Texas Registered Engineering Firm F-2393
Texas Board of Professional Geoscientist Firm 50036

1.

3.1. GROUNDWATER OBSERVATIONS

Depth to groundwater surface measurements were made at each monitoring well prior to

A total of three well-analyte combinations were found to have either increasing or decreasing trends. For these well-analyte pairs, a bootstra

Tables

Sampling Event	Sampling Event Dates		TOC Elevation Der-664.1(S)3t454 (feet btoc)	498.63 Water Level (msl)	TOC Elevation Depth to Water (feet btoc)	496.92 Water Level (msl)	TOC Elevation Depth to Water (feet btoc)	493.15 Water Level (msl)	TOC Elevation Depth to Water (feet btoc)	494.74 Water Level (msl)	TOC Elevation 2c-.De)1Wa4.2)T	496.40 564.29)]Te4.2pl7-66sDepth t
12/6/16 to 12/8/16	8.81	489.82	10.76	486.16	7.53	485.62	7.70	487.04	10.19	486.21		
2/21/17 to 2/23/17	8.56	43 T72]T19.877421.9481444(486.16)-5017.17(7.53)-5097.74(485.7)T32.0587 to 2(6.58)-509.7069 Tc0 Tw[4887.04)-48555.920.19)-4823.54(486.21)]T-57.803 -1.5161 TD Tc(2)T5.8729 .0806 TD-3/282.6003/30w[2/21/17 t										

			12/6/16 to 12/8/16	2/21/17 to 2/23/17	3/28/17 to 3/30/17	5/2/17 to 5/4/17	6/20/17 to 6/21/17	7/25/17 to 7/26/17	8/29/17 to 8/30/17	10/10/17 to 10/11/17	4/4/18 to 4/5/18	10/30/18 to 10/31/18	4/9/19 to 4/10/19	10/22/19 to 10/23/19	4/28/20 to 4/29/20	10/20/20 to 10/21/20	4/13/21to 4/14/21	10/19/21 to 10/20/21	
JKS-49	Upgradient Monitoring	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Detection
JKS-51	Upgradient Monitoring	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Detection
JKS-52	Downgradient Monitoring	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Detection
JKS-53	Downgradient Monitoring	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Detection
JKS-54	Downgradient Monitoring	16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Detection

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
SRH Pond

12/7/16 2/22/17 57(-)690275/3(-)690276/20/17)46247/25/17)46248/29/17)434531(10/10/17)46244/4/18)46241(10/30/18)46244/9/19)46241(10/22/19)434534(457(20)434521(10/21(20)434534(45151)434531(10/1951TJ-211517 -26557 TD-004 TcCons)53(9h9(s)53n62(ns)738368Unt9h91TJ362004

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
SRH Pond

Constituents	Unit

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
SRH Pond

TABLE 3

Figures

2021 Water Level Study Report

Appendix A

Annual Groundwater Monitoring and Corrective Action Reports have been completed for each of

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc)	Water Level (ft msl)
JKS-45 Upgradient	FAL	531.46	1	12/6/2016	46.83	484.63
JKS-45 Upgradient	FAL	531.46	2	2/21/2017	46.64	484.82
JKS-45 Upgradient	FAL	531.46	3	3/28/2017	46.52	484.94

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc)	Water Level (ft msl)

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

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Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date

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CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc)	Water Level (ft msl)
JKS-61 Downgradient	EP	505.51	1	12/6/2016	23.95	481.56
JKS-61 Downgradient	EP	505.51	2	2/21/2017	23.31	482.20
JKS-61 Downgradient	EP	505.51	3	3/28/2017	23.10	482.41
JKS-61 Downgradient	EP	505.51	4	5/2/2017	22.85	482.66
JKS-61 Downgradient	EP	505.51	5	6/20/2017	22.05	483.46
JKS-61 Downgradient	EP	505.51	6	7/25/2017	23.50	482.01
JKS-61 Downgradient	EP	505.51	7	8/29/2017	23.60	481.91
JKS-61 Downgradient	EP	505.51	8	10/10/2017	23.97	481.54
JKS-61 Downgradient	EP	505.51	9	4/4/2018	23.08	482.43
JKS-61 Downgradient	EP	505.51	10	10/30/2018	23.94	481.57
JKS-61 Downgradient	EP	505.51	11	4/9/2019	22.97	482.54
JