 872.00					15,200.00 12,300.00
	10/20/15 10/18/16				6,390.00	<0.50		797.00					15,200.00

\ITX05FP01DatalENVChevronTexacoTX8HES Transferl04 Field Investigations!2019/6 - Annual GWMRiCcoper Jal/2019 GWM Report!2019 Report!Cumulative Tables\_appendix C and E\_reformatted\_02.6.20
Appendix C

Cumulative Summary of Groundwater Analytical Results Cooper-Jal Unit Injection Station Lea County, New Mexico



Sample ID	Sample Date	Carbonate Alkalinity	Bicarbonate Alkalinity	Total Alkalinity	Chloride <sup>1</sup>	Fluoride <sup>2</sup>	Nitrate - N <sup>2</sup>	Sulfate <sup>1</sup>	Calcium	Magnesium	Potassium	Sodium	TDS <sup>1</sup>
NMWQC	C Groundwa	ater Standar	d		250	1.60	10	600.00					1,000
Dup	10/18/18				8,060.00	<0.10		815.00					13,300.00
	6/20/19				7,860.00								29,400.00
	11/24/19				7,720.00			943.00					21,000.00

Notes:

1. Bold value indicates a laboratory detection and New Mexico Water Quality Control Commission (NMWQCC) exceedance.

Results shown in mg/L.
 NS - Not Sampled
 D1 - The analysis was performed at a dilution due to the high analyte concentration.
 H - The analysis was performed past holding time.

6. C - Elevated detection limit due to matrix effect.

7. J - Estimated Concentration

8. < - Analyte detected below quantitation limit

9. <sup>1</sup>Human Health Standards for Groundwater.

<sup>10</sup> Other Standards for Domestic Water Supply.
 <sup>11</sup> \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.
 <sup>12</sup> \*\* - Reported TDS concentration includes a low bias. Not used in trend comparison.

13. \*\*\* - Indicates groundwater monitor well that was sampled prior to semiannual groundwater event via low-flow purge for internal use.

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## **APPENDIX D**

**Analytical Reports** 

Received by OCD: 3/25/2020 9:15:51 AM

# 1

# 🔅 eurofins

# Environment Testing TestAmerica

## ANALYTICAL REPORT

#### Eurofins TestAmerica, Houston 6310 Rothway Street Houston, TX 77040 Tel: (713)690-4444

#### Laboratory Job ID: 600-187419-1

Client Project/Site: Midland - Chevron Kegan Boyer

#### For:

ARCADIS U.S., Inc. 1004 North Big Spring Suite 121 Midland, Texas 79701

Attn: Mr. Brett Krehbiel

Hudchadker

Authorized for release by: 7/15/2019 1:40:31 PM Sachin Kudchadkar, Senior Project Manager (713)690-4444 sachin.kudchadkar@testamericainc.com

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

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

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

Released to Imaging: 9/13/2021 1:48:45 PM

LINKS

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Certification Summary	22
Chain of Custody	23
Receipt Checklists	27

#### Job ID: 600-187419-1

#### Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative 600-187419-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/21/2019 10:19 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 1.7° C.

#### All applicable analytical narratives can be found in the TRRP Checklist section of this report.

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Job ID: 600-187419-1

#### **Method Summary**

#### Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

lethod	Method Description	Protocol	Laboratory	- 2
00.0	Anions, Ion Chromatography	MCAWW	TAL HOU	
M 2540C	Solids, Total Dissolved (TDS)	SM	TAL HOU	2
Protocol Re	ferences:			
MCAWV	V = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020,	March 1983 And Subsequent Revisions.		
SM = "S	tandard Methods For The Examination Of Water And Wastewater"			
Laboratory	References:			
TAL HO	U = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040,	TEL (713)690-4444		
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#### Protocol References:

#### Laboratory References:

#### Sample Summary

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer Job ID: 600-187419-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID	
600-187419-1	MW - 12	Water	06/20/19 08:52	06/21/19 10:19		
600-187419-2	MW - 3	Water	06/20/19 09:32	06/21/19 10:19		
600-187419-3	MW - 1	Water	06/20/19 09:38	06/21/19 10:19		
600-187419-4	MW - 2A	Water	06/20/19 09:44	06/21/19 10:19		
600-187419-5	MW - 2	Water	06/20/19 09:47	06/21/19 10:19		
600-187419-6	MW - 6R	Water	06/20/19 09:53	06/21/19 10:19		
600-187419-7	DUP - 1	Water	06/20/19 00:00	06/21/19 10:19		
600-187419-8	MW - 5	Water	06/20/19 10:05	06/21/19 10:19		
600-187419-9	MW - 5A	Water	06/20/19 10:08	06/21/19 10:19		
600-187419-10	RW - 1	Water	06/20/19 10:14	06/21/19 10:19		
600-187419-11	DUP -2	Water	06/20/19 00:00	06/21/19 10:19		
600-187419-12	MW - 4	Water	06/20/19 10:22	06/21/19 10:19		
600-187419-13	MW - 4A	Water	06/20/19 10:24	06/21/19 10:19		
600-187419-14	RW - 6R	Water	06/20/19 10:49	06/21/19 10:19		
600-187419-15	RW - 2	Water	06/20/19 10:51	06/21/19 10:19		
600-187419-16	MW - 14	Water	06/20/19 11:05	06/21/19 10:19		
600-187419-17	MW - 7	Water	06/20/19 11:20	06/21/19 10:19		
600-187419-18	MW - 9	Water	06/20/19 11:30	06/21/19 10:19		
600-187419-19	MW - 9A	Water	06/20/19 11:34	06/21/19 10:19		
600-187419-20	MW - 11	Water	06/20/19 11:41	06/21/19 10:19		
600-187419-21	EB - 1	Water	06/20/19 12:50	06/21/19 10:19		

Received b	y OCD:	3/25/2020	9:15:51 AM
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#### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Boyer								
						Lab Sam	ole ID: 600-18	7419-1
							Matrix	x: Wate
tography								
	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
254		0.400	0.0534	mg/L			06/28/19 22:18	20
Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
580		10.0	10.0	mg/L			06/26/19 15:14	1
						Lab Sam	ole ID: 600-18	7419-2
								x: Water
							inder in	. Water
atography								
	Qualifier	MQL			D	Prepared	Analyzed	Dil Fac
40.0		0.400	0.0534	mg/L			06/28/19 22:38	5
Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
448		10.0	10.0	mg/L			06/26/19 15:14	1
						Lab Sam	ole ID: 600-18	7419-3
							Matri	x: Water
tography								
	Qualifier	MQL	MDL	Unit	D	Prepared	Analvzed	Dil Fac
1110		0.400			<u> </u>		06/28/19 22:58	100
	Qualifier	· · · · · · · · · · · · · · · · · · ·		-	D	Prepared	Analyzed	Dil Fac
2510		10.0	10.0	mg/L			06/26/19 15:14	1
						Lab Sam	ole ID: 600-18	7419-4
								x: Water
					_	_		
	Qualifier	MQL	MDL		D	Prepared		Dil Fac
		0.400	0.050.4				06/28/19 23:58	
86.5		0.400	0.0534	mg/L				10
86.5		0.400	0.0534	mg/L				10
	Qualifier		0.0534 MDL	C .	D	Prepared		Dil Fac
	Qualifier	0.400 <u>MQL</u> 10.0	MDL	C .	D	Prepared	Analyzed 06/26/19 15:14	
Result	Qualifier	MQL	MDL	Unit	D		Analyzed 06/26/19 15:14	Dil Fac
Result	Qualifier	MQL	MDL	Unit	<u>D</u>		- Analyzed 06/26/19 15:14 ole ID: 600-18	Dil Fac 1 7419-5
Result	Qualifier	MQL	MDL	Unit	<u>D</u>		- Analyzed 06/26/19 15:14 ole ID: 600-18	Dil Fac
Result	Qualifier	MQL	MDL	Unit	<u>D</u>		- Analyzed 06/26/19 15:14 ole ID: 600-18	Dil Fac 1 7419-5
Result 554	Qualifier	MQL	MDL	Unit	D		- Analyzed 06/26/19 15:14 ole ID: 600-18	Dil Fac 1 7419-5
Result 554	Qualifier	MQL	MDL	Unit mg/L	D		- Analyzed 06/26/19 15:14 ole ID: 600-18	Dil Fac 1 7419-5
Result 554		MQL 10.0	<u>MDL</u> 10.0	Unit Unit		Lab Sam	- <u>Analyzed</u> 06/26/19 15:14 Die ID: 600-18 Matriz	Dil Fac 1 7419-5 x: Water
Result 554		MQL 10.0	<u>MDL</u> 10.0 MDL	Unit Unit		Lab Sam	Analyzed 06/26/19 15:14 0le ID: 600-18 Matriz Analyzed	Dil Fac 1 7419-5 x: Water Dil Fac
Result 554 atography Result 283		MQL 10.0	<u>MDL</u> 10.0 MDL	Unit mg/L Unit mg/L		Lab Sam	Analyzed 06/26/19 15:14 0le ID: 600-18 Matriz Analyzed	Dil Fac 1 7419-5 x: Water Dil Fac
	254 Result 580 ttography Result 40.0 Result 448 ttography Result 1110 Result 2510 ttography	Result     Qualifier       254     Qualifier       Result     Qualifier       580     Qualifier       40.0     Qualifier       40.0     Qualifier       448     Qualifier       448     Qualifier       1110     Qualifier       Result     Qualifier       1110     Qualifier       2510     Qualifier	ResultQualifierMQL2540.400ResultQualifierMQL58010.0ntographyQualifierMQL40.00.400ResultQualifierMQL44810.0ntographyQualifierMQL10.00.400ResultQualifierMQL0.4000.400ResultQualifierMQL11100.400ResultQualifierMQL10.010.0	ResultQualifierMQLMDL2540.4000.0534ResultQualifierMQLMDL58010.010.0ttographyResultQualifierMQLMDL40.00.4000.0534ResultQualifierMQLMDL44810.010.0ttographyResultQualifierMQLMDL11100.4000.0534ResultQualifierMQLMDL11100.4000.0534ResultQualifierMQLMDL10.010.010.0	Result       Qualifier       MQL       MDL       Unit         254       0.400       0.0534       mg/L         Result       Qualifier       MQL       MDL       Unit         580       10.0       10.0       mg/L         atography       Result       Qualifier       MQL       MDL       Unit         40.0       0.400       0.0534       mg/L         Atography       Result       Qualifier       MQL       0.0534       mg/L         Result       Qualifier       MQL       MDL       Unit         448       10.0       10.0       mg/L         atography       Result       Qualifier       MQL       MDL       Unit         1110       0.400       0.0534       mg/L       mg/L         atography       Result       Qualifier       MQL       MDL       Unit         1110       0.400       0.0534       mg/L       mg/L         atography       Result       Qualifier       MQL       MDL       Unit         atography       Result       Qualifier       MQL       MDL       Unit         atography       Result       Qualifier       MQL       MDL	Itography Result       Qualifier       MQL       MDL       Unit       D         254       0.400       0.0534       mg/L       D         Result       Qualifier       MQL       MDL       Unit       D         580       10.0       10.0       mg/L       D         tography Result       Qualifier       MQL       MDL       Unit       D         40.0       0.400       0.0534       mg/L       D         40.0       0.400       0.0534       mg/L       D         Result       Qualifier       MQL       MDL       Unit       D         448       10.0       10.0       mg/L       D       D         ttography Result       Qualifier       MQL       MDL       Unit       D         1110       0.400       0.0534       mg/L       D       D         ttography Result       Qualifier       MQL       MDL       Unit       D         10.0       10.0       mg/L       D       D       D       D         ttography Result       Qualifier       MQL       MDL       Unit       D	Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         254       0.400       0.0534       mg/L       D       Prepared         Result       Qualifier       MQL       MDL       Unit       D       Prepared         10.0       10.0       mg/L       D       Prepared       Lab Samp         Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         40.0       0.400       0.0534       mg/L       D       Prepared         448       10.0       10.0       mg/L       D       Prepared         Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         Lab Samp       10.0       10.0       mg/L       D       Prepared       Lab Samp         Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared         Lab Samp       10.0       10.0	Itography Result       Qualifier       MQL       MDL       Unit       D       Prepared       Analyzed         254       0.400       0.0534       mg/L       D       Prepared       Analyzed         Result       Qualifier       MQL       MDL       Unit       D       Prepared       Analyzed         880       10.0       10.0       mg/L       D       Prepared       Analyzed         06/26/19 15:14       Lab Sample ID: 600-18       Matrix       Matrix       Matrix         ntography       Result       Qualifier       MQL       MDL       Unit       D       Prepared       Analyzed         40.0       0.00       0.0534       mg/L       D       Prepared       Analyzed         448       10.0       10.0       mg/L       D       Prepared       Analyzed         06/28/19 22:38       MQL       MDL       Unit       D       Prepared       Analyzed         1100       0.00       0.0534       mg/L       D       Prepared       Analyzed         06/28/19 15:14       0.400       0.0534       mg/L       D       Prepared       Analyzed         06/28/19 15:14       0.400       0.0534       mg/L

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#### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: MW - 6R							Lab Sam	ole ID: 600-18	7419-6
Date Collected: 06/20/19 09:53								Matri	x: Wateı
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chroma									
Analyte		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.1		0.400	0.0534	mg/L			06/29/19 01:58	10
- General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	482		10.0		mg/L			06/26/19 15:14	1
Client Sample ID: DUP - 1							Lah Samı	ole ID: 600-18	7/10-7
Date Collected: 06/20/19 00:00							Lab Gain		x: Wate
Date Received: 06/20/19 00:00								Watri	x. wate
Method: 300.0 - Anions, Ion Chroma Analyte		Qualifier	MQL	мы	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	64.4		0.400	0.0534				06/29/19 02:18	2
	04.4		0.400	0.0004	ilig/L			00/23/13 02.10	2
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	592		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 5							Lab Sam	ole ID: 600-18	7419-8
Date Collected: 06/20/19 10:05								Matri	x: Wate
Date Received: 06/21/19 10:19									
Analyte Chloride	1700	Qualifier	0.400	0.0534	Unit mg/L	<u>D</u>	Prepared	Analyzed 06/29/19 02:38	<b>Dil Fac</b> 100
General Chemistry	Decult	Qualifian	MQL	MDI	11		Dremered	Analyzad	
Analyte Total Dissolved Solids	4280	Qualifier	10.0		Unit mg/L	D	Prepared	Analyzed 06/27/19 12:49	Dil Fac
-					5				
Client Sample ID: MW - 5A							Lab Sam	ole ID: 600-18	
Date Collected: 06/20/19 10:08 Date Received: 06/21/19 10:19								Matri	x: Wate
Method: 300.0 - Anions, Ion Chroma	atography								
Analyte	Result	Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	118		0.400	0.0534	mg/L			06/29/19 02:58	5
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	650		10.0	10.0	mg/L			06/27/19 12:49	1
							Lab Sampl	e ID: 600-187	419-10
- Client Sample ID: RW - 1									
								Matri	x: Wateı
Date Collected: 06/20/19 10:14								Matri	x: Wate
Date Collected: 06/20/19 10:14		Qualifier	MQL	MDL	Unit	D	Prepared	Matri: Analyzed	
Date Collected: 06/20/19 10:14 Date Received: 06/21/19 10:19 Method: 300.0 - Anions, Ion Chroma		Qualifier	MQL 0.400	<b>MDL</b> 0.0534		D	Prepared		Dil Fac
Date Collected: 06/20/19 10:14 Date Received: 06/21/19 10:19 Method: 300.0 - Anions, Ion Chroma Analyte Chloride	Result	Qualifier				D	Prepared	Analyzed	Dil Fac
Analyte	Result 9290	Qualifier		0.0534		D	Prepared	Analyzed	Dil Fac

<b>Received</b> by	OCD:	3/25/2020	9:15:51 AM
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#### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: DUP -2 Date Collected: 06/20/19 00:00							Lap Samp	le ID: 600-1874 Matrix	419-11 k: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp	hv								
		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9200		0.400	0.0534	mg/L		··	06/29/19 03:38	500
– General Chemistry									
_	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2800		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 4							Lab Samp	le ID: 600-187	419-12
Date Collected: 06/20/19 10:22								Matrix	k: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatogram	ohy								
		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2760		0.400	0.0534	mg/L			06/29/19 03:58	200
General Chemistry									
-	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	7830		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 4A							Lab Samp	le ID: 600-187	419-13
Date Collected: 06/20/19 10:24									k: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp	-	Qualifian			11		Durante	A	D!!
Analyte F	336	Qualifier	0.400	0.0534	Unit	D	Prepared	Analyzed 06/29/19 04:58	Dil Fac
	550		0.400	0.0004	iiig/L			00/20/10 04:00	
General Chemistry									
Analyte F	Result	Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1040		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: RW - 6R							Lab Samp	le ID: 600-1874	419-14
Date Collected: 06/20/19 10:49								Matrix	k: Wate
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp	ohv								
		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7860		0.400	0.0534	mg/L			06/29/19 05:18	500
Conoral Chamistry									
General Chemistry Analyte F	Posult	Qualifier	MQL	мы	Unit	D	Prepared	Analyzed	Dil Fac
·	29400		10.0		mg/L			06/27/19 12:49	1
Client Sample ID: RW - 2							Lah Samn	le ID: 600-187	110_15
Date Collected: 06/20/19 10:51							Lab Samp		k: Wate
Date Received: 06/21/19 10:19								Wath	. wate
Method: 300.0 - Anions, Ion Chromatograp Analyte		Qualifier	MQL	МП	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3180		0.400	0.0534				06/29/19 06:18	200
	2.50				J				_00
General Chemistry									
		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	0200	н	10.0	10.0	mg/L			07/01/19 11:28	1

Received by	OCD: 3/25/2020	9:15:51 AM
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#### **Client Sample Results**

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Client Sample ID: MW - 14							Lab Sampl	e ID: 600-187	419-16
Date Collected: 06/20/19 11:05								Matrix	x: Water
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp									
	esult	Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	42.1		0.400	0.0534	mg/L			06/29/19 06:38	2
General Chemistry									
-	esult	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	481		10.0		mg/L			06/27/19 12:49	1
					5				
Client Sample ID: MW - 7							Lab Sampl	e ID: 600-187	419-17
Date Collected: 06/20/19 11:20								Matrix	x: Water
Date Received: 06/21/19 10:19									
Mathadi 200.0 Aniana lan Chromatagran	<b>h</b>								
Method: 300.0 - Anions, Ion Chromatograph Analyte Re		Qualifier	MQL	МП	Unit	D	Prepared	Analyzed	Dil Fac
	4210		0.400	0.0534		<b>_</b>		06/29/19 06:58	200
	-210		0.100	0.0001	iiig/L			00,20,10 00.00	200
General Chemistry									
-	esult	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 15	5500		10.0	10.0	mg/L			06/27/19 12:49	1
								- ID: COO 497	440.40
Client Sample ID: MW - 9							Lab Sampi	e ID: 600-187	
Date Collected: 06/20/19 11:30								Matrix	x: Water
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp	hv								
		Qualifier	MQL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	621	Quaimer	0.400	0.0534			riepaieu	06/29/19 07:18	50
	021		0.100	0.0001	iiig/L			00/20/10 01:10	00
General Chemistry									
-	esult	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids 2	2930		10.0	10.0	mg/L			06/27/19 12:49	1
								- ID: 000 407	440 40
Client Sample ID: MW - 9A							Lab Sampi	e ID: 600-187	
Date Collected: 06/20/19 11:34								Matrix	x: Wateı
Date Received: 06/21/19 10:19									
Method: 300.0 - Anions, Ion Chromatograp	hv								
		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	268		0.400	0.0534	mg/L		·	06/29/19 07:38	10
General Chemistry									
Analyte Re	esult	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1220		10.0	10.0	mg/L			06/27/19 12:49	1
Client Sample ID: MW - 11							Lah Samn	e ID: 600-187	110_20
Date Collected: 06/20/19 11:41							Lab Gampi		x: Water
Date Received: 06/20/19 11:41								Wath	x. water
Date Neceiveu. 00/21/13 10.13									
Method: 300.0 - Anions, Ion Chromatograp	hy								
		Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.4		0.400	0.0534	mg/L			06/29/19 07:58	2
General Chemistry		•				_			<b>-</b>
		Qualifier	MQL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	407		10.0	10.0	mg/L			06/27/19 12:49	1

#### **Client Sample Results**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: EB - 1 Date Collected: 06/20/19 12:50

Date	conected.	00/20/19	12.50
Date	<b>Received:</b>	06/21/19	10:19

Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			07/01/19 16:21	1
General Chemistry									
Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	70.0		10.0	10.0	mg/L			06/27/19 12:49	1

Lab Sample ID: 600-187419-21 Matrix: Water

Job ID: 600-187419-1

Job ID: 600-187419-1

#### **Definitions/Glossary**

#### Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Qualifiers		
HPLC/IC Qualifier	Qualifier Description	
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.	
U	Analyte was not detected at or above the SDL.	5
General Cher	nistry	
Qualifier	Qualifier Description	
Н	Sample was prepped or analyzed beyond the specified holding time	
U	Analyte was not detected at or above the SDL.	7
Glossary		0
Abbreviation	These commonly used abbreviations may or may not be present in this report.	0
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	0
%R	Percent Recovery	3
CFL	Contains Free Liquid	
CNF	Contains No Free Liquid	

DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Sample ID: MB 600-268268/35

Lab Sample ID: MB 600-268268/4

Lab Sample ID: LCS 600-268268/36

Lab Sample ID: LCS 600-268268/5

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Analyte

Chloride

Analyte

Chloride

Analyte

Chloride

Analysis Batch: 268268

Analysis Batch: 268268

Analysis Batch: 268268

#### **QC Sample Results**

MQL

0.400

MQL

0.400

Spike

Added

20.0

MDL Unit

MDL Unit

0.0534 mg/L

LCS LCS

19.05

Result Qualifier

0.0534 mg/L

D

D

D

Unit

mg/L

Prepared

Prepared

%Rec

95

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

Method: 300.0 - Anions, Ion Chromatography

MB MB Result Qualifier

MB MB Result Qualifier

0.0534 U

0.0534 U

Job ID: 600-187419-1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

Analyzed 06/28/19 23:18

**Client Sample ID: Method Blank** 

Analyzed

06/28/19 12:57

**Client Sample ID: Lab Control Sample** 

%Rec.

Limits

90 - 110

Dil Fac

Dil Fac

1

1

8		3	
	9		
			8

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

Analysis Batch: 268268								
	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	20.0	19.60		mg/L		98	90 - 110	

Lab Sample ID: 600-187419-5 M Matrix: Water	<b>MS</b>							•		nple ID: MW - 2 Type: Total/NA
Analysis Batch: 268268	Sample	Sample	Spike	MS	MS				• %Rec.	
Analyte Chloride	•	Qualifier	Added 200		Qualifier	- Unit mg/L	<u>D</u>	%Rec 79	Limits 80 - 120	

Lab Sample ID: 600-187419-5 M Matrix: Water	ISD								Client Sam Prep T	ple ID: N ype: To	
Analysis Batch: 268268	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	283		200	444.5		mg/L		81	80 - 120	1	20
·							<b>D</b>			1	

Lab Sample ID: 600-187419-14 Matrix: Water	MS							C		le ID: RW - 6R Type: Total/NA
Analysis Batch: 268268										
	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	7860		5000	11760	N1	mg/L		78	80 - 120	

Lab Sample ID: 600-187419-14 Matrix: Water	MSD							С	lient Samp Prep 1	le ID: RV Type: To		
Analysis Batch: 268268												
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	7860		5000	11760	N1	ma/L		78	80 - 120	0	20	

Lab Sample ID: MB 600-268404/4

Matrix: Water

#### **QC Sample Results**

Client: ARCADIS U.S., Inc.
Project/Site: Midland - Chevron Kegan Boyer

Method: 300.0 - Anions, Ion Chromatography

Job ID: 600-187419-1

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

												Prep Type:	
Analysis Batch: 268404	ME	B MB											
Analyte		t Qualifier		MQL		MDL	Unit		D	Pr	epared	Analyzed	Dil Fa
Chloride	0.0534			0.400		0534					spurcu	07/01/19 14:01	
		-											
Lab Sample ID: LCS 600-268404/5									Cli	ent	Sample	e ID: Lab Contro	Sample
Matrix: Water												Prep Type:	Total/N/
Analysis Batch: 268404													
			Spike		LCS	LCS						%Rec.	
Analyte			Added		Result	Quali	ifier	Unit		D	%Rec	Limits	
Chloride			20.0		19.30			mg/L			96	90 - 110	
Method: SM 2540C - Solids, To	otal Disso	lved (TD	S)										
_ Lab Sample ID: MB 600-268092/1										(	Client S	Sample ID: Meth	od Blanl
Matrix: Water												Prep Type:	
Analysis Batch: 268092													
	ME	B MB											
Analyte	Resul	t Qualifier		MQL		MDL	Unit		D	Pre	epared	Analyzed	Dil Fa
Total Dissolved Solids	10.0	Ū		10.0		10.0	mg/L					06/26/19 15:14	
									0				Comple
Lab Sample ID: LCS 600-268092/2 Matrix: Water									CI	ent	Sampi	e ID: Lab Contro	
												Prep Type:	TOLAI/IN/
Analysis Batch: 268092			Spike		LCS	LCS						%Rec.	
Analyte			Added		Result		ifior	Unit		D	%Rec	Limits	
Total Dissolved Solids			1800		1789	Quan		mg/L			99	90 - 110	
			1000		1100			ing/E			00	001110	
Lab Sample ID: 600-187419-5 DU												Client Sample ID	: <b>MW</b> - 2
Matrix: Water												Prep Type:	
Analysis Batch: 268092													
	Sample Sa	nple			DU	DU							RPI
Analyte	Result Qu	alifier			Result	Quali	ifier	Unit		D		RP	D Limi
					Result								
Total Dissolved Solids	960				934.0			mg/L					3 1
-	960							mg/L					
 Lab Sample ID: MB 600-268191/1	960							mg/L			Client S	Sample ID: Metho	od Blani
_ Lab Sample ID: MB 600-268191/1 Matrix: Water	960							mg/L			Client S	Sample ID: Methe Prep Type:	od Blani
 Lab Sample ID: MB 600-268191/1								mg/L			Client \$		od Blani
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191	ME	3 MB			934.0			mg/L				Prep Type:	od Blanl Total/N/
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte	ME Resul	t Qualifier		MQL	934.0	MDL		mg/L	D		Client S	Prep Type: Analyzed	od Blani Total/N/ Dil Fa
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191	ME Resul			<b>MQL</b> 10.0	934.0			mg/L	D			Prep Type:	od Blanl Total/N/
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte Total Dissolved Solids	ME Resul	t Qualifier			934.0	MDL		mg/L		Pro	epared	Analyzed           06/27/19 12:49	od Blani Total/N/ Dil Fa
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte	ME Resul	t Qualifier			934.0	MDL		mg/L		Pro	epared	Prep Type: Analyzed 06/27/19 12:49 e ID: Lab Contro	Dil Fa
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte Total Dissolved Solids Lab Sample ID: LCS 600-268191/2 Matrix: Water	ME Resul	t Qualifier			934.0	MDL		mg/L		Pro	epared	Analyzed           06/27/19 12:49	Dil Fa
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte Total Dissolved Solids Lab Sample ID: LCS 600-268191/2	ME Resul	t Qualifier	Spike		934.0	MDL		mg/L		Pro	epared	Prep Type: Analyzed 06/27/19 12:49 e ID: Lab Contro	Dil Fa
Lab Sample ID: MB 600-268191/1 Matrix: Water Analysis Batch: 268191 Analyte Total Dissolved Solids Lab Sample ID: LCS 600-268191/2 Matrix: Water	ME Resul	t Qualifier	Spike Added		934.0	MDL 10.0	mg/L	Unit		Pro	epared	Prep Type: Analyzed 06/27/19 12:49 e ID: Lab Contro Prep Type:	Dil Fa

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer Page 340 of 399

Job ID: 600-187419-1

#### Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 600-187419-13 DU											CI	ient Sample ID: M	W - 4A
Matrix: Water												Prep Type: To	otal/NA
Analysis Batch: 268191													
	Sample	Sam	ple			DU	DU						RPD
Analyte	Result	Qual	ifier			Result	Qua	ifier	Unit	D		RPD	Limit
Total Dissolved Solids	1040					1072			mg/L			3	10
- Lab Sample ID: 600-187419-18 DU											(	Client Sample ID:	MW - 9
Matrix: Water												Prep Type: To	
Analysis Batch: 268191													
	Sample	Sam	ple			DU	DU						RPD
Analyte	Result	Qual	ifier			Result	Qua	ifier	Unit	D		RPD	Limit
Total Dissolved Solids	2930					2976			mg/L			2	10
Lab Sample ID: MB 600-268421/1											Client S	ample ID: Method	l Blank
Matrix: Water												Prep Type: To	otal/NA
Analysis Batch: 268421													
-		ΜВ	MB										
Analyte	Re	sult	Qualifier		MQL		MDL	Unit		D F	Prepared	Analyzed	Dil Fac
Total Dissolved Solids		10.0	U		10.0		10.0	mg/L				07/01/19 11:28	1
Lab Sample ID: LCS 600-268421/2										Clien	t Sample	ID: Lab Control S	Sample
Matrix: Water												Prep Type: To	
Analysis Batch: 268421													
				Spike		LCS	LCS					%Rec.	
Analyte				Added		Result	Qua	ifier	Unit	D	%Rec	Limits	
Total Dissolved Solids				1800		1721			mg/L		96	90 - 110	

. Released to Imaging: 9/13/2021 1:48:45 PM

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#### **Default Detection Limits**

Client: ARCADIS U.S., Inc.	
Project/Site: Midland - Chevron Kegan Boyer	

Job ID: 600-187419-1

#### Method: 300.0 - Anions, Ion Chromatography MQL MDL Analyte Units Chloride 0.400 0.0534 mg/L 5 **General Chemistry** MQL MDL Analyte Units Total Dissolved Solids 10.0 10.0 mg/L

#### **QC Association Summary**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Job ID: 600-187419-1

#### HPLC/IC

#### Analysis Batch: 268268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-1	MW - 12	Total/NA	Water	300.0	
600-187419-2	MW - 3	Total/NA	Water	300.0	
600-187419-3	MW - 1	Total/NA	Water	300.0	
600-187419-4	MW - 2A	Total/NA	Water	300.0	
600-187419-5	MW - 2	Total/NA	Water	300.0	
600-187419-6	MW - 6R	Total/NA	Water	300.0	
600-187419-7	DUP - 1	Total/NA	Water	300.0	
600-187419-8	MW - 5	Total/NA	Water	300.0	
600-187419-9	MW - 5A	Total/NA	Water	300.0	
600-187419-10	RW - 1	Total/NA	Water	300.0	
600-187419-11	DUP -2	Total/NA	Water	300.0	
600-187419-12	MW - 4	Total/NA	Water	300.0	
600-187419-13	MW - 4A	Total/NA	Water	300.0	
600-187419-14	RW - 6R	Total/NA	Water	300.0	
600-187419-15	RW - 2	Total/NA	Water	300.0	
600-187419-16	MW - 14	Total/NA	Water	300.0	
600-187419-17	MW - 7	Total/NA	Water	300.0	
600-187419-18	MW - 9	Total/NA	Water	300.0	
600-187419-19	MW - 9A	Total/NA	Water	300.0	
600-187419-20	MW - 11	Total/NA	Water	300.0	
MB 600-268268/35	Method Blank	Total/NA	Water	300.0	
MB 600-268268/4	Method Blank	Total/NA	Water	300.0	
LCS 600-268268/36	Lab Control Sample	Total/NA	Water	300.0	
_CS 600-268268/5	Lab Control Sample	Total/NA	Water	300.0	
600-187419-5 MS	MW - 2	Total/NA	Water	300.0	
600-187419-5 MSD	MW - 2	Total/NA	Water	300.0	
600-187419-14 MS	RW - 6R	Total/NA	Water	300.0	
600-187419-14 MSD	RW - 6R	Total/NA	Water	300.0	

#### Analysis Batch: 268404

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
600-187419-21	EB - 1	Total/NA	Water	300.0	
MB 600-268404/4	Method Blank	Total/NA	Water	300.0	
LCS 600-268404/5	Lab Control Sample	Total/NA	Water	300.0	

#### **General Chemistry**

#### Analysis Batch: 268092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-1	MW - 12	Total/NA	Water	SM 2540C	
600-187419-2	MW - 3	Total/NA	Water	SM 2540C	
600-187419-3	MW - 1	Total/NA	Water	SM 2540C	
600-187419-4	MW - 2A	Total/NA	Water	SM 2540C	
600-187419-5	MW - 2	Total/NA	Water	SM 2540C	
600-187419-6	MW - 6R	Total/NA	Water	SM 2540C	
MB 600-268092/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-268092/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-187419-5 DU	MW - 2	Total/NA	Water	SM 2540C	

#### **QC Association Summary**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### **General Chemistry**

#### Analysis Batch: 268191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-7	DUP - 1	Total/NA	Water	SM 2540C	
600-187419-8	MW - 5	Total/NA	Water	SM 2540C	
600-187419-9	MW - 5A	Total/NA	Water	SM 2540C	
600-187419-10	RW - 1	Total/NA	Water	SM 2540C	
600-187419-11	DUP -2	Total/NA	Water	SM 2540C	
600-187419-12	MW - 4	Total/NA	Water	SM 2540C	
600-187419-13	MW - 4A	Total/NA	Water	SM 2540C	
600-187419-14	RW - 6R	Total/NA	Water	SM 2540C	
600-187419-16	MW - 14	Total/NA	Water	SM 2540C	
600-187419-17	MW - 7	Total/NA	Water	SM 2540C	
600-187419-18	MW - 9	Total/NA	Water	SM 2540C	
600-187419-19	MW - 9A	Total/NA	Water	SM 2540C	
600-187419-20	MW - 11	Total/NA	Water	SM 2540C	
600-187419-21	EB - 1	Total/NA	Water	SM 2540C	
MB 600-268191/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-268191/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-187419-13 DU	MW - 4A	Total/NA	Water	SM 2540C	
600-187419-18 DU	MW - 9	Total/NA	Water	SM 2540C	
nalysis Batch: 26842	21				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-187419-15	RW - 2	Total/NA	Water	SM 2540C	

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
600-187419-15	RW - 2	Total/NA	Water	SM 2540C		
MB 600-268421/1	Method Blank	Total/NA	Water	SM 2540C		
LCS 600-268421/2	Lab Control Sample	Total/NA	Water	SM 2540C		

0

Job ID: 600-187419-1

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Job ID: 600-187419-1

Lab Sample ID: 600-187419-1

Lab Sample ID: 600-187419-2

Lab Sample ID: 600-187419-3

Lab Sample ID: 600-187419-4

Lab Sample ID: 600-187419-5

Lab Sample ID: 600-187419-6

#### Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: MW - 12 Date Collected: 06/20/19 08:52

Date Received:	06/21/19 10:19	9								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			268268	06/28/19 22:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 3 Date Collected: 06/20/19 09:32 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			268268	06/28/19 22:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 1 Date Collected: 06/20/19 09:38

Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared			j
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	300.0		100			268268	06/28/19 22:58	SKR	TAL HOU	
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU	

#### Client Sample ID: MW - 2A

Date Collected: 06/20/19 09:44

#### Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/28/19 23:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 2

Date Collected: 06/20/19 09:47

Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			268268	06/29/19 00:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

#### Client Sample ID: MW - 6R Date Collected: 06/20/19 09:53 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 01:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268092	06/26/19 15:14	DTN	TAL HOU

Lab Sample ID: 600-187419-7

Lab Sample ID: 600-187419-8

Lab Sample ID: 600-187419-9

Lab Sample ID: 600-187419-10

Lab Sample ID: 600-187419-11

Lab Sample ID: 600-187419-12

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

#### Lab Chronicle

Job ID: 600-187419-1

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### **Client Sample ID: DUP - 1** Date Collected: 06/20/19 00:00

Date Received	: 06/21/19 10:1	9								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 02:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### **Client Sample ID: MW - 5** Date Collected: 06/20/19 10:05 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			268268	06/29/19 02:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### **Client Sample ID: MW - 5A**

Date Collected: 06/20/19 10:08

#### Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	300.0		5			268268	06/29/19 02:58	SKR	TAL HOU	
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU	

#### **Client Sample ID: RW - 1**

Date Collected: 06/20/19 10:14 Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			268268	06/29/19 03:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: DUP -2

Date Collected: 06/20/19 00:00

Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			268268	06/29/19 03:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### **Client Sample ID: MW - 4** Date Collected: 06/20/19 10:22 Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 03:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

7/15/2019

#### Lab Chronicle

Job ID: 600-187419-1

Lab Sample ID: 600-187419-13

Lab Sample ID: 600-187419-14

Lab Sample ID: 600-187419-15

Lab Sample ID: 600-187419-16

Lab Sample ID: 600-187419-17

Lab Sample ID: 600-187419-18

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: MW - 4A Date Collected: 06/20/19 10:24

Date Received:	: 06/21/19 10:1	9								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 04:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: RW - 6R Date Collected: 06/20/19 10:49 Date Received: 06/21/19 10:19

Γ	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			268268	06/29/19 05:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: RW - 2 Date Collected: 06/20/19 10:51

Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 06:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268421	07/01/19 11:28	DTN	TAL HOU

#### Client Sample ID: MW - 14

Date Collected: 06/20/19 11:05

Date Received	d: 06/21/19 10:1	9								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 06:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 7

Date Collected: 06/20/19 11:20

Date Received: 06/21/19 10:19

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			268268	06/29/19 06:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 9 Date Collected: 06/20/19 11:30 Date Received: 06/21/19 10:19

<b>[</b>	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			268268	06/29/19 07:18	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Client Sample ID: MW - 9A Date Collected: 06/20/19 11:34

Date Received	: 06/21/19 10:1	9								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			268268	06/29/19 07:38	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: MW - 11 Date Collected: 06/20/19 11:41 Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			268268	06/29/19 07:58	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU

#### Client Sample ID: EB - 1 Date Collected: 06/20/19 12:50 Date Received: 06/21/19 10:19

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared			4
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab	
Total/NA	Analysis	300.0		1			268404	07/01/19 16:21	SKR	TAL HOU	. 4
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	268191	06/27/19 12:49	DTN	TAL HOU	

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Matrix: Water

Matrix: Water

Job ID: 600-187419-1

Lab Sample ID: 600-187419-20

Lab Sample ID: 600-187419-21

#### **Accreditation/Certification Summary**

Client: ARCADIS U.S., Inc. Project/Site: Midland - Chevron Kegan Boyer

#### Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Oklahoma	State Program	6	2018-052	08-31-19
Texas	NELAP	6	T104704223-18-23	10-31-19
USDA	Federal		P330-18-00130	04-30-21

**12** 13

Job ID: 600-187419-1

Phone (713) 690-4444 Fax (713) 690-5646						407#		
Client Information	17	LB		Kudch	Lab PM: Kudchadkar, Sachin G	Carrier 1	racking No(s): [COC No: 600-6894	COC No: 600-68943-18804.1
Client Contact Mr. Brett Krehbiel	Phone:			E-Mai sach	n.kudchadi	E-Mail sachin.kudchadkar@testamericainc.com	Page 1 of 3	5f 3
Company: ARCADIS U.S., Inc.						Analysis Requested	Jab #:	
Address: 1004 North Big Spring Suite 121	Due Date Requested:	ed:					Preservat	
City: Midland	TAT Requested (days):	ays):			File		B - NaCH C - Zn Acetate	N - None N - AsNaO2
State. Z.p. T.X, 79701					-		D - NETIC A E - NAHSC F - MACH	
Phone: 916-786-5382(Tel)	Po #: Purchase Order not required	not require	T		(0)		G - Amchic H - Ascorb	
Email: brett.krehbiel@arcadis.com	MO#				(ON			
Project Name: Midland - Chevron K CLICL BOLICT	Project #: 60003622				10 S9)			
sile COUPELJON	SSOW#:				U as		of co	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, S=201d, O=westeloil, BT=Tissue, AmAir)	Field Filtered Perform MS/M 2540C_Calcd, 3	500-187419 (	Total Number	Special Instructions/Note:
	X	X	Preserva	Preservation Code:			X	
mw -12	61101100	2530	0	Water	T	n of		
mue - 3.	61/07/07	6432	0	Water	-	Cust		
thus - t	pulleng	0935	61	Water	-	ody		
MW - 2A	06/20/14	41160	U	Water	-			
- 2- MM	40/20/19	1440	G	Water	1			
MILS - UP	011 20 199 0412 3	52120	61	Water	-			
Dup -1	010 140 /14	1	CI	Water	-			
mw - S	0101001190	5001	CI	Water	1			
muc - SA	04/20/17/1008	1008	G	Water	-			
Rue - 1	EU   70   19	HIOI	61	Water	-			
2-2-2	61/22/010	1	IJ	Water	1			
Possible Hazard Idan tification Non-Hazard Elammaha Stin Initiant Poi	Doison R 1 Inknown		Radiological		Sample	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Return to Client	samples are retained longer	r than 1 month) Months
lested: I, II, III, IV, Other (specify)			in-Roman		Special	C Requireme		STREAM
Empty Kit Relinquished by:		Date:			Time:	Method	Method of Shipment:	
Reinquistree by Consumed 2. P. S.	Date/Time	\$/13	311	COMPANY	TA Reco	Received by	Date/Time	Company
1	Date/Time:			Company	Rec	Received by:	Date/Time:	Company
Reinquished by:	Date/Time:			Company	Rec	Received by:	Date/Time;	Company
Custody Seals Intact: Custody Seal No .:					Cool	Cooler Temperature(s) °C and Other Remarks:		

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7/15/2019

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6-310 колтway Street Houston, ТХ 77040 Phone (713) 690-4444 Fax (713) 690-5645		Chain o	of Cus	n of Custody Record	ecord	#	#264		
Client Information	111	LR		Lab PM Kudch	Lab PM. Kudchadkar, Sachin G		Carrier Tracking No(s).	COC No: 600-68943-18804.1	804.1
Client Contact Mr. Brett Krehbiel	Phone			E-Ma sach	n kudchadka	E-Mail: sachin.kudchadkar@testamencainc.com		Page 2 of 3	
Company ARCADIS U.S., Inc.						Analysis Requested	lested	Job #.	
Address 1004 North Big Spring Suite 121	Due Date Requested:	;pa						Preservation Codes	
City Midland State, Zp: State, Zp:	TAT Requested (days):	:(sAe						A - HCL B - NaOH C - Zh Acetale D - Nito Aold E - NaHSO4	M - Hexane N - None O - ASNAO2 P - Na2203 O - Na2203
Phone Phone	PO# Purchase Order not required	not required			(			F - MeOH G - Amchlor	
Email. brett krehbiel@arcadis.com	WO #				(ON				
Project Name. Midland - Chevron LEGIAN BUHLA	Project #. 60003622				10 50			E K EDA	W - pH 4-5 Z - other (specify)
Jal	SSOW#:				A) asi			of con	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Weasser, Secold Deserviol. BIFTINGLE, AAAF)	Field Filtered Perform MSM 2540C_Calcd, 3			Total Number S	Special Instructions/Note:
	X	X		Preservation Code:					V
mu4	10112114	1022	U	Water	4				
HH- MM	811071010	1224	U	Water	1				
RWJ - LOR	OLC/ LO/M	1049	G	Water	1				
RW-L	010/20/14	1051	G	Water	1				
P1- 24	10/20/19	1105	E	Water	1				
Thus - T	curre/14	1120	U	Water	1				
rnue -9	OLe (zo/19	1130	G	Water	1				
415- UM	00/20/14	HE 11	U	Water	-				
11- 5114	W/10/14	1141	C	Water	1				
EB-1	00 120/14	1250	IJ	Water	1				
	A'B			Water					
ant	Poison R Unkaown		Radiolonical		Sample	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) Return To Client Discossi Ru Lab Archive For Mon	assessed if samples a	are retained longer than Archive For	11 month) Months
			in the second second		Special Ir	Special Instructions/QC Requirements	in the second	IN COMPANY	CINICAL
Empty Kit Relinquished by:		Date			Time:		Method of Shipment		
Reinaustrad by	Deletime Delicali 8	1	311	CAPT'CA	DIT RECEIVED BY	/eď by:	Date/Time	mei	Company
elinquement by	DateTime	-		Company	Received by	Ved by	Date/Time	.au	Company
Reingushed by	Date/Time.			Company	Received by	ved by,	DateTime	mer	Company
Custody Seals Intact: Custody Seal No.					Cooler	Cooler Temperature(s) °C and Other Remarks	alks		

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2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on tedex com FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, nondelivery,misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$1000, e.g. jewelry, precious metals, negotiable instruments and other documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other incidental in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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HS-SA-WI-013

Received by OCD: 3/25/2020 9:15:51 AM	N
---------------------------------------	---

**TestAmerica Houston** 

JOB NUMBER:			Date/Time Received CLIENT:	٨	cad	19
	am				Ve	
JNPACKED BY:	A	-	CARRIER/DRIVER:		10	
Custody Seal Present:	VES	□ NO	Number of Coolers F	Received:	2	
[	Temp		Observed Temp	Therm	Them	Corrected Temp
Cooler ID	Blank	Trip Blank		1-D	CF	(3)
Gray	Y / N	Y / N		66	- d	
Gray	Y / N Y / N	Y/N	1.7	-		1.5
		Y / N				
	Y/N Y/N	Y/N Y/N				
	Y/N Y/N	YTN		0	1 GI	12.110
	YIN	Y / N		1	K VA	×111
		the second se				
				V		
CF = correction factor Samples received on ice	RVATION OF				] YES	
Samples received on ice	Y / N		EQUIRED:		2010	
Samples received on ice ABORATORY PRESE Base samples are>pH 1: H paper Lot #	Y / N ? ØYES RVATION OF : 2: ØYES [		Acid preserved are <p< th=""><th></th><th>2010</th><th>□ NO</th></p<>		2010	□ NO
Camples received on ice ABORATORY PRESE Case samples are>pH 1: H paper Lot #	Y / N P? ØYES RVATION OF 2: □YES [ able (5-6mm):		Acid preserved are <p< td=""><td>oH 2: ]</td><td>YES  </td><td>NO YES NO</td></p<>	oH 2: ]	YES	NO YES NO
Samples received on ice ABORATORY PRESE Base samples are>pH 1: H paper Lot # /OA headspace accepta	Y / N P? ØYES RVATION OF 2: □YES [ able (5-6mm):		Acid preserved are <p< th=""><th>oH 2: ]</th><th>YES  </th><th></th></p<>	oH 2: ]	YES	
Samples received on ice ABORATORY PRESE Base samples are>pH 1: H paper Lot # /OA headspace accepta	Y / N P? ØYES RVATION OF 2: □YES [ able (5-6mm):		Acid preserved are <p< td=""><td>oH 2: ]</td><td>YES  </td><td></td></p<>	oH 2: ]	YES	

Loc: 600

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Rev. 3; 07/01/2014

7/15/2019

5

13

**TestAmerica** 

#### Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

#### Login Number: 187419 List Number: 1

Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples.</td>	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.7,1.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

List Source: Eurofins TestAmerica, Houston

Job Number: 600-187419-1

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Received by OCD: 3/25/2020 9:15:51 AM

LINKS

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Total Access

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The

www.testamericainc.com

Visit us at:

Expert

Released to Imaging: 9/13/2021 1:48:45 PM

# eurofins 😵

# Environment Testing TestAmerica

## **ANALYTICAL REPORT**

Eurofins TestAmerica, Houston 6310 Rothway Street Houston, TX 77040 Tel: (713)690-4444

## Laboratory Job ID: 600-196675-1

Client Project/Site: Cooper Jal

For:

ARCADIS U.S., Inc. 1004 North Big Spring Suite 121 Midland, Texas 79701

Attn: Mr. Russell Grant

Authorized for release by: 12/19/2019 4:18:13 PM Jasmine Turner, Project Management Assistant I (713)690-4444 jasmine.turner@testamericainc.com

Designee for

Sachin Kudchadkar, Senior Project Manager (713)690-4444 sachin.kudchadkar@testamericainc.com

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

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

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

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## **Table of Contents**

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This data package is for Eurofins TestAmerica, Houston job number 600-196675-1 and consists of:

- 3 ☑ R1 - Field chain-of-custody documentation; ☑ R2 - Sample identification cross-reference; ☑ R3 - Test reports (analytical data sheets) for each environmental sample that includes: a. Items consistent with NELAC Chapter 5, b. dilution factors, c. preparation methods, d. cleanup methods, and e. if required for the project, tentatively identified compounds (TICs). □ R4 - Surrogate recovery data including: a. Calculated recovery (%R), and b. The laboratory's surrogate QC limits. ☑ R5 - Test reports/summary forms for blank samples; ☑ R6 - Test reports/summary forms for laboratory control samples (LCSs) including: a. LCS spiking amounts, b. Calculated %R for each analyte, and c. The laboratory's LCS QC limits. Z R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including: Samples associated with the MS/MSD clearly identified, b. MS/MSD spiking amounts, c. Concentration of each MS/MSD analyte measured in the parent and spiked samples, d. Calculated %Rs and relative percent differences (RPDs), and e. The laboratory's MS/MSD QC limits
  - R8 Laboratory analytical duplicate (if applicable) recovery and precision:
    - a. The amount of analyte measured in the duplicate,
    - b. The calculated RPD, and
    - c. The laboratory's QC limits for analytical duplicates.
  - Z R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
  - ☑ R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jasmine Turner, for Sachin Kudchadkar Name (printed)

Joseph-
Signature

12/19/2019

Date

Senior Project Manager Official Title (printed)

## Laboratory Review Checklist: Reportable Data - Page 2 of 4

			-		_					
Laboratory			Eurofins TestAmerica, Houston	LRC Date:	12/19/2019					
Project Name: Cooper Jal				Laboratory Job Number:	600-196675-1					
Revie	ewer	Name:	Jasmine Turner, for Sachin Kudchadkar							
1	. 2									5
# <sup>1</sup>	A <sup>2</sup>		Description			Yes	No	NA <sup>3</sup>	NR⁴	ER# <sup>5</sup>
۲1	OI	Chain-of-custody (C-O-C) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?								
						X X				
		Were all departures from standard conditions described in an exception report?								
R2	OI		nd quality control (QC) identification							
			sample ID numbers cross-referenced to the laboratory			Х				
	-		pratory ID numbers cross-referenced to the correspondir	ng QC data?		Х				
R3	OI	Test repor								
			amples prepared and analyzed within holding times?				Х			R03A
			those results < MQL, were all other raw values brackete	ed by calibration standards?		Х				
			ulations checked by a peer or supervisor?			Х				
			nalyte identifications checked by a peer or supervisor?			Х				
		Were sam	ple detection limits reported for all analytes not detected	?		Х				
			sults for soil and sediment samples reported on a dry w					Х		
		Were % m	oisture (or solids) reported for all soil and sediment sam	ples?				Х		
		Were bulk	soils/solids samples for volatile analysis extracted with r	methanol per SW846 Method	5035?			Х		
		If required	for the project, are TICs reported?					Х		
R4	0	Surrogate	recovery data							
		Were surro	ogates added prior to extraction?					Х		
		Were surro	ogate percent recoveries in all samples within the laboration	tory QC limits?				Х		
R5	OI	Test repor	ts/summary forms for blank samples							
		Were appr	opriate type(s) of blanks analyzed?			Х				
			ks analyzed at the appropriate frequency?			Х				
			nod blanks taken through the entire analytical process, ir	ncluding preparation and, if a	pplicable, cleanup					
		procedures				х				
		Were blan	k concentrations < MQL?			Х	Î 👘			R05D
R6	OI	Laborator	y control samples (LCS):				Ĩ			
	•		OCs included in the LCS?			Х				
		Was each	LCS taken through the entire analytical procedure, inclu	ding prep and cleanup steps	?	Х				
			s analyzed at the required frequency?			Х				
			(and LCSD, if applicable) %Rs within the laboratory QC	limits?		Х				
			etectability check sample data document the laboratory		Cs at the MDL used					
			e the SDLs?			X				
		Was the L	CSD RPD within QC limits?					Х		
R7	OI		ke (MS) and matrix spike duplicate (MSD) data							
			project/method specified analytes included in the MS and	d MSD?		Х				
			MSD analyzed at the appropriate frequency?			Х				
			and MSD, if applicable) %Rs within the laboratory QC li	mits?		X				
			MSD RPDs within laboratory QC limits?			X				
R8	OI		duplicate data							
	1-1		opriate analytical duplicates analyzed for each matrix?			Х				
			vtical duplicates analyzed at the appropriate frequency?			X				
			s or relative standard deviations within the laboratory Q			X				
R9	OI		Jantitation limits (MQLs):							
			QLs for each method analyte included in the laboratory d	lata package?		Х				
			Ls correspond to the concentration of the lowest non-ze			X				
			sted MQLs and DCSs included in the laboratory data pa			X				
R10	OI		blems/anomalies	-0-						
	1.01		wn problems/anomalies/special conditions noted in this	LRC and ER?		Х		<u> </u>		
			cable and available technology used to lower the SDL to		nce effects on the	$\vdash$	<u> </u>			
		sample res				х				
		· · ·		poroditation Dragram for the	nalutaa matriasa	$\vdash$	<u> </u>			
			ratory NELAC-accredited under the Texas Laboratory Ac	ccreditation Program for the a	analytes, matrices	<b>↓</b>				
	4		ds associated with this laboratory data package?	data naakana subasittad in ti		X	tors	L	I	
	Т.		tified by the letter "R" must be included in the laboratory			אנ(s). I	iems	i		
	~		y the letter "S" should be retained and made available u		ate retention period.					
<ol> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> </ol>										
		NA = Not a								
	4.	NR = Not r	eviewed;							
	E	1 D# - Eva	antion Depart identities number (on Evention Depart		itom if "NID" or "No" ic					

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

## Laboratory Review checklist: Supporting Data - Page 3 of 4

	ory Name:	Eurofins TestAmerica, Houston	LRC Date:	12/19/2019				
	Name:	Cooper Jal	Laboratory Job Number:	600-196675-1				
eviewe	er Name:	Jasmine Turner, for Sachin Kudchadkar						
	2						.31	
# <sup>1</sup> A			ription		Yes	No N	A <sup>3</sup> NR <sup>4</sup>	ER#
<b>1</b> 0		ibration (ICAL)						
		oonse factors and/or relative response factors for			Х			
		cent RSDs or correlation coefficient criteria met?			Х			
		number of standards recommended in the method			Х			
	Were all p	oints generated between the lowest and highest	standard used to calculate the curve?		Х			
	Are ICAL	Х						
	Has the in	itial calibration curve been verified using an appr	ropriate second source standard?		Х			
<b>52</b> O		continuing calibration verification (ICV and	ink (CCB):					
		CCV analyzed at the method-required frequency?			Х			
	Were per	cent differences for each analyte within the method	od-required QC limits?		Х			
	Was the I	CAL curve verified for each analyte?			Х			
	Was the a	bsolute value of the analyte concentration in the	inorganic CCB < MDL?		Х			
<b>33</b> O	Mass spe	ctral tuning					1	
•		ppropriate compound for the method used for tu	ning?				(	
		abundance data within the method-required QC I					(	
<b>54</b> O		tandards (IS)						
		rea counts and retention times within the method	d-required QC limits?				(	
<b>S5</b> O		(NELAC Section 5.5.10)						
		raw data (for example, chromatograms, spectral	data) reviewed by an analyst?		Х			
		a associated with manual integrations flagged on			X			
<b>36</b> O		mn confirmation						
		olumn confirmation results meet the method-req					(	
<b>S7</b> 0		ly identified compounds (TICs)				`		
51 0			ata subject to appropriate checks?				(	
S8	If TICs were requested, were the mass spectra and TIC data subject to appropriate checks? Interference Check Sample (ICS) results						<u>`</u>	
30							(	
<u>eo l</u> i		Were percent recoveries within method QC limits?						-
S9	Serial dilutions, post digestion spikes, and method of standard additions						/	
240 0	Were percent differences, recoveries, and the linearity within the QC limits specified in the method?						(	
<b>510</b> O							_	
		DL study performed for each reported analyte?	D00-0		X X		_	
	Is the MDL either adjusted or supported by the analysis of DCSs? Proficiency test reports						_	
511 0				udia a O	V		_	
		aboratory's performance acceptable on the applic	cable proficiency tests or evaluation st	udies?	Х		_	
<b>512</b> 0		s documentation		<u>_</u>	Ň		_	
		ndards used in the analyses NIST-traceable or o	obtained from other appropriate source	es?	Х		_	
<b>513</b> O		nd/analyte identification procedures					_	
		ocedures for compound/analyte identification do	cumented?		Х		_	
<b>514</b>   O		ration of analyst competency (DOC)						
		conducted consistent with NELAC Chapter 5?			Х			
		entation of the analyst's competency up-to-date a			Х			
S15 O	Verificati							
	Are all the	methods used to generate the data documented	d, verified, and validated, where applic	able?	Х			
<b>516</b> O	Laborato	ry standard operating procedures (SOPs)						
		atory SOPs current and on file for each method p			Х			
1.	1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items							-
		e retention period.						
2.		ic analyses; I = inorganic analyses (and general		·				
3.	-	NA = Not applicable;						
4.								
5.		ception Report identification number (an Exception	on Report should be completed for an	item if "NR" or "No" is	check	ed)		

## Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:		Eurofins TestAmerica, Houston	LRC Date:	12/19/2019	2			
Project Name:		Cooper Jal	Laboratory Job Number:	600-196675-1				
Reviewer	Name:	Jasmine Turner, for Sachin Kudchadkar			3			
ER # <sup>1</sup>			Description		ו			
	remaining	Method SM 2540C: The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-12 (600-196675-1), MW-3 (600-196675-2), MW-2 (600-196675-3), MW-2A (600-196675-4), MW-6R (600-196675-5), MW-5 (600-						
R03A	196675-6) 196675-12	196675-6), MW-5A (600-196675-7), MW-1 (600-196675-8), MW-4 (600-196675-9), MW-4A (600-196675-10), RW-1 (600-196675-11), RW-2R (600-196675-12), RW-2 (600-196675-13), MW-14 (600-196675-14), DUP-1 (600-196675-15), MW-10 (600-196675-16), MW-7 (600-196675-17), MW-8 (600-196675-18), MW-9 (600-196675-19), MW-9A (600-196675-20) and MW-11 (600-196675-21).						
	<u> </u>							
		Method 300.0: The method blank for analytical batch 600-283030 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.						
R05D		Method 300.0: The method blank for analytical batch 600-283045 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.						
		Method 300.0: The method blank for analytical batch 600-283211 contained chloride above the method detection limit. This target analyte						
	concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.							
1.		ntified by the letter "R" must be included in the lat by the letter "S" should be retained and made ava	, ,					
2.		nic analyses; I = inorganic analyses (and general						
3.		applicable;						
4.	NR = Not							
5.	$FR# = Fx^{\prime}$	ception Report identification number (an Exception	ion Donort abouild be completed for a	an itom if "ND" or "No" is chocked)				

Sulfate

EuroFins TestAmerica, Houston

0.5

Matrix: Method: Date Analyzed: Job #: TALS Batch: Units:	Water SW-846 9056 / 8/23/2019 600-188237 272774 mg/L	EPA 300			
Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Bromide	CHWC16	0.101	0.200	0.306	0.4
Chloride	CHWC16	0.053	0.200	0.305	0.4
Fluoride	CHWC16	0.060	0.200	0.296	0.2
Nitrate as N	CHWC16	0.025	0.200	0.306	0.2
Nitrite as N	CHWC16	0.030	0.400	0.384	0.2

0.096

0.400

0.482

CHWC16

DCS = Detection Check Standard MQL = Method Quantitation Limit
Matrix: Method: Date Analyzed: Job #: TALS Batch: Units:	Water SM 2540C 8/20/2019 600-188237 272376 mg/L				
Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Total Dissolved Solids	NOEQUIP	10.000	29.880	86.000	10

DCS = Detection Check Standard MQL = Method Quantitation Limit

#### Job ID: 600-196675-1

#### Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative 600-196675-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 11/27/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

All applicable analytical narratives can be found in the TRRP Checklist section of this report.

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**Method Description** 

Anions, Ion Chromatography

Solids, Total Dissolved (TDS)

SM = "Standard Methods For The Examination Of Water And Wastewater"

## **Method Summary**

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

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

#### ( I

**Protocol References:** 

Laboratory References:

Method

SM 2540C

300.0

Job ID: 600-196675-1

Laboratory

TAL HOU TAL HOU

3	99
	5
	8
	9

Client: ARCADIS U.S., Inc.	
Project/Site: Cooper Jal	

Protocol

MCAWW

SM

## **Sample Summary**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal Job ID: 600-196675-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-196675-1	MW-12	Water	11/23/19 15:10	11/27/19 10:15	
600-196675-2	MW-3	Water	11/23/19 15:22	11/27/19 10:15	
600-196675-3	MW-2	Water	11/23/19 15:32	11/27/19 10:15	
600-196675-4	MW-2A	Water	11/23/19 15:37	11/27/19 10:15	
600-196675-5	MW-6R	Water	11/23/19 15:46	11/27/19 10:15	
600-196675-6	MW-5	Water	11/23/19 15:54	11/27/19 10:15	
600-196675-7	MW-5A	Water	11/23/19 16:04	11/27/19 10:15	
600-196675-8	MW-1	Water	11/24/19 08:26	11/27/19 10:15	
600-196675-9	MW-4	Water	11/24/19 08:44	11/27/19 10:15	
600-196675-10	MW-4A	Water	11/24/19 08:49	11/27/19 10:15	
600-196675-11	RW-1	Water	11/24/19 09:08	11/27/19 10:15	
600-196675-12	RW-2R	Water	11/24/19 09:21	11/27/19 10:15	
600-196675-13	RW-2	Water	11/24/19 09:25	11/27/19 10:15	
600-196675-14	MW-14	Water	11/24/19 09:31	11/27/19 10:15	
600-196675-15	DUP-1	Water	11/24/19 00:00	11/27/19 10:15	
600-196675-16	MW-10	Water	11/24/19 09:52	11/27/19 10:15	
600-196675-17	MW-7	Water	11/24/19 10:11	11/27/19 10:15	
600-196675-18	MW-8	Water	11/24/19 10:22	11/27/19 10:15	
600-196675-19	MW-9	Water	11/24/19 10:32	11/27/19 10:15	
600-196675-20	MW-9A	Water	11/24/19 10:41	11/27/19 10:15	
600-196675-21	MW-11	Water	11/24/19 10:51	11/27/19 10:15	

Eurofins TestAmerica, Houston

## **Client Sample Results**

MQL (Adj)

MQL (Adj)

100

125

20.0

Job ID: 600-196675-1

Client: ARCADIS U.S., Inc.
Project/Site: Cooper Jal
Client Sample ID: MW-12

Analyte

Sulfate

Analyte

Chloride

Date Collected: 11/23/19 15:10 Date Received: 11/27/19 10:15

Method: 300.0 - Anions, Ion Chromatography

**Result Qualifier** 

Result Qualifier

337 b

140

1010 H

				000 12.000 10		2			
Lab Sample ID: 600-196675-1 Matrix: Water									
						4			
 SDL		D	Prepared	Analyzed	Dil Fac	5			
13.4 23.9	mg/L mg/L			12/14/19 06:51 12/14/19 06:51	250 250	6			
SDL	Unit	D	Prepared	Analyzed	Dil Fac	7			
 20.0	mg/L		•	12/04/19 15:38	1	8			

Lab Sample ID: 600-196675-2

Lab Sample ID: 600-196675-3

**Matrix: Water** 

Matrix: Water

Matrix: Water

#### **Client Sample ID: MW-3** Date Collected: 11/23/19 15:22

**General Chemistry** 

**Total Dissolved Solids** 

Date Received: 11/27/19 10:15

Method: 300.0 - Anions, Ion C	Chromatogra	iphy							
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.0	b	20.0	2.67	mg/L			12/14/19 07:02	50
Sulfate	96.6		25.0	4.79	mg/L			12/14/19 07:02	50
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	352	Н	20.0	20.0	mg/L			12/04/19 13:21	1

## **Client Sample ID: MW-2**

Date Collected: 11/23/19 15:32 Date Received: 11/27/19 10:15

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27.7	b	8.00	1.07	mg/L			12/14/19 07:13	20
Sulfate	42.0		10.0	1.91	mg/L			12/14/19 07:13	20
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	274	н	10.0	10.0	mg/L			12/04/19 13:21	1
Client Sample ID: MW-2A						La	h Sample	ID: 600-196	675-

## Client Sample ID: MW-2A

Date Collected: 11/23/19 15:37 Date Received: 11/27/19 10:15

Method: 300.0 - Anions, Ion	Chromatogra	iphy							
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.0	b	20.0	2.67	mg/L			12/14/19 07:23	50
Sulfate	76.5		25.0	4.79	mg/L			12/14/19 07:23	50
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	414	Н	20.0	20.0	mg/L			12/04/19 13:21	1

Client: ARCADIS U.S., Inc.

## **Client Sample Results**

Job ID: 600-196675-1

Project/Site: Cooper Jal						1	0	ID. 000 404	N75 -
Client Sample ID: MW-6R Date Collected: 11/23/19 15:46 Date Received: 11/27/19 10:15						Lat	o Sample	ID: 600-196 Matrix	
Method: 300.0 - Anions, Ion Chr	omatogra	iphy							
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	69.4	b	20.0		mg/L			12/14/19 07:34	5
Sulfate	95.2		25.0	4.79	mg/L			12/14/19 07:34	5
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	384	Н	20.0	20.0	mg/L			12/04/19 13:21	
Client Sample ID: MW-5 Date Collected: 11/23/19 15:54						Lat	o Sample	ID: 600-196 Matrix	
Date Received: 11/27/19 10:15								Matrix	. wate
- Method: 300.0 - Anions, Ion Chr	omatogra	phy							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	1530	b	80.0	10.7	mg/L			12/14/19 08:06	20
Sulfate	250		100	19.1	mg/L			12/14/19 08:06	20
General Chemistry									
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	3900	н	100	100	mg/L			12/04/19 13:21	
Client Sample ID: MW-5A						Lat	Sample	ID: 600-196	675-7
Date Collected: 11/23/19 16:04 Date Received: 11/27/19 10:15								Matrix	
_									
Method: 300.0 - Anions, Ion Chr						_			
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fa
Chloride	116	b	20.0		mg/L			12/14/19 08:17	5
Sulfate	61.1		25.0	4.79	mg/L			12/14/19 08:17	5
General Chemistry	Desult	Qualifian			11		Duran and	A wak waad	
Analyte Total Dissolved Solids	502	Qualifier H			Unit mg/L	D	Prepared	Analyzed 12/04/19 13:21	Dil Fa
- Client Comple ID: MW/ 4							Sampla	ID: 000 400	C75 (
Client Sample ID: MW-1 Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15						Lai	Sample	ID: 600-196 Matrix	
_ Method: 300.0 - Anions, Ion Chr	omatogra	phy							
Analyte		Qualifier	MQL (Adj)	SDL		D	Prepared	Analyzed	Dil Fa
Chloride	1110	b	80.0	10.7	mg/L			12/14/19 08:28	20
Sulfate	222		100	19.1	mg/L			12/14/19 08:28	20
General Chemistry									
	Deeult	Qualifier		SDL	linit	D	Prepared	Analyzed	Dil Fa
Analyte Total Dissolved Solids	2190	-	- MQL (Adj) 40.0		mg/L		Flepaleu	<u>12/04/19 13:21</u>	

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## **Client Sample Results**

Job ID: 600-196675-1

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal
Client Sample ID: MW-4

Date Collected: 11/24/19 08:44 Date Received: 11/27/19 10:15

Lab Sample ID: 6	00-196675-9
	Matrix: Water

Method: 300.0 - Anions, Ion Chr Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3050	b	200	26.7	mg/L			12/14/19 09:00	500
Sulfate	420		250	47.9	mg/L			12/14/19 09:00	50
General Chemistry									
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fa
Total Dissolved Solids	5960	н	100	100	mg/L			12/04/19 13:21	
Client Sample ID: MW-4A						Lab	Sample I	D: 600-1966	75-10
Date Collected: 11/24/19 08:49 Date Received: 11/27/19 10:15								Matrix	: Wate
Method: 300.0 - Anions, Ion Chr						_	_		
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	321	b	40.0		mg/L			12/14/19 09:11	100
Sulfate	94.5		50.0	9.57	mg/L			12/14/19 09:11	100
General Chemistry									
	Deeulé			SDI	Unit	D	Prepared	Analyzed	Dil Fa
Analyte		Qualifier	MQL (Adj)					•	
Total Dissolved Solids	824		20.0		mg/L			12/04/19 13:21	
			• •				•	•	75-11
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15	824	H	• •				•	12/04/19 13:21	75-1 <i>°</i>
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08	824 •omatogra	H	• •	20.0			•	12/04/19 13:21	7 <b>5-1</b> ′ : Wate
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr	824 •omatogra	H phy Qualifier	20.0	20.0	mg/L	Lab	Sample	12/04/19 13:21 D: 600-1966 Matrix	0 <b>75-1</b> 1 : Wate Dil Fa
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte	824 romatogra Result	H phy Qualifier	20.0	20.0 SDL 53.4	mg/L Unit	Lab	Sample	12/04/19 13:21 D: 600-1966 Matrix Analyzed	
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride	824 romatogra Result 5780	H phy Qualifier	<u>20.0</u> MQL (Adj) 400	20.0 SDL 53.4	Unit mg/L	Lab	Sample	<b>D: 600-1966</b> Matrix Analyzed 12/14/19 09:43	<b>575-1</b> 1 : Wate Dil Fac
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte	romatogra Result 5780 722 Result	H Qualifier b Qualifier	<u>MQL (Adj)</u> 400 500 MQL (Adj)	20.0 SDL 53.4 95.7 SDL	Unit mg/L mg/L mg/L Unit	Lab	Sample	12/04/19 13:21         D: 600-1966         Matrix         Analyzed         12/14/19 09:43         12/14/19 09:43         12/14/19 09:43         Analyzed	<b>575-11</b> : Wate <u>Dil Fa</u> 1000
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry	824 romatogra Result 5780 722	H Qualifier b Qualifier	20.0 20.0 MQL (Adj) 400 500	20.0 SDL 53.4 95.7 SDL	Unit mg/L mg/L mg/L	Lab	Sample   Prepared	<b>Analyzed</b> 12/14/19 13:21 <b>D: 600-1966</b> Matrix	<b>Dil Fa</b> <b>Dil Fa</b>
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte	romatogra Result 5780 722 Result	H Qualifier b Qualifier	<u>MQL (Adj)</u> 400 500 MQL (Adj)	20.0 SDL 53.4 95.7 SDL	Unit mg/L mg/L mg/L Unit	Lab	Sample   Prepared	12/04/19 13:21         D: 600-1966         Matrix         Analyzed         12/14/19 09:43         12/14/19 09:43         12/14/19 09:43         Analyzed	<b>Dil Fa</b> 100 100
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids	romatogra Result 5780 722 Result	H Qualifier b Qualifier	<u>MQL (Adj)</u> 400 500 MQL (Adj)	20.0 SDL 53.4 95.7 SDL	Unit mg/L mg/L mg/L Unit	Lab	Sample   Prepared	Analyzed           12/14/19 13:21           D: 600-1966           Matrix           12/14/19 09:43           12/14/19 09:43           12/14/19 09:43           12/14/19 10:43           12/14/19 13:21	Dil Fac 1000 1000 Dil Fac
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: RW-2R Date Collected: 11/24/19 09:21 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr	romatogra Result 5780 722 Result 12200	H Qualifier b Qualifier H	<u>MQL (Adj)</u> 400 500 <u>MQL (Adj)</u> 200	20.0 SDL 53.4 95.7 SDL 200	Unit mg/L mg/L Unit mg/L	Lab	Sample   Prepared Prepared	Analyzed         12/04/19 13:21         D: 600-1966         Matrix         Analyzed         12/14/19 09:43         12/14/19 09:43         12/14/19 09:43         12/04/19 13:21         D: 600-1966         Matrix	Dil Fac 1000 1000 Dil Fac 1000 1000
Total Dissolved Solids Client Sample ID: RW-1 Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte Chloride Sulfate General Chemistry Analyte Total Dissolved Solids Client Sample ID: RW-2R Date Collected: 11/24/19 09:21 Date Received: 11/27/19 10:15	romatogra Result 5780 722 Result 12200	H phy Qualifier b Qualifier H	<u>MQL (Adj)</u> 400 500 MQL (Adj)	20.0 SDL 53.4 95.7 SDL 200 SDL	Unit mg/L mg/L mg/L Unit	Lab	Sample   Prepared	Analyzed         12/14/19 13:21         D: 600-1966         Matrix         -         Analyzed         12/14/19 09:43         12/14/19 09:43         -         Analyzed         12/14/19 13:21         D: 600-1966	Dil Fa 100 100 Dil Fa

General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	21000	H	200	200	mg/L			12/04/19 13:21	1

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		Client	t Sample F	Resul	ts				
Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal			-					Job ID: 600-19	96675-1
Client Sample ID: RW-2 Date Collected: 11/24/19 09:25 Date Received: 11/27/19 10:15						Lab	Sample I	D: 600-1966 Matrix	75-13 : Water
Method: 300.0 - Anions, Ion Chr Analyte		i <mark>phy</mark> Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3510		200	-	mg/L			12/18/19 01:23	500
Sulfate	464	-	250		mg/L			12/18/19 01:23	500
General Chemistry Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	9880	Н	200	200	mg/L			12/04/19 13:21	1
Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte		iphy Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.1		8.00	1.07	mg/L			12/14/19 10:24	20
Sulfate	94.5		10.0	1.91	mg/L			12/14/19 10:24	20
General Chemistry Analyte	Result	Qualifier	MQL (Adj)	SDI	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	328		20.0		mg/L			12/04/19 13:21	1
Client Sample ID: DUP-1						l ab	Sample I	D: 600-1966	75-15
Date Collected: 11/24/19 00:00 Date Received: 11/27/19 10:15									: Water
Method: 300.0 - Anions, Ion Chr Analyte		i <mark>phy</mark> Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40.4		8.00	1.07	mg/L		•	12/14/19 11:25	20
Sulfate	95.9		10.0		mg/L			12/14/19 11:25	20
General Chemistry	Descrit	Qualifier		001	11	-	Durante de	A	
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac

## **Total Dissolved Solids Client Sample ID: MW-10**

Date Collected: 11/24/19 09:52

Date Received: 11/27/19 10:15

Method: 300.0 - Anions, Ion (	Chromatogra	phy							
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	230	b	40.0	5.34	mg/L			12/14/19 11:46	100
Sulfate	78.0		50.0	9.57	mg/L			12/14/19 11:46	100
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	826	Н	20.0	20.0	mg/L			12/04/19 13:21	1

20.0

20.0 mg/L

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12/04/19 13:21

Lab Sample ID: 600-196675-16

·13 ater Fac 500 500

1

Matrix: Water

324 H

## **Client Sample Results**

Job ID: 600-196675-1

Matrix: Water

Lab Sample ID: 600-196675-17

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Client Sample ID: MW-7
Date Collected: 11/24/19 10:11
Data Received: 11/27/10 10:15

Method: 300.0 - Anions, Ion Chr									
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2080	b	200		mg/L			12/14/19 12:06	500
Sulfate	272		250	47.9	mg/L			12/14/19 12:06	500
General Chemistry									
Analyte		Qualifier	MQL (Adj)		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6300	н	100	100	mg/L			12/04/19 13:21	1
Client Sample ID: MW-8						Lab	Sample	ID: 600-1966	75-18
Date Collected: 11/24/19 10:22 Date Received: 11/27/19 10:15								Matrix	: Water
Method: 300.0 - Anions, Ion Chr	omatogra	iphy							
Analyte		Qualifier	MQL (Adj)	-	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.9	b	10.0		mg/L			12/14/19 12:27	25
Sulfate	27.6		12.5	2.39	mg/L			12/14/19 12:27	25
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	239	Н	10.0	10.0	mg/L			12/04/19 13:21	1
Client Sample ID: MW-9						Lab	Sample	ID: 600-1966	75-19
Date Collected: 11/24/19 10:32									: Water
Date Received: 11/27/19 10:15									
_ Method: 300.0 - Anions, Ion Chr	omatogra	phy							
Analyte		Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	337	b	40.0	5.34	mg/L		-	12/14/19 12:47	100
Sulfate	80.6		50.0		mg/L			12/14/19 12:47	100
_									
General Chemistry		_							
Analyte	Docult	Qualifier							
			MQL (Adj)	SDL		D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1170		MQL (Adj) 20.0	-	Unit mg/L	<u>D</u>	Prepared	Analyzed 12/04/19 13:21	
				-					1
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41				-				12/04/19 13:21	<sup>1</sup> 75-20
Total Dissolved Solids Client Sample ID: MW-9A				-				12/04/19 13:21	<sup>1</sup> 75-20
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chro	1170 omatogra	н	20.0	20.0	mg/L	Lab	Sample	12/04/19 13:21	1 75-20 : Water
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chr Analyte	1170 omatogra Result	H phy Qualifier	MQL (Adj)	20.0 SDL	mg/L Unit			12/04/19 13:21	1 7 <b>5-20</b> : Water Dil Fac
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chro	1170 omatogra	H phy Qualifier	20.0	20.0 SDL 5.34	mg/L	Lab	Sample	12/04/19 13:21	1 575-20 : Water Dil Fac 100
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chro Analyte Chloride Sulfate	0matogra Result 231	H phy Qualifier	<u> </u>	20.0 SDL 5.34	Unit mg/L	Lab	Sample	12/04/19 13:21 10: 600-1966 Matrix Analyzed 12/14/19 13:48	1 575-20 : Water Dil Fac 100
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chro Analyte Chloride Sulfate General Chemistry	0matogra Result 231 83.2	H Qualifier b	<u>MQL (Adj)</u> 40.0 50.0	20.0 SDL 5.34 9.57	Unit mg/L mg/L mg/L	Lab	Sample	<b>Analyzed</b> 12/14/19 13:21 <b>D: 600-1966</b> Matrix	1 75-20 : Water <u>Dil Fac</u> 100 100
Total Dissolved Solids Client Sample ID: MW-9A Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15 Method: 300.0 - Anions, Ion Chro Analyte Chloride Sulfate	0matogra Result 231 83.2	H Qualifier b Qualifier	<u> </u>	20.0 SDL 5.34 9.57 SDL	Unit mg/L	Lab	Sample	12/04/19 13:21 10: 600-1966 Matrix Analyzed 12/14/19 13:48	1 575-20 : Water Dil Fac

## **Client Sample Results**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

Client Sample ID: MW-1	1					Lab	Sample I	D: 600-1966	575-21
Date Collected: 11/24/19 10:	51						-	Matrix	: Wate
Date Received: 11/27/19 10:	15								
Method: 300.0 - Anions, Io	n Chromatogra	phy							
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.8	b	20.0	2.67	mg/L			12/14/19 14:50	50
Sulfate	113		25.0	4.79	mg/L			12/14/19 14:50	50
General Chemistry									
Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	364	н	20.0	20.0	ma/L			12/04/19 13:21	1

## **Definitions/Glossary**

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Client: ARCA Project/Site: (	•	Job ID: 600-196675-1	
Qualifiers			
HPLC/IC Qualifier	Qualifier Description		
b	The compound was found in the blank and sample		
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.		5
U	Analyte was not detected at or above the SDL.		
General Che	mistry		
Qualifier	Qualifier Description		
H	Sample was prepped or analyzed beyond the specified holding time		
U	Analyte was not detected at or above the SDL.		
Glossary			8
Abbreviation	These commonly used abbreviations may or may not be present in this report.		6
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
PQL	Practical Quantitation Limit		
QC	Quality Control		

TEF Toxicity Equivalent Factor (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

Relative Percent Difference, a measure of the relative difference between two points

Relative Error Ratio (Radiochemistry)

TEQ Toxicity Equivalent Quotient (Dioxin)

RER

RL RPD

Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 600-283030/34 Matrix: Water Analysis Batch: 283030										Clie	ent Sam	ple ID: Me Prep Typ			
Analysis Baten. 200000	м	B MB													
Analyte	Resu	It Qualifier	MQL	(Adj)		SDL	Unit		D	P	repared	Analyze	ed	Dil	Fac
Chloride	0.313	10 J		0.400	0.0	)534	mg/L					12/14/19 0	7:45		1
Sulfate	0.095	57 U		0.500	0.0	)957	mg/L					12/14/19 0	7:45		1
Lab Sample ID: MB 600-283030/6 Matrix: Water										Clie	ent Sam	ple ID: Me Prep Typ			
Analysis Batch: 283030												гер тур	e. IC	Jial/	
Analysis Batch. 203030	м	B MB													
Analyte		It Qualifier	моі	(Adj)		sni	Unit		D	P	repared	Analyze	hd	Dil	Fac
Chloride	0.310			0.400			mg/L		- <u>-</u>		lepaieu	<u>12/14/19 0</u>			1
Sulfate	0.095			0.500			mg/L					12/14/19 0			-
Sunate	0.090	0		0.500	0.0	1957	mg/∟					12/14/19 0	2.45		
Lab Sample ID: LCS 600-283030/3 Matrix: Water	5							CI	ient	Sar	nple ID	: Lab Cont Prep Typ			
Analysis Batch: 283030			Spike		LCS	109						%Rec.			
Analyte			Added		Result			Unit		D	%Rec	Limits			
			20.0		19.45	Qua	inner			<u> </u>	97				
								mg/L				90 - 110			
Sulfate			20.0		19.18			mg/L			96	90 - 110			
Lab Sample ID: LCS 600-283030/7								<b>C</b> 1	iont	800	mala ID	u Lob Cont		• • • •	mle
-									ient	Jai	inple in	: Lab Cont			
Matrix: Water												Prep Тур	e: 10	)tal/	INA
Analysis Batch: 283030			0		1.00							0/ <b>D</b> = =			
• • •			Spike		LCS					_	a. <b>-</b>	%Rec.			
Analyte			Added		Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride			20.0		19.37			mg/L			97	90 - 110			
Sulfate			20.0		19.14			mg/L			96	90 - 110			
Lab Sample ID: 600-196675-10 MS Matrix: Water											Clie	ent Sample Prep Typ			
Analysis Batch: 283030															
	ple S	ample	Spike		MS	MS						%Rec.			
Analyte Re	sult Q	ualifier	Added		Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride	321 b		1000		1285			mg/L		_	96	80 - 120			
Sulfate	94.5		1000		1026			mg/L			93	80 - 120			
Lab Sample ID: 600-196675-10 MS Matrix: Water	D										Clie	ent Sample Prep Typ			
Analysis Batch: 283030															
	ple S	ample	Spike		MSD	MSI	)					%Rec.		F	RPC
Analyte Re	sult Q	ualifier	Added		Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	L	imi
Chloride	321 b		1000		1296			mg/L		_	97	80 - 120	1		20
Sulfate	94.5		1000		1046			mg/L			95	80 - 120	2	2	20
Lab Sample ID: MB 600-283045/4 Matrix: Water										Clie	ent Sam	nple ID: Me Prep Typ			
Analysis Batch: 283045															
,	М	в мв													
Analyte	Resu	It Qualifier	MQL	(Adj)		SDL	Unit		D	P	repared	Analyze	ed	Dil	Fac
Chloride	0.190			0.400			mg/L				-	12/14/19 0			1

Job ID: 600-196675-1

12/19/2019

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Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 600-28	83045/5							Cli	ent	Sar	nple ID	: Lab Cor	ntrol S	amp	le
Matrix: Water												Prep Ty			
Analysis Batch: 283045															
				Spike	LCS	LCS	5					%Rec.			
Analyte				Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride				20.0	20.20			mg/L			101	90 - 110			
Sulfate				20.0	19.48			mg/L			97	90 - 110			
Lab Sample ID: 600-196675	5-14 MS										Clie	ent Sampl	le ID: I	<b>NW-</b> 1	14
Matrix: Water												Prep Ty			
Analysis Batch: 283045															
-	Sample	San	nple	Spike	MS	MS						%Rec.			
Analyte	Result	Qua	alifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride	37.1	b		200	243.4			mg/L		_	103	80 - 120			_
Sulfate	94.5			200	294.4			mg/L			100	80 - 120			
Lab Sample ID: 600-196675											Clie	ent Sampl			14
Matrix: Water											One	Prep Ty			
												герту	pe. 10		
Analysis Batch: 283045	Sample	San	nple	Spike	MSD	MSI	כ					%Rec.		RF	סי
Analyte	Result		•	Added	Result	-		Unit		D	%Rec	Limits	RPD		
Chloride	37.1			200	243.4	Quu		mg/L		_	103	80 - 120			20
Sulfate	94.5	D		200	293.7			mg/L			100	80 - 120	0		20
	04.0			200	200.1			ing/∟			100	00-120	0		20
Lab Sample ID: 600-196675	5-20 MS										Clie	nt Sampl	e ID: N	<b>/W-</b> 9	A
Matrix: Water												Prep Ty	pe: To	tal/N	Α
Analysis Batch: 283045															
	Sample	San	nple	Spike	MS	MS						%Rec.			
Analyte	Result	Qua	alifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits			
Chloride	231	b		1000	1255			mg/L		_	102	80 - 120			_
Sulfate	83.2			1000	1041			mg/L			96	80 - 120			
Lab Sample ID: 600-196675 Matrix: Water	5-20 MSD										Clie	nt Sampl Prep Ty			
Analysis Batch: 283045															
·····,···	Sample	San	nple	Spike	MSD	MSI	C					%Rec.		RF	PD
Analyte	Result	Qua	alifier	Added	Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Lin	nit
Chloride	231	b		1000	1261			mg/L		_	103	80 - 120	1		20
Sulfate	83.2			1000	1045			mg/L			96	80 - 120	0		20
Lab Sample ID: MB 600-28 Matrix: Water	3211/35									Clie	ent Sam	ple ID: M Prep Ty			
Analysis Batch: 283211															
-		MB	MB												
Analyte	Re	sult	Qualifier	MQL (Adj)		SDL	Unit		D	Ρ	repared	Analy	zed	Dil F	ac
Chloride	0.2	1862	J	0.400	0.	0534	mg/L		_			12/17/19	22:19		1
Sulfate	0.0	957	U	0.500	0.	0957	mg/L					12/17/19	22:19		1
Lab Sample ID: MB 600-28	3211/4									Clie	ont Sam	ple ID: M	ethod	Blar	ık
Matrix: Water											Sull Sull	Prep Ty			
Analysis Batch: 283211												i i op i y	P0. 10		
Analysis Daton. 200211		мв	МВ												
Analyte	Re		Qualifier	MQL (Adj)		SDI	Unit		D	P	repared	Analy	zed	Dil F	ac
Chloride		1863		0.400			mg/L		_	•		12/17/19			1
Sulfate		)957		0.500			mg/L					12/17/19			1
Cunato	0.0		0	0.000	0.	5551	y/∟					12/11/19	11.40		

Job ID: 600-196675-1

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Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 600-283211/36					Clie	nt Sai	nple ID	: Lab Control S	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 283211		Queilles	1.00	1.00				0/ <b>D</b> = =	
Ameliate		Spike	-	LCS	11	_	0/ <b>D</b> = =	%Rec.	
Analyte		Added	1017	Qualifier	Unit	D	%Rec	Limits	
Chloride		1000			mg/L		102	90 - 110	
Sulfate		1000	980.3		mg/L		98	90 - 110	
Lab Sample ID: LCS 600-283211/5					Clie	nt Sai	nple ID	: Lab Control S	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 283211		-							
		Spike	-	LCS				%Rec.	
Analyte		Added		Qualifier	Unit	D	%Rec	Limits	
Chloride		20.0	20.14		mg/L		101	90 - 110	
Sulfate		20.0	19.34		mg/L		97	90 - 110	
Method: SM 2540C - Solids, Total	Dissolve	d (TDS)							
Lab Sample ID: MB 600-282061/1						Clie	ent Sam	nple ID: Method	
Matrix: Water								Prep Type: To	otal/NA
Analysis Batch: 282061									
N	IB MB								
Analyte Resu	ult Qualifier	MQL (Adj)		SDL Unit	I	D P	repared	Analyzed	Dil Fac
Total Dissolved Solids 10	).0 U	10.0		10.0 mg/L				12/04/19 13:21	1
Lab Sample ID: LCS 600-282061/2					Clie	nt Sai	nole ID	: Lab Control S	ample
Matrix: Water								Prep Type: To	
Analysis Batch: 282061									
		Spike	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Dissolved Solids		1800	1726		mg/L		96	90 - 110	
-					-				
Lab Sample ID: 600-196675-10 DU							Clie	ent Sample ID: N	/W-4A
Matrix: Water								Prep Type: To	tal/NA
Analysis Batch: 282061									
Sample S	Sample		DU	DU					RPD
Analyte Result C	Qualifier		Result	Qualifier	Unit	D		RPD	Limit
Total Dissolved Solids 824 H	1		806.0		mg/L			2	10
Lab Sample ID: 600-196675-21 DU							Clie	ent Sample ID: I	<b>NW-11</b>
Matrix: Water								Prep Type: To	tal/NA
Analysis Batch: 282061									
Sample S	Sample		DU	DU					RPD
Analyte Result C				Qualifier	Unit	D		RPD	
Total Dissolved Solids 364 H			340.0		mg/L			7	
ab Sample ID: MB 600-282105/1						Clie	nt Sam	nle ID: Method	Blank
Lab Sample ID: MB 600-282105/1 Matrix: Water						Clie	ent Sam	nple ID: Method	
Matrix: Water						Clie	ent Sam	nple ID: Method Prep Type: To	
Matrix: Water Analysis Batch: 282105	18 MB					Clie	ent Sam		
Matrix: Water Analysis Batch: 282105	1B MB ult Qualifier	MQL (Adj)		SDL Unit			ent Sarr repared		

Job ID: 600-196675-1

Eurofins TestAmerica, Houston

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal oh ID: 600 106675 1

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Job ID: 600-196675-1

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 600-2 Matrix: Water	82105/2					Clie	nt Sa	mple ID	: Lab Control Prep Type: T		
Analysis Batch: 282105			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Total Dissolved Solids			1800	1726		mg/L		96	90 - 110		
 Lab Sample ID: 600-19667	5-1 DU							Clie	ent Sample ID:	MV	V-12
Matrix: Water									Prep Type: T		
Analysis Batch: 282105											
	Sample	Sample		DU	DU						RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D		RP	D	Limit
Total Dissolved Solids	1010	Н		1032		mg/L				2	10

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## **Unadjusted Detection Limits**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

Project/Site: Cooper Jal				JOD ID: 600-196675-1	
Method: 300.0 - Anions, Ion Chi	romatography				
Analyte	MQL	MDL	Units		
Chloride	0.400	0.0534	mg/L		
Sulfate	0.500	0.0957	mg/L		
General Chemistry					5
Analyte	MQL	MDL	Units		
Total Dissolved Solids	10.0	10.0	mg/L		
-					
					8
					9
					1

## **QC** Association Summary

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

Job ID: 600-196675-1

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## HPLC/IC

#### Analysis Batch: 283030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-1	MW-12	Total/NA	Water	300.0	
600-196675-2	MW-3	Total/NA	Water	300.0	
600-196675-3	MW-2	Total/NA	Water	300.0	
600-196675-4	MW-2A	Total/NA	Water	300.0	
600-196675-5	MW-6R	Total/NA	Water	300.0	
600-196675-6	MW-5	Total/NA	Water	300.0	
600-196675-7	MW-5A	Total/NA	Water	300.0	
600-196675-8	MW-1	Total/NA	Water	300.0	
600-196675-9	MW-4	Total/NA	Water	300.0	
600-196675-10	MW-4A	Total/NA	Water	300.0	
600-196675-11	RW-1	Total/NA	Water	300.0	
600-196675-12	RW-2R	Total/NA	Water	300.0	
MB 600-283030/34	Method Blank	Total/NA	Water	300.0	
MB 600-283030/6	Method Blank	Total/NA	Water	300.0	
LCS 600-283030/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-283030/7	Lab Control Sample	Total/NA	Water	300.0	
600-196675-10 MS	MW-4A	Total/NA	Water	300.0	
600-196675-10 MSD	MW-4A	Total/NA	Water	300.0	
nalysis Batch: 283	045				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
600-196675-14	MW-14	Total/NA	Water	300.0	
600-196675-15	DUP-1	Total/NA	Water	300.0	
600 106675 16	M/M/ 10	Total/NA	\M/ator	200.0	

600-196675-16	MW-10	Total/NA	Water	300.0	
600-196675-17	MW-7	Total/NA	Water	300.0	
600-196675-18	MW-8	Total/NA	Water	300.0	
600-196675-19	MW-9	Total/NA	Water	300.0	
600-196675-20	MW-9A	Total/NA	Water	300.0	
600-196675-21	MW-11	Total/NA	Water	300.0	
MB 600-283045/4	Method Blank	Total/NA	Water	300.0	
LCS 600-283045/5	Lab Control Sample	Total/NA	Water	300.0	
600-196675-14 MS	MW-14	Total/NA	Water	300.0	
600-196675-14 MSD	MW-14	Total/NA	Water	300.0	
600-196675-20 MS	MW-9A	Total/NA	Water	300.0	
600-196675-20 MSD	MW-9A	Total/NA	Water	300.0	

#### Analysis Batch: 283211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-13	RW-2	Total/NA	Water	300.0	
MB 600-283211/35	Method Blank	Total/NA	Water	300.0	
MB 600-283211/4	Method Blank	Total/NA	Water	300.0	
LCS 600-283211/36	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-283211/5	Lab Control Sample	Total/NA	Water	300.0	

## **General Chemistry**

#### Analysis Batch: 282061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-2	MW-3	Total/NA	Water	SM 2540C	
600-196675-3	MW-2	Total/NA	Water	SM 2540C	
600-196675-4	MW-2A	Total/NA	Water	SM 2540C	

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## **QC** Association Summary

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

## **General Chemistry (Continued)**

## Analysis Batch: 282061 (Continued)

_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-5	MW-6R	Total/NA	Water	SM 2540C	
600-196675-6	MW-5	Total/NA	Water	SM 2540C	
600-196675-7	MW-5A	Total/NA	Water	SM 2540C	
600-196675-8	MW-1	Total/NA	Water	SM 2540C	
600-196675-9	MW-4	Total/NA	Water	SM 2540C	
600-196675-10	MW-4A	Total/NA	Water	SM 2540C	
600-196675-11	RW-1	Total/NA	Water	SM 2540C	
600-196675-12	RW-2R	Total/NA	Water	SM 2540C	
00-196675-13	RW-2	Total/NA	Water	SM 2540C	
00-196675-14	MW-14	Total/NA	Water	SM 2540C	
00-196675-15	DUP-1	Total/NA	Water	SM 2540C	
00-196675-16	MW-10	Total/NA	Water	SM 2540C	
600-196675-17	MW-7	Total/NA	Water	SM 2540C	
00-196675-18	MW-8	Total/NA	Water	SM 2540C	
600-196675-19	MW-9	Total/NA	Water	SM 2540C	
600-196675-20	MW-9A	Total/NA	Water	SM 2540C	
00-196675-21	MW-11	Total/NA	Water	SM 2540C	
VIB 600-282061/1	Method Blank	Total/NA	Water	SM 2540C	
_CS 600-282061/2	Lab Control Sample	Total/NA	Water	SM 2540C	
00-196675-10 DU	MW-4A	Total/NA	Water	SM 2540C	
500-196675-21 DU	MW-11	Total/NA	Water	SM 2540C	

#### Analysis Batch: 282105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-196675-1	MW-12	Total/NA	Water	SM 2540C	
MB 600-282105/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-282105/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-196675-1 DU	MW-12	Total/NA	Water	SM 2540C	

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## Lab Chronicle

Job ID: 600-196675-1

#### Lab Sample ID: 600-196675-1 Matrix: Water

Lab Sample ID: 600-196675-2

Lab Sample ID: 600-196675-3

Client Sample ID: MW-12 Date Collected: 11/23/19 15:10 Date Received: 11/27/19 10:15

Client: ARCADIS U.S., Inc.

Project/Site: Cooper Jal

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		250			283030	12/14/19 06:51	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282105	12/04/19 15:38	TNL	TAL HOU

#### Client Sample ID: MW-3 Date Collected: 11/23/19 15:22 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	<b>Type</b> Analysis	Method 300.0	Run	Factor 50	Amount	Amount	Number 283030	or Analyzed 12/14/19 07:02	Analyst W1N	Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

## Client Sample ID: MW-2 Date Collected: 11/23/19 15:32

Date Received: 11/27/19 10:15	

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			283030	12/14/19 07:13	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-2A Date Collected: 11/23/19 15:37

Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 07:23	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-6R Date Collected: 11/23/19 15:46

Date Received: 11/23/19 15:46

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 07:34	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-5 Date Collected: 11/23/19 15:54 Date Received: 11/27/19 10:15

_	Batch	Batch	_	Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	Type Analysis	Method 300.0	Run	Factor	Amount	Amount	Number 283030	or Analyzed 12/14/19 08:06	Analyst W1N	Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

# Lab Sample ID: 600-196675-4

Lab Sample ID: 600-196675-5

Lab Sample ID: 600-196675-6

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

Job ID: 600-196675-1

Matrix: Water

Matrix: Water

Matrix: Water

Lab Sample ID: 600-196675-7

Lab Sample ID: 600-196675-8

Lab Sample ID: 600-196675-9

## Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### **Client Sample ID: MW-5A** Date Collected: 11/23/19 16:04 - Dessived: 44/07/40 40.4E

Date Received: 1	1/27/19 10	):15								
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283030	12/14/19 08:17	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-1** Date Collected: 11/24/19 08:26 Date Received: 11/27/19 10:15

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			283030	12/14/19 08:28	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

## **Client Sample ID: MW-4** Date Collected: 11/24/19 08:44

Date Received: 1	1/27/19 10:15	
Г		

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			283030	12/14/19 09:00	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-4A** Date Collected: 11/24/19 08:49 Date Received: 11/27/19 10:15

#### Batch Batch Dil Initial Final Batch Prepared Method Number or Analyzed Analyst Prep Type Туре Factor Amount Amount Run Lab 300.0 283030 12/14/19 09:11 W1N Total/NA Analysis 100 TAL HOU Total/NA Analysis SM 2540C 1 50 mL 282061 12/04/19 13:21 TNL TAL HOU 100 mL

## Client Sample ID: RW-1

Date Collected: 11/24/19 09:08 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1000			283030	12/14/19 09:43	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: RW-2R** Date Collected: 11/24/19 09:21 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1000			283030	12/14/19 09:54	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

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# Lab Sample ID: 600-196675-10

Lab Sample ID: 600-196675-11

Lab Sample ID: 600-196675-12

Matrix: Water

Matrix: Water

Matrix: Water

## Lab Chronicle

Job ID: 600-196675-1

## Lab Sample ID: 600-196675-13

Lab Sample ID: 600-196675-14

Lab Sample ID: 600-196675-15

Lab Sample ID: 600-196675-16

Lab Sample ID: 600-196675-17

Lab Sample ID: 600-196675-18

Matrix: Water

Matrix: Water

Matrix: Water

**Matrix: Water** 

Matrix: Water

Matrix: Water

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### Client Sample ID: RW-2 Date Collected: 11/24/19 09:25 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			283211	12/18/19 01:23	SKR	TAL HOU
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-14 Date Collected: 11/24/19 09:31 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type Total/NA	<b>Type</b> Analysis	Method 300.0	Run	Factor 20	Amount	Amount	Number 283045	or Analyzed 12/14/19 10:24	Analyst W1N	Lab TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: DUP-1 Date Collected: 11/24/19 00:00 Date Received: 11/27/19 10:15

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			283045	12/14/19 11:25	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-10 Date Collected: 11/24/19 09:52 Date Received: 11/27/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 11:46	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-7 Date Collected: 11/24/19 10:11

Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			283045	12/14/19 12:06	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### Client Sample ID: MW-8 Date Collected: 11/24/19 10:22 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		25			283045	12/14/19 12:27	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

## Lab Chronicle

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### **Client Sample ID: MW-**Date Collected: 11/24/19 10 Date Received: 11/27/19 10

-9					Lab	Sample ID	: 600-1	96675-19
0:32							Ма	trix: Water
0:15								
Batch		Dil	Initial	Final	Batch	Prepared		
Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
300.0		100			283045	12/14/19 12:47	W1N	TAL HOU

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 12:47	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-9A** Date Collected: 11/24/19 10:41 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			283045	12/14/19 13:48	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

#### **Client Sample ID: MW-11** Date Collected: 11/24/19 10:51 Date Received: 11/27/19 10:15

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			283045	12/14/19 14:50	W1N	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	282061	12/04/19 13:21	TNL	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Job ID: 600-196675-1

Matrix: Water

Lab Sample ID: 600-196675-20

Lab Sample ID: 600-196675-21 Matrix: Water

## **Accreditation/Certification Summary**

Client: ARCADIS U.S., Inc. Project/Site: Cooper Jal

#### Laboratory: Eurofins TestAmerica, Houston

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0759	08-04-20
Louisiana	NELAP	01967	06-30-20
Oklahoma	State	2019-073	08-31-20
Texas	NELAP	T104704223-19-25	10-31-19 *
Texas	NELAP	T104704223-19-25	10-31-20
USDA	US Federal Programs	P330-18-00130	04-30-21
Utah	NELAP	TX000832019-5	07-31-20

Eurofins TestAmerica, Houston

## Job ID: 600-196675-1

Phone (713) 690-4444 Fax (713) 690-5646								
Client Information	Sampler Carles	N	« them	Lab PM Kudchad	Lab PM Kudchadkar, Sachin G	5	Carrier Tracking No(s)	COC No <sup>-</sup> 600-72356-19860.3
Client Contact: Mr. Russell Grant	Phone 361-	101-02	10364	E-Mail: sachin ku	idchadkar@	E-Mail: sachin.kudchadkar@testamericainc.com		Page: Page
Company. ARCADIS U.S., Inc.						Analysis Requested	quested	Job #
Address: 1004 North Big Spring Suite 121	Due Date Requested:	ed:						eservation Cod
City Midland State: Zip	TAT Requested (days):	ays):			-			A - NACU B - NACH B - NACH C - Zh Acetarte C - Zh Acetarte D - Nitine Acid P - NA2C4S E - Nitine Acid P - NA2C4S
1.5, / 9/01 Phone 916-786-5382/Tal)	PO #: 30006543 Mark Owen	Owen						- MeOH - Amchlor
Email: russell.grant@arcadis-us.com	#OM				(0)			H - Ascorbic Acid 1 - Ice J - Di Water
Project Name. Martine Martine Cooper Jul Site:	Project #. 60003622 SSOW#:							K - EDTA L - EDA Other:
Samole Identification	Samule Date	Sample Time	Sample Type (C=comp,	Matrix (www.antrix	seriorn MS/MS	100°CI' 204		o tati Number o
		X	- m	X	z		a last to be a lost of the	
MW-12	1123/19	15/0	3	Water	X	×	-	1
E-MW SOLATER COL	61/27/11	1522	5	Water	X			1
MW-2	11/23/19	1532	5	Water	×	X		
MW-ZA	11123/19	1537	5	Water	×	X		1
MW-6R	11/23/19	1546	E	Water	X		pota	1
MW-5-MM	101/52/11	1554	5	Water	X	X	of Cu	
MW - 5A	11/23/19	1604	G	Water	×	X	o uisi	
NW-1	11/2/11	92.80	R	Water	X		40 5.	-
Hur-4	61 1 2 11	4480	R	Water	X	X	2996	1
Anny	112419	6480	G	Water	×		1-00	3
RW-I	11/214/11	3063	U	Water	X		9.	1
Possible Hazard Identification	Doison B Duknown		Rac		Sample Dist	To Client	r be assessed if samples a	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)  Return To Client Anchive For Months
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instru	Special Instructions/OC Requirements	ents	
Empty Kit Relinquished by:		Date		Time:	a.		Method of Shipment	
Reinquistred by Log Martine	DateTime DateTime	1 6	00,81	Company Company	Received by	50	Date/Time	27/19 1015 Company
Relinquished by	Date/Time			Company	Received by		Date/Time	Company
Custody Seals Intact: Custody Seal No.:					Cooler Ten	Cooler Temperature(s) <sup>a</sup> C and Other Remarks	Remarks:	

. Released to Imaging: 9/13/2021 1:48:45 PM

12/19/2019

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Phone (713) 690-4444 Fax (713) 690-5646								
Client Information	Sampler Carlos	Hacking	2	Lab PM Kudchadk	ar, Sachin G	Carher Tracking No(s),	COC No 600-72356-19860.3	60.3
Client Contact Mr. Russell Grant	Phone 761-0361	1-0361		E-Mall sachin.ku	E-Mail sachin kudchadkar@lestamericainc com	E	Page Page	
Company ARCADIS U.S., Inc.					Analysis	Analysis Requested	a dol	
Address 1004 North Big Spring Suite 121	Due Date Requested;	d;					Preservation Codes:	
City Midland State, Zp TX, 79701	TAT Requested (days):	;(s/i					B - NaCH B - NaCH C - Zh Acetate D - Nifnc Acid E - NaHSO4	N None 0 AsNaO2 P - Na2045 0 - Na2045
Phone 916-786-5382(Tel)	PO# 30006543 Mark Owen	Owen		((			F - MeOH G - Amchior H - Ascorbic Acid	
Email tussell grant@arcadis-us.com	#OM			_	(0)			
Project Name MARKOWEN Cropper Jul	Project # 60003622 SSOW#							Z - other (specify)
Samole Identification	Sample Date	Sample Time	Sample Type (C=comp, G=qrab)	Matrix (www.matrix (www.matrix Second Oswamica Oswamica BTT Traves A AM	900-Cl' SO4 2540C- TDS 2540C- TDS 260-Cl, SO4		Total Number o	Special Instructions/Note:
	X	X	Preserva	X	z			V
RW-2R	11/24/11	1250	৬	Water	XX		1	
RW-2	11/24/14	0925	J	Water	XX		1	
Mw-14	1124 14	1240	B	Water	XX		1	
1-dha	612211	1	R	Water	XX		1	
01-MM	112419	2560	G	Water	XX			
E-MW	11 124 9	1011	C	Water	XX		1	
MW-B	11/24/14	10.12	B	Water	XX		1	
MW-9	RIZHIN	10.32	Y	Water	XX		1	
MW-9A	11124/19	1041	G	Water	XX		-	
Mw-II	11/24/14	1051	5	Water	ХХ		4	
				Water				
Possible Hazard Identification	Poison B Dunknown	Ш	Radiological		Sample Disposa! ( A fee may be assessed if samples are retained longer than 1 month) Return To Client R Disposal By Lab Archive For Mor	r be assessed if samples	are retained longer than	1 month) Months
iverable Requested 1, II, III, IV, Other (specify)				03	pecial Instructions/QC Requi	rements		
Empty Kit Relinquished by:		Date:		Time:	a.	Method of Shipment	nt	
Reinquistred by Reinquistred by.	Date/Time	0081	0	ARCH DU Company	Received by AL	DateTime	101 61/10 101S	Company
Reinquistied by	Date/Tune			Company	Referred by	Date/Time	inte:	Conipany
Custody Seals Intact. Custody Seal No.					Cooler Temperature(s) °C and Other Remarks	ther Remarks		

12/19/2019

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Received by	OCD:	3/25/2020	9:15:	51 AM
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Eurofins TestAmeri	ca Houston		Loc: 600 196675	*	eurofins	Environment Testing TestAmerica
S	ample Rece	eiot Check	list			
						'19NCU 27 10:
			ate/Time Received: _	Ar	cadi	
JOB NUMBER:	-		LIENT: _	Ende	IN	2
UNPACKED BY:	- Alt	C/	ARRIER/DRIVER: _	TRUC	7	
Custody Seal Present:		NO NI	umber of Coolers Receiv Observed Temp	ved:	1 Therm	Corrected Temp
Cooler ID	Temp Blank	Trip Blank	(°C)	ID	CF	(°C)
337	Y / N Y / N	Y / N Y / N	02.1	676	+0·1	2:2
	Y/N	Y/N				
	Y/N	Y/N				>
	Y/N	Y/N		1	11/2	7/19
	Y / N CF = correction factor	Y/N			11/2 11/2	27/19
Samples received on ic LABORATORY PRES Base samples are>pH TX1005 samples <u>frozen</u> pH paper Lot #	Y     N       CF = correction factor       ce?     YES       ce?     YES       ERVATION OF S       12:     YES       12:     YES       n     upon receipt:	Y / N NO SAMPLES REQ NO Ad	UIRED: DNO cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F DA headspace acceptat</ph>	REEZER:		1
Samples received on ic LABORATORY PRES Base samples are>pH TX1005 samples <u>frozen</u> pH paper Lot #	Y     N       CF = correction factor       ce?       YES       ERVATION OF S       12:     YES       n     upon receipt:	Y / N NO SAMPLES REQ NO AC	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F</ph>	□YES REEZER: ble (5-6mm):		1
Samples received on ic LABORATORY PRES Base samples are>pH TX1005 samples <u>frozen</u> pH paper Lot #	Y     N       CF = correction factor       ce?       YES       ERVATION OF S       12:     YES       n     upon receipt:	Y / N NO SAMPLES REQ NO AC	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F OA headspace acceptat</ph>	□YES REEZER: ble (5-6mm):		D DINA
Samples received on ic <b>LABORATORY PRES</b> Base samples are>pH TX1005 samples <u>frozen</u> bH paper Lot # d samples meet the labor	Y     N       CF = correction factor       ce?       YES       ERVATION OF S       12:     YES       n     upon receipt:	Y / N NO SAMPLES REQ NO AC	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F OA headspace acceptat</ph>	□YES REEZER: ble (5-6mm):		D DINA
Samples received on ic LABORATORY PRES Base samples are>pH TX1005 samples <u>frozen</u> pH paper Lot # d samples meet the labor	Y     N       CF = correction factor       ce?       YES       ERVATION OF S       12:     YES       n     upon receipt:	Y / N NO SAMPLES REQ NO AC	cid preserved are <ph 2:<br="">ATE &amp; TIME PUT IN F OA headspace acceptat</ph>	□YES REEZER: ble (5-6mm):		D DINA

•

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

#### Login Number: 196675 List Number: 1 Creator: Rubio, Yuri

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td>Lab does not accept radioactive samples.</td>	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Job Number: 600-196675-1

List Source: Eurofins TestAmerica, Houston

# **APPENDIX E**

**Cumulative Summary of Groundwater Potentiometric Elevation Data** 

ARCADIS Design & Consultancy for natural and built assets



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-1	05/18/98	135.05	3184.95	173.00	2.00	153-173
3320.00	05/25/99	134.93	3185.07			
	02/08/01	134.80	3185.20			
	05/10/02 10/22/02	134.77 134.89	3185.23 3185.11			
	05/20/03	135.17	3184.83			
	11/24/03	134.70	3185.30			
	05/11/04 11/15/04	134.75 134.76	3185.25 3185.24			
	05/17/05	134.29	3185.71			
	11/15/05	134.93	3185.07			
	05/08/06 11/13/06	134.68 134.62	3185.32 3185.38			
	05/29/07	134.71	3185.29			
	11/16/07	134.70	3185.30			
	05/14/08 11/03/08	134.73 134.69	3185.27 3185.31			
	05/19/09	134.64	3185.36			
	11/02/09	134.71	3185.29			
	05/05/10 11/08/10	134.90 134.50	3185.10 3185.50			
	05/11/11	134.60	3185.40			
	11/08/11	134.64	3185.36			
	05/16/12 10/10/12	134.60 134.73	3185.40 3185.27			
	05/16/13	134.58	3185.42			
	10/08/13	134.53	3185.47			
	05/01/14 10/05/14	134.70 134.49	3185.30 3185.51			
	05/21/15	134.56	3185.44			
	10/19/15	134.80	3185.20			
	05/25/16 10/17/16	134.69 134.35	3185.31 3185.65			
	05/10/17	134.44	3185.56			
3321.94	10/24/17	134.63	3187.31			
	05/22/18 10/17/18	134.45 134.54	3187.49 3187.40			
	06/20/19	134.56	3187.38	171.17		
	11/20/19	134.45	3187.49	174.20		
MW-2	05/18/98	135.00	3184.86	173.00	2.00	163-173
3319.86	05/25/99 02/08/01	134.79 134.63	3185.07 3185.23			
	05/10/02	134.65	3185.21			
	10/22/02	134.72	3185.14			
	05/20/03 11/24/03	134.95 134.56	3184.91 3185.30			
	05/11/04	134.55	3185.31			
	11/15/04	134.53	3185.33			
	05/17/05 11/15/05	134.39 134.77	3185.47 3185.09			
	05/08/06	134.52	3185.34			
	11/13/06	134.44	3185.42			
	05/29/07 11/14/07	134.54 134.52	3185.32 3185.34			
	05/14/08	134.52	3185.33			
	11/03/08	134.44	3185.42			
	05/19/09	134.46 134.51	3185.40 3185.35			
	05/05/10	134.51 134.62	3185.35			
	11/08/10	134.25	3185.61			
	05/11/11	134.31	3185.55			
	11/08/11 05/16/12	134.36 134.31	3185.50 3185.55			
	10/10/12	134.51	3185.35			
	05/16/13 10/07/13	134.33 142.85	3185.53 3177.01			
	05/01/14	134.37	3185.49			
	10/05/14	134.14	3185.72			
	05/21/15	134.21	3185.65			
	10/19/15 05/25/16	134.20 134.38	3185.66 3185.48			
	10/17/16	134.00	3185.86			
	05/10/17 10/25/17	134.13	3185.73			
2224 27		134.32	3186.95			
3321.27			3187.16			
3321.27	05/22/18 10/17/18	134.11 134.21	3187.16 3187.06			
3321.27	05/22/18	134.11				

#### \\TX05FP01\Data\ENV\ChevronTexacoTX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2010 Report\2019 R

ARCADIS Design & Consultancy for natural and built assets

Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
тос	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-2A	05/18/98	134.80	3185.06	145.00	2.00	130-145
3319.86	05/25/99	134.73	3185.13			
	02/08/01	134.58	3185.28			
	05/10/02 10/22/02	134.50 134.66	3185.36 3185.20			
	05/20/03	135.80	3184.06			
	11/24/03	134.60	3185.26			
	05/11/04	134.53	3185.33			
	11/15/04 05/17/05	134.58 134.47	3185.28 3185.39			
	11/15/05	134.74	3185.12			
	05/08/06	134.46	3185.40			
	11/13/06 05/29/07	134.39 134.50	3185.47 3185.36			
	11/14/07	134.48	3185.38			
	05/14/08	134.49	3185.37			
	11/03/08	134.46	3185.40			
	05/19/09 11/02/09	134.42 134.45	3185.44 3185.41			
	05/05/10	134.52	3185.34			
	11/08/10	134.30	3185.56			
	05/11/11	134.38	3185.48			
	11/08/11 05/16/12	134.42 134.43	3185.44 3185.43			
	10/10/12	134.65	3185.21			
	05/16/13	134.35	3185.51			
	10/07/13 05/01/14	134.20 134.45	3185.66 3185.41			
	10/05/14	134.15	3185.71			
	05/21/15	134.32	3185.54			
	10/19/15	134.40	3185.46			
	05/25/16 10/17/16	134.49 134.10	3185.37 3185.76			
	05/10/17	134.29	3185.57			
3321.3	10/25/17	134.40	3186.90			
	05/22/18 10/17/18	134.31	3186.99			
		134.31	3186.99			
	06/20/19 11/20/19	134.43 134.24	3186.87 3187.06	142.47 142.23		
MW-3	06/20/19	134.43	3186.87	142.47	  2.00	  161-171
MW-3 3318.21	06/20/19 11/20/19 05/18/98 05/25/99	134.43 134.24 132.65 132.52	3186.87 3187.06 3185.56 3185.69	142.47 142.23		
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01	134.43 134.24 132.65 132.52 132.40	3186.87 3187.06 3185.56 3185.69 3185.81	142.47 142.23 171.00  	 2.00  	161-171  
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02	134.43 134.24 132.65 132.52 132.40 132.40	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81	142.47 142.23		
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	134.43         134.24         132.65         132.52         132.40         132.40         132.40         132.40         132.75	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.81 3185.72 3185.46	142.47 142.23 171.00    	 2.00    	161-171  
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.72 3185.46 3185.92	142.47 142.23 171.00  	 2.00  	161-171  
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38	3186.87 3187.06 3185.56 3185.89 3185.81 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83	142.47 142.23 171.00    	 2.00    	161-171    
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.72 3185.46 3185.92	142.47 142.23 171.00    	 2.00    	161-171    
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.32 132.55	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.89 3185.66	142.47 142.23 171.00         	 2.00    	
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.83 3185.83 3185.75 3185.89 3185.66 3185.69	142.47 142.23 171.00        	 2.00    	
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.32 132.55	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.81 3185.72 3185.46 3185.92 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.94	142.47 142.23 171.00         	 2.00        	       
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.25 132.32 132.27 132.36	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.83 3185.83 3185.75 3185.89 3185.66 3185.69	142.47 142.23 171.00 	 2.00         	       
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.32 132.35 132.32 132.32 132.32 132.34 132.36	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.72 3185.74 3185.75 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.85 3185.85	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/17/05 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.32 132.32 132.34 132.34	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.89 3185.66 3185.89 3185.94 3185.85 3185.85 3185.85 3185.85 3185.85	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.32 132.35 132.32 132.32 132.32 132.34 132.36	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.72 3185.74 3185.75 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.85 3185.85	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 05/05/10	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.35 132.32 132.35 132.32 132.36 132.34 132.36 132.31 132.35 132.34	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.85 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.84 3185.84 3185.73	142.47 142.23 171.00 	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/16/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/10	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.25 132.32 132.25 132.32 132.36 132.34 132.36 132.31 132.25 132.37 132.34 132.25 132.37 132.48 132.44	3186.87 3185.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.73 3185.73 3185.73	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 11/15/05 11/13/06 05/29/07 11/16/07 05/14/08 11/03/08 05/19/09 05/05/10	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.35 132.32 132.35 132.32 132.36 132.34 132.36 132.31 132.35 132.34	3186.87 3187.06 3185.69 3185.81 3185.81 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.85 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.87 3185.84 3185.84 3185.73	142.47 142.23 171.00 	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/29/07 11/16/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.55 132.32 132.36 132.34 132.36 132.31 132.36 132.31 132.25	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.46 3185.83 3185.75 3185.83 3185.75 3185.89 3185.86 3185.89 3185.94 3185.85 3185.85 3185.87 3185.85 3185.90 3185.90 3185.94 3185.97	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/04 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 05/19/09 11/08/10 05/11/11 11/08/10 05/11/11	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.27 132.32 132.27 132.36 132.34 132.34 132.34 132.34 132.25 132.37 132.25 132.37 132.25 132.34	3186.87 3187.06 3185.69 3185.69 3185.81 3185.81 3185.72 3185.83 3185.75 3185.83 3185.75 3185.89 3185.89 3185.89 3185.86 3185.87 3185.85 3185.87 3185.87 3185.87 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97	142.47 142.23 171.00         		161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/16/11 11/08/11 05/16/12 05/16/13	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.32           132.38           132.36           132.36           132.36           132.36           132.37           132.36           132.37           132.34           132.25           132.24           132.37           132.48           132.24           132.25           132.25           132.25           132.25           132.25           132.25	3186.87 3187.06 3185.69 3185.69 3185.81 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.83 3185.75 3185.89 3185.89 3185.89 3185.85 3185.85 3185.85 3185.85 3185.85 3185.85 3185.86 3185.96 3185.96	142.47 142.23 171.00         	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/24/03 05/11/04 05/17/05 11/15/04 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 05/19/09 11/08/10 05/11/11 11/08/10 05/11/11	134.43 134.24 132.65 132.52 132.40 132.40 132.49 132.75 132.29 132.38 132.46 132.32 132.55 132.32 132.27 132.32 132.27 132.36 132.34 132.34 132.34 132.34 132.25 132.37 132.25 132.37 132.25 132.34	3186.87 3187.06 3185.69 3185.69 3185.81 3185.81 3185.72 3185.83 3185.75 3185.83 3185.75 3185.89 3185.89 3185.89 3185.86 3185.87 3185.85 3185.87 3185.87 3185.87 3185.90 3185.90 3185.97 3185.97 3185.97 3185.97	142.47 142.23 171.00 	 2.00         	161-171
-	06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 11/15/05 11/15/05 05/08/06 05/29/07 05/14/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/16/12 05/16/12 05/16/13 10/08/13 10/08/13 05/01/14 10/05/14	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.32           132.38           132.36           132.36           132.36           132.36           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.24           132.25           132.25           132.25           132.25           132.25           132.25           132.210           132.58	3186.87 3187.06 3185.69 3185.69 3185.81 3185.81 3185.72 3185.46 3185.73 3185.75 3185.83 3185.75 3185.89 3185.86 3185.89 3185.86 3185.87 3185.85 3185.85 3185.85 3185.96 3185.96 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.67	142.47 142.23 171.00       	 2.00         	161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/15/05 05/29/07 11/16/07 05/14/08 05/19/09 11/02/19 05/05/10 11/08/11 05/16/12 10/08/13 05/01/14 10/05/14 10/05/14 05/21/15	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.29           132.38           132.32           132.32           132.32           132.32           132.36           132.36           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.24           132.25           132.25           132.25           132.14           132.26           132.25           132.25           132.25           132.25           132.25           132.25	3186.87 3185.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.81 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.89 3185.85 3185.87 3185.87 3185.90 3185.90 3185.90 3185.91 3185.91 3185.96 3185.96	142.47 142.23 171.00         		161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/12/03 05/11/04 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 05/19/09 11/02/09 05/16/12 05/16/12 05/16/13 05/01/14 10/05/14 05/21/15 10/19/15	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.55           132.32           132.32           132.32           132.34           132.35           132.36           132.31           132.25           132.31           132.25           132.31           132.25           132.32           132.31           132.25           132.31           132.25           132.32           132.31           132.25           132.24           132.25           132.25           132.25           132.25           132.25           132.25           132.26           132.25           132.25           132.25           132.25           132.25           132.25           13	3186.87 3187.06 3185.56 3185.56 3185.69 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.83 3185.76 3185.89 3185.89 3185.66 3185.89 3185.85 3185.85 3185.85 3185.87 3185.86 3185.96 3185.91 3185.96 3185.96 3185.96 3185.96	142.47 142.23 171.00         		161-171
-	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/15/05 05/29/07 11/16/07 05/14/08 05/19/09 11/02/19 05/05/10 11/08/11 05/16/12 10/08/13 05/01/14 10/05/14 10/05/14 05/21/15	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.29           132.38           132.32           132.32           132.32           132.32           132.36           132.36           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.24           132.25           132.25           132.25           132.14           132.26           132.25           132.25           132.25           132.25           132.25           132.25	3186.87 3185.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.81 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.89 3185.89 3185.85 3185.87 3185.87 3185.90 3185.90 3185.90 3185.91 3185.91 3185.96 3185.96	142.47 142.23 171.00         		161-171
3318.21	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/22/02 05/20/03 11/12/03 05/11/04 11/15/05 05/08/06 11/13/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 05/11/11 11/08/10 05/16/12 05/16/13 05/01/14 10/05/14 10/05/14 10/10/12 05/25/16 10/17/16 05/25/16 10/17/16	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.75           132.32           132.32           132.32           132.32           132.32           132.34           132.35           132.36           132.31           132.25           132.31           132.25           132.31           132.25           132.32           132.31           132.25           132.31           132.25           132.31           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           13	3186.87 3187.06 3185.56 3185.56 3185.69 3185.81 3185.72 3185.46 3185.72 3185.83 3185.75 3185.89 3185.89 3185.89 3185.66 3185.89 3185.85 3185.87 3185.85 3185.87 3185.96 3185.91 3185.91 3185.91 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96	142.47 142.23 171.00 		161-171
-	06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 11/08/10 05/16/13 10/08/13 05/10/14 05/21/15 05/25/16 10/17/16 05/26/16 10/17/16 05/26/16	134.43           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.52           132.32           132.32           132.32           132.32           132.32           132.36           132.36           132.36           132.31           132.32           132.34           132.35           132.31           132.32           132.34           132.35           132.31           132.25           132.32           132.32           132.31           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.34           132.20           132.23	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.83 3185.75 3185.83 3185.75 3185.83 3185.75 3185.83 3185.85 3185.86 3185.90 3185.90 3185.90 3185.90 3185.91 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.97 3185.96 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.97 3185.96 3185.97	142.47 142.23 171.00         		161-171
3318.21	06/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/15/05 05/08/06 05/29/07 11/16/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/16/12 10/08/13 05/16/13 10/08/13 05/25/16 10/17/16 05/25/16	134.43           134.24           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.32           132.35           132.32           132.32           132.32           132.36           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.37           132.36           132.25           132.24           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           13	3186.87 3185.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.81 3185.72 3185.83 3185.72 3185.89 3185.89 3185.89 3185.89 3185.89 3185.89 3185.87 3185.87 3185.90 3185.90 3185.91 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.97 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.97 3187.97 3187.9	142.47 142.23 171.00 		161-171
3318.21	06/20/19 11/20/19 11/20/19 05/18/98 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/16/07 05/14/08 11/02/09 05/05/10 11/08/10 05/16/13 10/08/13 05/10/14 05/21/15 05/25/16 10/17/16 05/26/16 10/17/16 05/26/16	134.43           132.65           132.52           132.40           132.40           132.40           132.40           132.40           132.40           132.40           132.41           132.52           132.32           132.32           132.32           132.32           132.32           132.36           132.36           132.36           132.31           132.32           132.34           132.35           132.31           132.32           132.34           132.35           132.31           132.25           132.32           132.32           132.31           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.25           132.34           132.20           132.23	3186.87 3187.06 3185.56 3185.69 3185.81 3185.81 3185.72 3185.83 3185.75 3185.83 3185.75 3185.83 3185.75 3185.83 3185.75 3185.83 3185.85 3185.86 3185.90 3185.90 3185.90 3185.90 3185.91 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.97 3185.96 3185.96 3185.67 3185.96 3185.96 3185.96 3185.96 3185.97 3185.96 3185.96 3185.97 3185.96 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3185.96 3185.97 3186.11	142.47 142.23 171.00 		161-171

#### \\TX05FP01\Data\ENV\ChevronTexacoTX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2010 Report\2019 R



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation (ft MSL)	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
MW-4	05/18/98	136.01	3183.73	171.00	2.00	161-171
3319.74	05/25/99	135.57	3184.17			
	02/08/01 05/10/02	135.87 135.67	3183.87 3184.07			
	10/22/02	135.90	3183.84			
	05/20/03	136.00	3183.74			
	11/24/03 05/11/04	135.70 135.34	3184.04 3184.40			
	11/15/04	135.76	3183.98			
	05/17/05	135.69	3184.05			
	11/15/05 05/08/06	135.85 135.60	3183.89 3184.14			
	11/13/06	135.59	3184.15			
	05/29/07	135.75	3183.99			
	11/14/07 05/14/08	135.62 135.76	3184.12 3183.98			
	11/03/08	135.66	3184.08			
	05/19/09	135.67	3184.07			
	11/02/09 05/05/10	135.68 135.83	3184.06 3183.91			
	11/08/10	135.36	3184.38			
	05/05/11	135.40	3184.34			
	11/08/11 05/16/12	135.43 135.38	3184.31 3184.36			
	10/10/12	135.55	3184.19			
	05/16/13	135.38 135.53	3184.36			
	10/07/13 05/01/14	135.53	3184.21 3184.33			
	10/05/14	135.61	3184.13			
	05/21/15 10/19/15	135.25	3184.49			
	05/25/16	135.70 135.44	3184.04 3184.30			
	10/17/16	135.11	3184.63			
3321.58	05/10/17 10/25/17	135.20 135.40	3184.54 3186.18			
3321.50	05/22/18	135.13	3186.45			
	10/16/18	135.32	3186.26			
	06/20/19	136.21	3185.37	171.81		
		135.06	3186 52	177 64		
MW-4A	11/19/19	135.06 135.68	3186.52 3183.90	177.64 143.00	2.00	128-143
MW-4A 3319.58		135.06 135.68 135.65	3186.52 3183.90 3183.93	177.64 143.00 	 2.00 	 128-143 
	11/19/19 05/18/98 05/21/99 05/25/99	135.68 135.65 135.90	3183.90 3183.93 3183.68	143.00  	2.00  	128-143  
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01	135.68 135.65 135.90 135.34	3183.90 3183.93 3183.68 3184.24			
	11/19/19 05/18/98 05/21/99 05/25/99	135.68 135.65 135.90	3183.90 3183.93 3183.68	143.00  	2.00  	128-143  
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	135.68 135.65 135.90 135.34 135.30 135.51 135.55	3183.90 3183.93 3183.68 3184.24 3184.28 3184.07 3184.03	143.00  	2.00  	128-143  
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03	135.68 135.65 135.90 135.34 135.30 135.51 135.55 135.55 135.31	3183.90 3183.93 3183.68 3184.24 3184.28 3184.07 3184.03 3184.27	143.00     	2.00   	128-143     
	11/19/19 05/18/98 05/21/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04	135.68 135.65 135.90 135.34 135.30 135.51 135.55 135.55 135.31 135.72 135.38	3183.90 3183.93 3183.68 3184.24 3184.28 3184.07 3184.07 3184.07 3184.27 3183.86 3184.20	143.00     	2.00   	128-143     
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05	135.68 135.65 135.90 135.34 135.30 135.51 135.55 135.31 135.72 135.38 135.32	3183.90 3183.93 3183.68 3184.24 3184.28 3184.07 3184.07 3184.07 3184.27 3183.86 3184.20 3184.20	143.00         	2.00        	128-143         
	11/19/19 05/18/98 05/21/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04	135.68 135.65 135.90 135.34 135.30 135.51 135.55 135.31 135.72 135.38 135.32 135.32 135.52	3183.90 3183.93 3183.68 3184.24 3184.28 3184.07 3184.03 3184.03 3184.27 3183.86 3184.20 3184.20 3184.26 3184.06	143.00        	2.00      	128-143        
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/21/0/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 11/15/05 11/13/06	135.68 135.65 135.90 135.34 135.30 135.55 135.55 135.31 135.72 135.38 135.32 135.52 135.26 135.20	3183.90 3183.93 3183.68 3184.24 3184.24 3184.07 3184.03 3184.07 3184.03 3184.20 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32	143.00         	2.00         	128-143         
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 05/29/07	135.68           135.65           135.90           135.34           135.51           135.51           135.51           135.51           135.31           135.32           135.32           135.52           135.20           135.32	3183.90 3183.93 3183.68 3184.24 3184.24 3184.27 3184.03 3184.27 3184.03 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32 3184.32	143.00         	2.00        	128-143         
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/21/0/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 11/15/05 11/13/06	135.68 135.65 135.90 135.34 135.30 135.55 135.55 135.31 135.72 135.38 135.32 135.52 135.26 135.20	3183.90 3183.93 3183.68 3184.24 3184.24 3184.07 3184.03 3184.07 3184.03 3184.20 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32	143.00         	2.00         	128-143         
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/37/0/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/06 05/29/07 11/14/07 05/14/08 11/03/08	135.68           135.65           135.90           135.34           135.51           135.51           135.55           135.31           135.32           135.52           135.20           135.20           135.20           135.31           135.20           135.32           135.32           135.20           135.31           135.27	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.27\\ 3184.07\\ 3184.07\\ 3184.03\\ 3184.27\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.26\\ 3184.32\\ 3184.32\\ 3184.38\\ 3184.38\\ 3184.38\\ 3184.31\\ 3184.$	143.00         	2.00         	128-143         
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/10/02 05/20/03 11/24/03 05/11/04 05/11/04 05/11/04 05/11/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/11/09	135.68           135.65           135.90           135.34           135.51           135.55           135.31           135.52           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32           135.32	3183.90 3183.93 3183.68 3184.24 3184.28 3184.27 3184.03 3184.27 3183.86 3184.20 3184.20 3184.20 3184.20 3184.20 3184.38 3184.38 3184.27 3184.38 3184.27 3184.31 3184.33	143.00         	2.00         	128-143          -
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/37/0/02 10/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 11/15/04 05/17/05 11/15/06 05/29/07 11/14/07 05/14/08 11/03/08	135.68           135.65           135.90           135.34           135.51           135.51           135.55           135.31           135.32           135.52           135.20           135.20           135.20           135.31           135.20           135.32           135.32           135.20           135.31           135.27	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.27\\ 3184.07\\ 3184.07\\ 3184.03\\ 3184.27\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.26\\ 3184.32\\ 3184.32\\ 3184.38\\ 3184.38\\ 3184.38\\ 3184.31\\ 3184.$	143.00         	2.00         	128-143          -
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/02/09 05/05/10 05/05/10	135.68           135.65           135.90           135.34           135.51           135.55           135.55           135.31           135.52           135.26           135.20           135.32           135.32           135.32           135.32           135.32           135.31           135.27           135.27           135.23           135.25           135.33           135.33           135.18	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.28\\ 3184.27\\ 3184.07\\ 3184.03\\ 3184.27\\ 3184.03\\ 3184.27\\ 3184.20\\ 3184.20\\ 3184.26\\ 3184.26\\ 3184.32\\ 3184.38\\ 3184.26\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.25\\ 3184.40\\ \end{array}$	143.00         	2.00         	128-143 
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/20/03 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 05/05/10 05/11/11	135.68           135.65           135.90           135.34           135.30           135.51           135.55           135.55           135.31           135.52           135.32           135.26           135.26           135.27           135.28           135.29           135.20           135.20           135.21           135.25           135.25           135.25           135.33           135.18	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.07\\ 3184.03\\ 3184.27\\ 3183.86\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.36\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.41\\ \end{array}$	143.00         	2.00         	128-143 
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/22/02 05/20/03 11/24/03 05/11/04 05/11/04 05/17/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/02/09 05/05/10 05/05/10	135.68           135.65           135.90           135.34           135.51           135.55           135.55           135.31           135.52           135.26           135.20           135.32           135.32           135.32           135.32           135.32           135.31           135.27           135.27           135.23           135.25           135.33           135.33           135.18	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.28\\ 3184.27\\ 3184.07\\ 3184.03\\ 3184.27\\ 3184.03\\ 3184.27\\ 3184.20\\ 3184.20\\ 3184.26\\ 3184.26\\ 3184.32\\ 3184.38\\ 3184.26\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.25\\ 3184.40\\ \end{array}$	143.00         	2.00         	128-143 
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/20/03 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 05/11/11 11/08/11 05/16/12 10/10/12	135.68           135.65           135.90           135.34           135.30           135.51           135.55           135.55           135.55           135.55           135.55           135.51           135.55           135.31           135.52           135.26           135.26           135.27           135.26           135.27           135.25           135.25           135.25           135.25           135.33           135.18           135.18           135.51           135.51           135.51	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.07\\ 3184.03\\ 3184.27\\ 3183.86\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.41\\ 3184.41\\ 3184.40\\ 3184.425\\ \end{array}$	143.00 	2.00         	128-143 
	11/19/19 05/18/98 05/21/99 02/08/01 05/25/99 02/08/01 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 05/05/10 05/5/10 11/02/09 05/05/11/11 11/08/10 11/08/10 11/08/11 05/11/11 11/08/11 05/11/11 11/08/12 05/16/12 05/16/13	135.68           135.65           135.90           135.34           135.31           135.51           135.51           135.51           135.51           135.51           135.51           135.52           135.32           135.26           135.27           135.28           135.20           135.21           135.25           135.20           135.21           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.31           135.25           135.31           135.25           135.31           135.22           135.33           135.33           135.20	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.27\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.02\\ 3184.26\\ 3184.26\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.27\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.33\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.425\\ 3184.38\\ \end{array}$	143.00 	2.00         	128-143
	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/20/03 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/09 11/02/09 05/05/10 05/11/11 11/08/10 05/11/11 11/08/10 05/16/12 05/16/13 10/07/13 05/07/13 05/07/13	135.68           135.65           135.90           135.34           135.30           135.51           135.55           135.55           135.55           135.55           135.55           135.51           135.55           135.31           135.52           135.26           135.26           135.27           135.26           135.27           135.25           135.25           135.25           135.25           135.33           135.18           135.18           135.51           135.51           135.51	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.07\\ 3184.03\\ 3184.27\\ 3183.86\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.20\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.41\\ 3184.41\\ 3184.40\\ 3184.425\\ \end{array}$	143.00         	2.00         	128-143
	11/19/19 05/18/98 05/21/99 02/08/01 05/25/99 02/08/01 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/9/09 11/02/09 05/05/10 05/05/10 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14	135.68           135.65           135.90           135.34           135.30           135.51           135.51           135.51           135.51           135.51           135.51           135.52           135.32           135.26           135.27           135.20           135.21           135.22           135.20           135.21           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.26           135.27           135.28           135.20           135.33           135.20           135.20           135.20           135.20           135.20           135.20           135.20           135.20           135.20           13	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.27\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.02\\ 3184.26\\ 3184.20\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.33\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.425\\ 3184.32\\ 3184.35\\ 3184$	143.00	2.00         	128-143          -
	11/19/19 05/18/98 05/25/99 02/08/01 05/10/02 05/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 11/13/08 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/12 05/16/12 05/16/13 05/01/14 005/14 10/07/13 05/01/14 00/05/14 10/05/14	135.68           135.65           135.90           135.34           135.51           135.51           135.51           135.55           135.31           135.55           135.32           135.52           135.52           135.26           135.27           135.28           135.20           135.21           135.22           135.21           135.22           135.25           135.25           135.25           135.25           135.27           135.28           135.29           135.21           135.22           135.33           135.20           135.17           135.20           135.20           135.20           135.20           135.20           135.01           135.05           135.01	3183.90 3183.93 3183.68 3184.24 3184.24 3184.27 3184.03 3184.27 3184.03 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.32 3184.33 3184.33 3184.25 3184.40 3184.41 3184.36 3184.425 3184.32 3184.32 3184.32 3184.32 3184.53 3184.53 3184.47	143.00	2.00         	128-143
	11/19/19 05/18/98 05/21/99 02/08/01 05/25/99 02/08/01 10/22/02 05/20/03 11/24/03 05/11/04 11/15/04 05/17/05 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/9/09 11/02/09 05/05/10 05/05/10 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14	135.68           135.65           135.90           135.34           135.30           135.51           135.51           135.51           135.51           135.51           135.51           135.52           135.32           135.26           135.27           135.20           135.21           135.22           135.20           135.21           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.25           135.26           135.27           135.28           135.20           135.33           135.20           135.20           135.20           135.20           135.20           135.20           135.20           135.20           135.20           13	$\begin{array}{r} 3183.90\\ 3183.93\\ 3183.68\\ 3184.24\\ 3184.24\\ 3184.24\\ 3184.27\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.07\\ 3184.02\\ 3184.26\\ 3184.20\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.32\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.33\\ 3184.41\\ 3184.33\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.41\\ 3184.40\\ 3184.425\\ 3184.32\\ 3184.35\\ 3184$	143.00	2.00         	128-143
	11/19/19 05/18/98 05/21/99 02/08/01 05/12/99 02/08/01 05/21/02 05/20/03 11/24/03 05/11/04 11/15/05 05/07/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/10 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/16/12 10/07/13 05/01/14 05/21/15 10/07/15	135.68           135.65           135.90           135.34           135.30           135.51           135.51           135.55           135.31           135.52           135.32           135.26           135.27           135.26           135.27           135.26           135.27           135.28           135.27           135.28           135.29           135.21           135.25           135.31           135.25           135.31           135.25           135.31           135.25           135.33           135.18           135.20           135.21           135.20           135.20           135.01           135.20           135.05           135.05           135.11           135.27           135.00	3183.90 3183.93 3183.68 3184.24 3184.24 3184.27 3184.03 3184.27 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32 3184.33 3184.33 3184.33 3184.40 3184.50 3184.40 3184.50 3184.40 3184.50 3184.40 3184.50 318		2.00         	128-143
3319.58	11/19/19 05/18/98 05/21/99 05/25/99 02/08/01 05/25/99 02/08/01 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/08/06 11/15/05 05/08/06 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 11/03/08 05/19/07 11/04/07 05/11/11 11/08/10 05/16/12 10/10/12 05/01/14 10/05/	135.68           135.65           135.90           135.34           135.51           135.51           135.51           135.55           135.51           135.55           135.51           135.52           135.38           135.26           135.26           135.27           135.26           135.27           135.26           135.27           135.25           135.25           135.25           135.25           135.26           135.27           135.28           135.29           135.20           135.21           135.22           135.23           135.21           135.23           135.20           135.21           135.26           135.21           135.26           135.01           135.26           135.27           135.00           135.01           135.01	3183.90 3183.93 3183.68 3184.24 3184.24 3184.24 3184.27 3184.07 3184.07 3184.07 3184.07 3184.07 3184.07 3184.07 3184.07 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32 3184.33 3184.33 3184.33 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.57 3184.58 3184.57 3184.58 3184.58 3184.58 3184.58 3184.58 318	143.00	2.00         	128-143
	11/19/19 05/18/98 05/21/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03 05/11/04 11/15/05 05/07/05 11/15/05 05/08/06 11/13/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/10 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/16/12 10/07/13 05/01/14 05/21/15 10/07/13 05/21/15 05/25/16 10/17/16	135.68           135.65           135.90           135.34           135.30           135.51           135.51           135.55           135.31           135.52           135.32           135.26           135.27           135.26           135.27           135.26           135.27           135.28           135.27           135.28           135.29           135.21           135.25           135.31           135.25           135.31           135.25           135.31           135.25           135.33           135.18           135.20           135.21           135.20           135.20           135.01           135.20           135.05           135.05           135.11           135.27           135.00	3183.90 3183.93 3183.68 3184.24 3184.24 3184.27 3184.03 3184.27 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.20 3184.32 3184.32 3184.33 3184.33 3184.33 3184.40 3184.50 3184.40 3184.50 3184.40 3184.50 3184.40 3184.50 318		2.00         	128-143
3319.58	11/19/19 05/18/98 05/21/99 02/08/01 05/25/99 02/08/01 05/21/99 02/08/01 05/21/02 05/20/03 11/24/03 05/11/04 05/11/04 05/11/04 05/11/04 05/11/04 05/08/06 11/13/06 05/29/07 11/14/07 05/08/06 11/03/08 05/19/09 11/02/09 05/05/10 05/14/108 10/07/13 05/01/14 10/05/15 10/05/15 10/05/15 10/05/15 10/05/15 10/05/15 10/05	135.68           135.65           135.90           135.34           135.30           135.51           135.51           135.55           135.51           135.55           135.51           135.52           135.38           135.26           135.26           135.27           135.28           135.29           135.20           135.21           135.25           135.25           135.25           135.26           135.27           135.28           135.29           135.21           135.25           135.26           135.27           135.26           135.27           135.26           135.27           135.27           135.20           135.21           135.20           135.21           135.20           135.21           135.21           135.21           135.21	3183.90 3183.93 3183.68 3184.24 3184.24 3184.27 3184.07 3184.07 3184.07 3184.07 3184.07 3184.07 3184.08 3184.07 3184.06 3184.20 3184.20 3184.30 3184.32 3184.32 3184.33 3184.33 3184.33 3184.33 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.40 3184.57 3184.57 3184.57 3184.57 3184.57 3186.51 3186.45 3186.31			128-143
3319.58	11/19/19 05/18/98 05/21/99 02/08/01 05/12/99 02/08/01 05/21/02 05/20/03 11/24/03 05/11/04 11/15/05 05/07/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/14/08 05/19/09 11/02/09 05/05/10 11/08/10 05/14/08 05/19/09 11/02/09 05/05/10 11/08/11 05/14/08 05/19/09 11/02/09 11/02/09 05/05/10 11/08/11 05/16/12 10/07/13 05/01/14 05/21/15 10/07/13 05/21/15 10/07/13 05/21/15 10/17/16 05/22/18	135.68           135.65           135.90           135.34           135.34           135.51           135.51           135.51           135.51           135.51           135.52           135.32           135.26           135.27           135.26           135.27           135.26           135.27           135.26           135.27           135.26           135.27           135.28           135.29           135.21           135.22           135.25           135.31           135.25           135.31           135.25           135.31           135.25           135.33           135.20           135.01           135.20           135.21           135.20           135.27           135.00           135.27           135.00           135.27           135.00           135.22           134.97	3183.90 3183.93 3183.68 3184.24 3184.24 3184.24 3184.27 3184.03 3184.27 3184.20 3184.26 3184.26 3184.32 3184.32 3184.38 3184.27 3184.38 3184.27 3184.33 3184.25 3184.40 3184.40 3184.41 3184.35 3184.57 3184.31 3184.57 3184.31 3184.57 318		2.00         	128-143

\\TX65FP01\Data\ENV\ChevronTexaco TX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR\Cooper Jal/2019 GWM Report\2019 Report\Cumulative Tables\_appendix C and E\_reformatted\_02.6.20



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-5	05/18/98	137.42	3183.68	171.00	2.00	161-171
3321.10	05/25/99	137.28	3183.82			
	02/08/01	137.18 137.10	3183.92			
	05/10/02 10/22/02	137.04	3184.00 3184.06			
	05/20/03	137.45	3183.65			
	11/24/03	137.01	3184.09			
	05/11/04 11/15/04	137.01 137.08	3184.09 3184.02			
	05/17/05	137.00	3184.10			
	11/15/05 05/08/06	137.18 136.90	3183.92 3184.20			
	11/13/06	136.81	3184.29			
	05/29/07	136.92	3184.18			
	11/14/07	136.85	3184.25			
	05/14/08 11/03/08	136.97 136.89	3184.13 3184.21			
	05/19/09	136.90	3184.20			
	11/02/09	136.90	3184.20			
	05/05/10 11/08/10	137.02 136.93	3184.08 3184.17			
	05/11/11	136.92	3184.18			
	11/08/11	136.84	3184.26			
	05/16/12 10/10/12	136.80 136.98	3184.30 3184.12			
	05/16/13	136.80	3184.30			
	10/07/13 05/01/14	136.79	3184.31 3184.27			
	10/05/14	136.83 136.63	3184.47			
	05/21/15	130.60	3190.50			
	10/19/15	136.70	3184.40			
	05/25/16 10/17/16	136.79 136.51	3184.31 3184.59			
	05/10/17	136.53	3184.57			
3322.98	10/25/17	136.80	3186.18			
	05/22/18 10/16/18	136.51 136.58	3186.47 3186.40			
	06/20/19	136.65	3186.33	173.72		
	11/19/19	136.91	3186.07	177.50		
MW-5A 3321.07	05/18/98	137.20	3183.87	141.00	2.00	126-141
3321.07	05/25/99 02/08/01	137.11 136.99	3183.96 3184.08			
	05/10/02	136.90	3184.17			
	10/22/02	137.17	3183.90			
	05/20/03 11/24/03	137.24 136.91	3183.83 3184.16			
	05/11/04	136.88	3184.19			
	11/15/04	136.92	3184.15			
	05/17/05 11/15/05	136.83 137.06	3184.24 3184.01			
	05/08/06	136.80	3184.27			
	11/13/06	136.74	3184.33			
	05/29/07	136.82 136.88	3184.25 3184.19			
	05/14/08	136.83	3184.24			
	11/03/08	136.81	3184.26			
	05/19/09 11/02/09	136.78 136.80	3184.29 3184.27			
	05/05/10	136.91	3184.16			
	11/08/10	136.69	3184.38			
	05/11/11 11/08/11	136.87 136.77	3184.20 3184.30			
	05/16/12	136.74	3184.33			
	10/10/12	136.85	3184.22			
		136.72	3184.35			
	05/16/13 10/07/13	137.45	3103.02			1
	10/07/13 05/01/14	136.81	3183.62 3184.26			
	10/07/13 05/01/14 10/05/14	136.81 136.61	3184.26 3184.46			
	10/07/13 05/01/14 10/05/14 05/21/15	136.81 136.61 136.68	3184.26 3184.46 3184.39			  
	10/07/13 05/01/14 10/05/14	136.81 136.61	3184.26 3184.46			
	10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16	136.81 136.61 136.68 136.55 136.84 136.43	3184.26 3184.46 3184.39 3184.52 3184.23 3184.64			
3321 07	10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17	136.81 136.61 136.68 136.55 136.84 136.43 136.43	3184.26 3184.46 3184.39 3184.52 3184.23 3184.64 3184.41	  		  
3321.07	10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17 05/22/18	136.81 136.61 136.68 136.55 136.84 136.43	3184.26 3184.46 3184.39 3184.52 3184.23 3184.23 3184.41 3184.41 3184.27 3184.52	  		  
3321.07	10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17 05/22/18 10/16/18	136.81 136.61 136.68 136.55 136.84 136.43 136.66 136.80 136.55 136.64	3184.26 3184.46 3184.39 3184.52 3184.52 3184.64 3184.41 3184.41 3184.52 3184.52 3184.43	        		    
3321.07	10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 10/17/16 05/10/17 10/25/17 05/22/18	136.81 136.61 136.68 136.55 136.84 136.43 136.66 136.80 136.55	3184.26 3184.46 3184.39 3184.52 3184.23 3184.23 3184.41 3184.41 3184.27 3184.52	     		    

<sup>\\</sup>TX05FP01\Data\ENV\ChevronTexacoTX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2010 Report\2019 R



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-6	05/18/98	136.73	3184.42	170.00	2.00	120-170
3321.15	05/25/99	136.61	3184.54			
	02/08/01	136.50	3184.65			
	05/10/02	136.40 136.57	3184.75 3184.58			
	10/22/02 05/20/03	136.85	3184.30			
	11/24/03	136.38	3184.77			
	05/11/04	136.41	3184.74			
	11/15/04 05/17/05	136.08 136.58	3185.07 3184.57			
	11/15/05	136.82	3184.33			
	05/08/06	136.58	3184.57			
	11/13/06	136.49	3184.66			
	05/29/07 11/15/07	136.61 136.59	3184.54 3184.56			
	05/14/08	136.58	3184.57			
	11/03/08	136.52	3184.63			
	05/19/09	136.52	3184.63			
	11/02/09 05/05/10	136.51 136.53	3184.64 3184.62			
	11/08/10	136.40	3184.75			
	05/11/11			Casing Damaged		
	11/08/11			Casing Damaged		
	05/16/12 10/10/12			Casing Damaged Casing Damaged		
	09/30/13			gged and Abando		
MW-6R	10/07/13	136.17	3185.33	176.00	4.00	136-176
3321.50	05/01/14	136.25	3185.25			
	10/05/14 05/21/15	136.40 136.13	3185.10 3185.37			
	10/19/15	136.20	3185.30			
	05/25/16	136.27	3185.23			
	10/17/16	135.96	3185.54			
3323.04	05/10/17 10/25/17	136.07 136.20	3185.43 3186.84			
5525.04	05/22/18	136.03	3187.01			
	10/17/18	136.09	3186.95			
	06/20/19					
	11/19/19	136.04	3187.00	187.37		
MW-7 3318.39	05/18/98 05/25/99	136.19 135.98	3182.20 3182.41	166.00	2.00	151-166
3310.39	02/08/01	135.87	3182.52			
	05/10/02	135.67	3182.72			
	10/22/02	135.89	3182.50			
	05/20/03 11/24/03	136.12 135.71	3182.27 3182.68			
	05/11/04	135.74	3182.65			
	11/15/04	135.78	3182.61			
	05/17/05	135.68	3182.71			
	11/15/05 05/08/06	135.90 135.64	3182.49 3182.75			
	11/13/06	135.58	3182.75			
	05/29/07	135.73	3182.66			
	11/15/07	135.64	3182.75			
	05/14/08 11/03/08	135.68 135.66	3182.71 3182.73			
	05/19/09	135.63	3182.76			
			3182.74			
	11/02/09	135.65				
	05/05/10	135.80	3182.59			
	05/05/10 11/08/10	135.80 135.51	3182.59 3182.88			
	05/05/10	135.80	3182.59			  
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12	135.80 135.51 135.68 135.62 135.55	3182.59 3182.88 3182.71 3182.77 3182.84			
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12	135.80 135.51 135.68 135.62 135.55 135.79	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60	  		  
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13	135.80 135.51 135.68 135.62 135.55 135.79 135.59	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80			
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12	135.80 135.51 135.68 135.62 135.55 135.79	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60	  		  
	05/05/10 11/08/10 05/11/11 11/08/11 105/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14	135.80 135.51 135.68 135.62 135.55 135.79 135.59 NS 135.65 135.65 135.58	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.74			  
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 05/01/13 05/01/14 10/05/14 05/21/15	135.80 135.51 135.68 135.62 135.55 135.59 135.59 NS 135.65 135.58 135.58	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.81 3182.81			
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 10/19/15	135.80 135.51 135.68 135.62 135.55 135.59 NS 135.59 NS 135.65 135.58 135.52 135.52	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.81 3182.87 3182.87 3182.85			
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 05/01/13 05/01/14 10/05/14 05/21/15	135.80 135.51 135.68 135.62 135.55 135.59 135.59 NS 135.65 135.58 135.58	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.81 3182.81			
	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 10/19/15 05/25/16 05/25/16 05/17/16	135.80 135.51 135.68 135.62 135.55 135.59 NS 135.59 NS 135.65 135.58 135.52 135.52 135.54 135.52 135.54 135.35 135.35	3182.59 3182.88 3182.71 3182.77 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.87 3182.87 3182.87 3182.85 3182.85			
3320.19	05/05/10 11/08/10 05/11/11 11/08/11 11/08/11 10/07/13 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16 10/17/16 05/25/16 10/17/16	135.80 135.51 135.68 135.62 135.55 135.79 135.65 135.65 135.58 135.56 135.54 135.54 135.54 135.54 135.33 135.39	3182.59 3182.88 3182.71 3182.77 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.87 3182.87 3182.87 3182.87 3182.85 3182.64 3183.04 3183.00 3184.81			
3320.19	05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 05/21/15 05/25/16 10/17/16 05/25/16	135.80 135.51 135.68 135.62 135.55 135.79 135.65 135.59 NS 135.65 135.58 135.58 135.54 135.54 135.75 135.35 135.39 135.38	3182.59 3182.88 3182.71 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.81 3182.81 3182.81 3182.85 3182.64 3183.00 3183.00 3184.81 3184.80			
3320.19	05/05/10 11/08/10 05/11/11 11/08/11 11/08/11 10/07/13 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 05/22/16 10/17/16 05/25/16 10/17/16	135.80 135.51 135.68 135.62 135.55 135.79 135.65 135.65 135.58 135.56 135.54 135.54 135.54 135.54 135.33 135.39	3182.59 3182.88 3182.71 3182.77 3182.77 3182.84 3182.60 3182.80 NS 3182.74 3182.87 3182.87 3182.87 3182.87 3182.85 3182.64 3183.04 3183.00 3184.81			

<sup>\\</sup>TX05FP01\Data\ENVIChevronTexaco TX8IHES Transfer\04 Field Investigations\2019\6 - Annual GWMRCcoper Jal/2019 GWM Report\2019 Report\2unvalative Tables\_appendix C and E\_reformatted\_02.6.20

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Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-8	05/18/98	134.36	3182.78	170.00	2.00	155-170
3317.14	05/25/99	134.21	3182.93			
	02/08/01	134.08	3183.06			
	05/10/02 10/22/02	133.95 134.18	3183.19 3182.96			
	05/20/03	134.38	3182.76			
	11/24/03	133.99	3183.15			
	05/11/04 11/15/04	134.02 134.11	3183.12 3183.03			
	05/17/05	133.97	3183.17			
	11/15/05	134.21	3182.93			
	05/08/06 11/13/06	133.94 133.90	3183.20 3183.24			
	05/29/07	134.02	3183.12			
	11/15/07	133.76	3183.38			
	05/15/08 11/03/08	133.98 134.01	3183.16 3183.13			
	05/19/09	133.97	3183.17			
	11/02/09	134.00	3183.14			
	05/05/10 11/08/10	134.08 134.03	3183.06 3183.11			
	05/11/11	133.98	3183.16			
	11/08/11	133.96	3183.18			
	05/16/12 10/10/12	133.84 134.15	3183.30 3182.99			
	05/16/13	133.94	3183.20			
	10/07/13	133.90	3183.24			
	05/01/14 10/05/14	133.91 133.75	3183.23 3183.39			
	05/21/15	133.88	3183.26			
	10/19/15	133.88	3183.26			
	05/25/16	133.86	3183.28			
	10/17/16 05/10/17	133.68 133.84	3183.46 3183.30			
3319.06	10/24/17	133.72	3185.34			
	05/22/18 10/17/18	133.77 133.87	3185.29 3185.19			
	06/20/19	133.87	3185.19	146.85		
	11/20/19	133.84	3185.22	146.92		
MW-9	05/18/98	132.89	3179.90	164.00	2.00	149-164
3312.79	05/25/99 02/08/01	132.68 132.52	3180.11 3180.27			
	05/10/02	137.20	3175.59			
	10/22/02	132.56	3180.23			
	05/20/03 11/24/03	132.75 132.35	3180.04 3180.44			
	05/11/04	132.39	3180.44			
	11/15/04	132.43	3180.36			
	05/17/05	132.43 132.26	3180.36 3180.53			
	05/17/05 11/15/05	132.43 132.26 132.60	3180.36 3180.53 3180.19		  	   
	05/17/05 11/15/05 05/08/06 11/13/06	132.43 132.26 132.60 132.26 132.19	3180.36 3180.53 3180.19 3180.53 3180.60		   	
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07	132.43 132.26 132.60 132.26 132.19 132.32	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47			
	05/17/05 11/15/05 05/08/06 11/13/06	132.43 132.26 132.60 132.26 132.19	3180.36 3180.53 3180.19 3180.53 3180.60		   	
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08	132.43 132.26 132.60 132.26 132.19 132.32 132.34 132.29 132.33	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.50 3180.46		   	
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09	132.43 132.26 132.60 132.26 132.19 132.32 132.34 132.29 132.33 132.21 132.21	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.50 3180.46 3180.50 3180.46			  
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09	132.43 132.26 132.60 132.26 132.19 132.32 132.34 132.29 132.33	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.45 3180.46 3180.58 3180.58			  
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10	132.43 132.26 132.26 132.20 132.29 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10	$\begin{array}{c} 3180.36\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.58\\ 3180.58\\ 3180.58\\ 3180.38\\ 3180.69\\ \end{array}$			      
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 05/05/10 11/02/09 05/05/10 11/02/11/11	132.43 132.26 132.26 132.20 132.29 132.32 132.34 132.29 132.33 132.21 132.35 132.21 132.35 132.41 132.10 132.22	3180.36 3180.53 3180.19 3180.53 3180.47 3180.47 3180.45 3180.45 3180.58 3180.44 3180.58 3180.44 3180.58 3180.69 3180.69			      
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 05/05/10 11/02/09 05/05/10 11/08/10	132.43 132.26 132.26 132.26 132.19 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.19	$\begin{array}{r} 3180.36\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.45\\ 3180.46\\ 3180.58\\ 3180.44\\ 3180.38\\ 3180.69\\ 3180.57\\ 3180.60\\ \end{array}$			      
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/11/11 11/08/11 05/11/11 11/08/11 05/16/12 10/10/12	132.43 132.26 132.26 132.20 132.32 132.32 132.34 132.29 132.33 132.21 132.35 132.21 132.35 132.41 132.10 132.22 132.20 132.20 132.05 132.32	$\begin{array}{r} 3180.36\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.47\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.50\\ 3180.46\\ 3180.58\\ 3180.58\\ 3180.44\\ 3180.38\\ 3180.69\\ 3180.57\\ 3180.69\\ 3180.77\\ 3180.61\\ 3180.74\\ 3180.47\\ \end{array}$			      
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/11/11 11/08/11 05/16/12 05/16/13	132.43 132.26 132.26 132.26 132.19 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.41 132.10 132.22 132.19 132.05 132.32 132.08	$\begin{array}{r} 3180.36\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.40\\ 3180.47\\ 3180.45\\ 3180.45\\ 3180.46\\ 3180.46\\ 3180.58\\ 3180.44\\ 3180.58\\ 3180.44\\ 3180.57\\ 3180.57\\ 3180.69\\ 3180.57\\ 3180.69\\ 3180.74\\ 3180.71\\ \end{array}$			
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/11 11/08/11 11/08/11 11/08/11 05/16/12 10/10/12	132.43 132.26 132.26 132.20 132.32 132.32 132.34 132.29 132.33 132.21 132.35 132.21 132.35 132.41 132.10 132.22 132.20 132.20 132.05 132.32	$\begin{array}{r} 3180.36\\ 3180.53\\ 3180.19\\ 3180.53\\ 3180.60\\ 3180.47\\ 3180.47\\ 3180.45\\ 3180.50\\ 3180.46\\ 3180.50\\ 3180.46\\ 3180.58\\ 3180.48\\ 3180.60\\ 3180.60\\ 3180.67\\ 3180.67\\ 3180.67\\ 3180.74\\ 3180.71\\ 3180.85\\ \end{array}$			
	05/17/05 11/15/05 05/08/06 05/29/07 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/11/11 11/08/11 11/08/11 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14	132.43           132.26           132.60           132.36           132.32           132.33           132.34           132.35           132.31           132.32           132.33           132.31           132.32           132.33           132.21           132.22           132.21           132.22           132.22           132.23           132.05           132.32           132.05           132.32           132.08           131.94	3180.36 3180.53 3180.19 3180.53 3180.40 3180.47 3180.45 3180.45 3180.46 3180.58 3180.44 3180.58 3180.44 3180.58 3180.57 3180.69 3180.71 3180.47 3180.47 3180.47 3180.47 3180.85 Not Measu 3180.84			
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14	132.43 132.26 132.26 132.20 132.29 132.32 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.05 132.32 132.08 131.94	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.47 3180.45 3180.46 3180.50 3180.46 3180.58 3180.44 3180.38 3180.60 3180.74 3180.61 3180.74	        	        	
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 05/05/10 05/10/11 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 10/05/14 10/05/14 10/19/15	132.43 132.26 132.26 132.20 132.32 132.34 132.34 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.05 132.05 132.05 132.05 132.01	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.45 3180.46 3180.58 3180.46 3180.58 3180.44 3180.58 3180.69 3180.57 3180.69 3180.74 3180.71 3180.85 Not Measu 3180.84 3180.74 3180.74			
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14	132.43 132.26 132.26 132.20 132.29 132.32 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.05 132.32 132.08 131.94	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.47 3180.45 3180.46 3180.50 3180.46 3180.58 3180.44 3180.38 3180.60 3180.74 3180.61 3180.74	        	        	
	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/13 10/07/13 05/01/14 10/05/14 10/19/15 05/25/16 10/17/16 05/10/17	132.43 132.26 132.26 132.20 132.29 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.10 132.22 132.05 132.08 131.94 131.95	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.45 3180.45 3180.46 3180.58 3180.46 3180.58 3180.69 3180.57 3180.69 3180.74 3180.74 3180.71 3180.85 Not Measu 3180.84 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.84 3180.84 3180.84		        	
3314.68	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/16/13 10/07/13 10/07/13 10/07/13 10/05/14 05/21/14 05/25/16 10/17/16 05/25/16	132.43           132.26           132.60           132.36           132.32           132.32           132.33           132.21           132.33           132.21           132.35           132.21           132.32           132.31           132.22           132.32           132.32           132.05           132.05           132.05           131.94           131.95           132.01           131.95           131.95           131.95           131.95           131.95           131.95	3180.36 3180.53 3180.19 3180.53 3180.40 3180.47 3180.45 3180.45 3180.45 3180.46 3180.58 3180.44 3180.58 3180.46 3180.58 3180.69 3180.57 3180.60 3180.74 3180.47 3180.47 3180.47 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.85	        	        	
3314.68	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/13 10/07/13 05/01/14 10/05/14 10/19/15 05/25/16 10/17/16 05/10/17	132.43 132.26 132.26 132.20 132.29 132.32 132.34 132.29 132.33 132.21 132.35 132.41 132.10 132.22 132.10 132.22 132.05 132.08 131.94 131.95	3180.36 3180.53 3180.19 3180.53 3180.60 3180.47 3180.45 3180.45 3180.45 3180.46 3180.58 3180.46 3180.58 3180.69 3180.57 3180.69 3180.74 3180.74 3180.71 3180.85 Not Measu 3180.84 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.74 3180.84 3180.84 3180.84		        	
3314.68	05/17/05 11/15/05 05/08/06 11/13/06 05/29/07 11/14/07 05/15/08 11/03/08 05/19/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/05/10 11/02/09 05/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 10/17/16 05/22/18	132.43           132.26           132.26           132.30           132.32           132.33           132.34           132.35           132.35           132.31           132.32           132.33           132.21           132.35           132.41           132.22           132.19           132.22           132.35           132.05           132.05           132.05           132.05           132.05           132.01           131.95           131.95           131.91           131.92           131.92           131.90	3180.36 3180.53 3180.19 3180.53 3180.40 3180.47 3180.45 3180.45 3180.46 3180.58 3180.44 3180.58 3180.44 3180.58 3180.47 3180.57 3180.60 3180.74 3180.74 3180.47 3180.85 Not Measu 3180.74 3180.84 3180			

#### \\TX05FP01\Data\ENV\ChevronTexacoTX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2010 Report\2019 R

ARCADIS Design & Consultancy for natural and built assets



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
тос	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-9A	05/18/98	132.65	3179.91	142.00	2.00	127-142
3312.56	05/25/99	132.43	3180.13			
	02/08/01 05/10/02	132.37 137.20	3180.19 3175.36			
	10/22/02	137.20	3180.21			
	05/20/03	132.55	3180.01			
	11/24/03	132.10	3180.46			
	05/11/04 11/15/04	132.14 132.19	3180.42 3180.37			
	05/17/05	132.06	3180.50			
	11/15/05 05/08/06	132.35 132.02	3180.21 3180.54			
	11/13/06	131.09	3181.47			
	05/29/07	132.08	3180.48			
	11/14/07 05/15/08	132.06 132.03	3180.50 3180.53			
	11/03/08	131.98	3180.58			
	05/19/09	132.00	3180.56			
	11/02/09	131.90	3180.66			
	05/05/10 11/08/10	131.96 131.85	3180.60 3180.71			
	05/11/11	132.06	3180.50			
	11/08/11	131.95	3180.61			
	05/16/12 10/10/12	131.81 132.09	3180.75 3180.47			
	05/16/13	131.88	3180.68			
	10/07/13	131.90	3180.66			
	05/01/14 10/05/14			red - Obstruction I red - Obstruction I		
	05/21/15			red - Obstruction I		
	10/19/15	131.68	3180.88			
	05/25/16 10/17/16	131.73 131.62	3180.83 3180.94			
	05/10/17	131.68	3180.88			
3314.48	10/24/17	131.60	3182.88			
	05/22/18 10/17/18	131.81 131.72	3182.67 3182.76			
	06/20/19	131.69	3182.79	141.72		
	11/20/19	131.63	3182.85	145.66		
	11120/10					
MW-10	05/18/98	137.18	3182.12	166.00	2.00	151-166
MW-10 3319.30	05/18/98 05/25/99	137.04	3182.26			
	05/18/98 05/25/99 02/08/01	137.04 136.88	3182.26 3182.42	166.00  	2.00  	151-166  
	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02	137.04 136.88 136.80 136.91	3182.26 3182.42 3182.50 3182.39	  		  
	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	137.04 136.88 136.80 136.91 137.13	3182.26 3182.42 3182.50 3182.39 3182.17			
	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03 11/24/03	137.04 136.88 136.80 136.91 137.13 136.71	3182.26 3182.42 3182.50 3182.39 3182.17 3182.59	  		  
	05/18/98 05/25/99 02/08/01 05/10/02 10/22/02 05/20/03	137.04 136.88 136.80 136.91 137.13 136.71 136.77 136.82	3182.26 3182.42 3182.50 3182.39 3182.17	    		    
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\\TX05FP01\Data\ENV\ChevronTexacoTX8\HES Transfer\04 Field Investigations\20196 - Annual GWMR(Cooper Ja\2019 GWM Report\2019 Report\2010 Report\2019 R



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-11	03/23/99	131.12	3178.57	140.00	4.00	125-140
3309.69	05/25/99	130.91	3178.78		4.00	
	02/08/01	130.11	3179.58			
	05/10/02 10/22/02	135.60 130.76	3174.09 3178.93			
	05/20/03	131.03	3178.66			
	11/24/03	130.57	3179.12			
	05/11/04	130.61	3179.08			
	11/15/04 05/17/05	130.65 131.56	3179.04 3178.13			
	11/15/05	130.70	3178.99			
	05/08/06	130.41	3179.28			
	11/13/06 05/29/07	130.42 130.52	3179.27 3179.17			
	11/14/07	130.32	3179.27			
	05/15/08	130.46	3179.23			
	11/03/08	130.41	3179.28			
	05/19/09 11/02/09	130.40 130.40	3179.29 3179.29			
	05/05/10	130.43	3179.26			
	11/08/10	130.28	3179.41			
	05/11/11	130.40	3179.29			
	11/08/11 05/16/12	130.37 130.23	3179.32 3179.46			
	10/10/12	130.49	3179.20			
	05/16/13	130.27	3179.42			
	10/07/13 05/01/14	130.12 130.21	3179.57 3179.48			
	10/05/14	130.16	3179.53			
	05/21/15	130.17	3179.52			
	10/19/15	130.20	3179.49			
	05/25/16 10/17/16	130.17 130.02	3179.52 3179.67			
	05/10/17	130.02	3179.60			
3311.56	10/24/17	130.14	3181.42			
	05/22/18	130.07	3181.49			
	10/17/18 06/20/19	130.09 130.13	3181.47 3181.43	165.71		
	11/20/19	130.04	3181.52	172.30		
MW-12*	05/10/02	139.57	3188.86	171.65	4.00	157-172
3328.43	10/22/02	139.73	3188.70			
	05/20/03 11/24/03	139.72 139.69	3188.71 3188.74			
	05/11/04	139.64	3188.79			
	11/15/04	139.68	3188.75			
	05/17/05	139.58	3188.85			
	11/15/05 05/08/06	139.83 139.55	3188.60 3188.88			
	11/13/06	139.53	3188.90			
	05/29/07	139.65	3188.78			
	11/16/07	139.05	3189.38			
	05/14/08	130.60	3188 7/			
	05/14/08 11/03/08	139.69 139.61	3188.74 3188.82			
	05/14/08 11/03/08 05/19/09		3188.74 3188.82 3188.84			
	11/03/08 05/19/09 11/02/09	139.61 139.59 139.62	3188.82 3188.84 3188.81			
	11/03/08 05/19/09 11/02/09 05/05/10	139.61 139.59 139.62 139.66	3188.82 3188.84 3188.81 3188.77			
	11/03/08 05/19/09 11/02/09	139.61 139.59 139.62	3188.82 3188.84 3188.81 3188.77 3188.88			
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11	139.61 139.59 139.62 139.66 139.55 139.04 139.68	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75			
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.75 3188.78			  
	11/03/08 05/19/09 11/02/09 05/05/10 05/11/11 05/11/11 11/08/11 05/16/12 10/10/12	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65 139.95	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.75 3188.78 3188.48			  
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.75 3188.78	       		
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65 139.95 139.67 139.50 139.58	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.78 3188.78 3188.76 3188.93 3188.93 3188.85			
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14	139.61 139.59 139.62 139.65 139.04 139.65 139.04 139.65 139.95 139.95 139.67 139.56	3188.82 3188.84 3188.81 3188.87 3188.77 3188.88 3189.39 3188.75 3188.48 3188.48 3188.48 3188.48 3188.85 3188.85	       		
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65 139.95 139.95 139.67 139.57 139.56 139.56 139.56 139.56	3188.82 3188.84 3188.81 3188.87 3188.88 3189.39 3188.75 3188.75 3188.76 3188.76 3188.93 3188.85 3188.87 3188.87 3188.87			
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/07/14 05/07/14 05/07/14 05/02/1/5 05/22/16	139.61 139.59 139.62 139.65 139.04 139.65 139.04 139.65 139.95 139.95 139.67 139.56	3188.82 3188.84 3188.81 3188.87 3188.77 3188.88 3189.39 3188.75 3188.48 3188.48 3188.48 3188.48 3188.85 3188.85			
	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 05/21/15 10/19/15 05/25/16	139.61 139.59 139.62 139.62 139.65 139.04 139.68 139.65 139.67 139.67 139.50 139.56 139.56 139.56 139.56 139.56 139.65 139.65 139.65 139.45	3188.82 3188.84 3188.81 3188.87 3188.77 3188.78 3188.75 3188.75 3188.76 3188.76 3188.76 3188.93 3188.85 3188.87 3188.87 3188.78 3188.72 3188.72 3188.98			
3330 33	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 05/21/15 05/25/16 05/25/16 05/10/17/16	139.61 139.59 139.62 139.66 139.55 139.04 139.68 139.65 139.65 139.67 139.50 139.50 139.56 139.65 139.65 139.65 139.45 139.45 139.45	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.75 3188.75 3188.75 3188.76 3188.76 3188.93 3188.85 3188.87 3188.78 3188.72 3188.98 3188.98 3188.98			
3330.33	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 05/21/15 10/19/15 05/25/16	139.61 139.59 139.62 139.62 139.65 139.04 139.68 139.65 139.67 139.67 139.50 139.56 139.56 139.56 139.56 139.56 139.65 139.65 139.65 139.45	3188.82 3188.84 3188.81 3188.87 3188.77 3188.78 3188.75 3188.75 3188.76 3188.76 3188.76 3188.93 3188.85 3188.87 3188.87 3188.78 3188.72 3188.72 3188.98			
3330.33	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 10/10/12 05/16/13 10/07/13 05/01/14 10/05/14 10/05/14 10/05/14 05/21/15 05/25/16 05/10/17/16 05/10/17 10/24/17 05/22/18 10/17/18	139.61 139.59 139.62 139.62 139.65 139.04 139.68 139.65 139.95 139.67 139.50 139.56 139.65 139.65 139.45 139.45 139.45 139.45 139.45 139.68	3188.82 3188.84 3188.81 3188.77 3188.88 3189.39 3188.75 3188.75 3188.76 3188.76 3188.76 3188.93 3188.76 3188.93 3188.85 3188.78 3188.78 3188.78 3188.72 3188.98 3188.82 3190.61 3190.74 3190.65			
3330.33	11/03/08 05/19/09 11/02/09 05/05/10 11/08/10 05/11/11 11/08/11 05/16/12 05/16/12 05/16/13 10/07/13 05/01/14 05/21/15 10/19/15 05/25/16 10/17/16 05/22/18	139.61 139.59 139.62 139.62 139.65 139.04 139.68 139.65 139.95 139.67 139.50 139.56 139.56 139.56 139.56 139.65 139.65 139.71 139.71 139.71 139.72 139.59	3188.82 3188.84 3188.81 3188.87 3188.77 3188.78 3188.75 3188.75 3188.76 3188.76 3188.76 3188.93 3188.87 3188.87 3188.87 3188.87 3188.72 3188.72 3188.82 3188.72 3188.82 3190.61 3190.74			



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID		Depth to	Groundwater	Constructed	Casing	Well Screen
TOC	Collection	Groundwater	Elevation	Depth	Diameter	Interval
Elevation	Date	(ft below TOC)	(ft MSL)	(ft below TOC)	(in)	(ft bgs)
(ft MSL) MW-13*	05/10/02	144.45	3194.04	171.65	4.00	157-172
3338.49	10/22/02	144.49	3194.00			
	05/20/03	144.90	3193.59			
	11/24/03 05/11/04	144.37 144.47	3194.12 3194.02			
	11/15/04	144.56	3193.93			
	05/17/05	144.36	3194.13			
	11/15/05 05/08/06	144.60 144.29	3193.89 3194.20			
	11/13/06	144.38	3194.11			
	05/29/07	144.54 144.54	3193.95			
	11/16/07 05/14/08	144.45	3193.95 3194.04			
	11/03/08	144.36	3194.13			
	05/19/09 11/02/09	144.51 144.35	3193.98 3194.14			
	05/05/10	144.35	3194.14			
	11/08/10	144.40	3194.09			
	05/11/11 11/08/11	144.60 144.74	3193.89 3193.75			
	05/16/12	144.74	3193.79			
	10/10/12	144.82	3193.67			
	05/16/13 10/07/13	144.70 144.60	3193.79			
	05/01/14	144.60	3193.89 3193.96			
	10/05/14	144.70	3193.79			
	05/21/15 10/19/15	144.78 144.75	3193.71 3193.74			
	05/25/16	144.73	3193.62			
	10/17/16	144.54	3193.95			
	05/10/17 07/11/17	144.66	3193.83 Well Plu	 gged and Abando		
MW-14	10/07/13	134.60	3182.24	171.50	4.00	131-171
3316.84	05/01/14	134.51	3182.33			
	10/05/14 05/21/15	134.44 134.31	3182.40 3182.53			
	10/19/15	134.49	3182.35			
	05/25/16	134.42	3182.42			
	10/17/16 05/10/17	134.30 134.35	3182.54 3182.49			
3318.36	10/24/17	134.30	3184.06			
	05/22/18	134.32	3184.04			
	10/15/18 06/20/19	134.41 134.78	3183.95 3183.58	 178.74		
	11/20/19	130.48	3187.88	178.42		
RW-1	05/21/99	134.32	3184.18	175.00	5.00	130-174
3318.50	05/25/99	134.24	3184.26			
	02/08/01 05/10/02	134.15 134.00	3184.35 3184.50			
	10/22/02	134.17	3184.33			
	05/20/03	134.40	3184.10			
	11/24/03 05/11/04	134.02 134.01	3184.48 3184.49			
	11/15/04	134.06	3184.44			
	05/17/05	133.97	3184.53			
	11/15/05	134.20	3184.30			
	05/08/06 11/13/06	133.93 133.92	3184.57 3184.58			
	05/29/07	134.00	3184.50			
	11/15/07 05/14/08	133.88	3184.62			
	11/03/08	133.98 133.99	3184.52 3184.51			
	05/19/09	133.92	3184.58			
	11/02/09 05/05/10	134.00	3184.50			
	11/08/10	134.03 133.81	3184.47 3184.69			
	05/11/11	133.83	3184.67			
	11/08/11	133.88	3184.62			
	05/16/12 10/10/12	133.84 135.01	3184.66 3183.49			
	05/16/13	133.85	3184.65			
	10/07/13	133.68	3184.82			
	05/01/14 10/05/14	133.91 133.64	3184.59 3184.86			
	05/21/15	133.73	3184.77			
	10/19/15	133.73	3184.77			
	05/25/16	133.73	3184.77			
	10/17/16 05/10/17	133.80 133.67	3184.70 3184.83			
	10/25/17	133.80	3186.51			
3320.31		400.04	3186.70			
3320.31	05/22/18	133.61				
3320.31	05/22/18 10/16/18 06/20/19	133.61 133.76 133.64	3186.55 3186.67	 164.03		



Appendix E Cumulative Summary of Potentiometric Elevation Data Cooper-Jal Unit South Injection Station Lea County, New Mexico

Well ID TOC Elevation (ft MSL)	Collection Date	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft MSL)	Constructed Depth (ft below TOC)	Casing Diameter (in)	Well Screen Interval (ft bgs)
RW-2	02/08/01	135.58	3183.04	160.00	5.00	134-173
3318.62	05/10/02	135.55	3183.07			
	10/22/02	135.55	3183.07			
	05/20/03	135.58	3183.04			
	11/24/03	135.54	3183.08			
	05/11/04	135.48	3183.14			
	11/15/04	135.43	3183.19			
	05/17/05	135.46	3183.16			
	11/15/05	135.65	3182.97			
	05/08/06	135.42	3183.20			
	11/13/06	135.47	3183.15			
	05/29/07	135.54	3183.08			
	11/15/07	135.48	3183.14			
	05/14/08	135.48	3183.14			
	11/03/08	135.44	3183.18			
	05/19/09	135.44	3183.18			
	11/02/09	135.45	3183.17			
	05/05/10	135.47	3183.15			
	11/08/10	135.30	3183.32			
	05/11/11	135.55	3183.07			
	11/08/11	135.46	3183.16			
	05/16/12	135.40	3183.22			
	10/10/12	135.49	3183.13			
	05/16/13	135.33	3183.29			
	05/01/14	135.40	3183.22			
	10/05/14	135.29	3183.33			
	05/21/15	135.28	3183.34			
	10/19/15 05/25/16	135.32 135.21	3183.30 3183.41			
	10/17/16	135.21	3183.41			
	05/10/17	135.15	3183.47			
3320.42	10/25/17	135.14	3185.48			
3320.42	05/22/18	135.12	3185.30			
	10/15/18	135.21	3185.21			
	06/20/19	135.23	3185.19	156.50		
	11/19/19	135.08	3185.34	172.60		
						100.170
RW-2R	10/07/13	135.43	3183.19	173.00	6.00	133-173
3320.68	10/07/13	136.94	3183.74			
	05/01/14	137.05	3183.63			
	10/05/14	136.85	3183.83			
	05/21/15	136.85	3183.83			
	10/19/15	136.92	3183.76			
	05/25/16	136.89	3183.79			
	10/17/16	136.75	3183.93			
2220 60	05/10/17	136.77	3183.91			
3320.68	10/25/17 05/22/18	137.00 136.76	3183.68 3183.92			
	10/15/18	136.87	3183.92			
	06/20/19	136.87	3183.89	176.82		
	11/19/19	136.79	3183.89	176.82		
						400.470
RW-6R	10/07/13	135.43	3183.19	173.00	6.00	133-173

Notes:

otes: 1. TOC - Top of Casing 2. ft bgs - feet below ground surface 3. in - inches 4. NS - Not sampled

A - Indicates groundwater monitor well installed in shallow Uppermost Groundwater Bearing Unit.
 MSL - Mean Sea Level
 \* - Indicates groundwater monitor well installed off-Site and upgradient of plume.

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

Operator:	OGRID:
Arcadis U.S., Inc	329073
630 Plaza Drive	Action Number:
Highlands Ranch, CO 80129	4683
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
bbillings	None	9/13/2021

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Action 4683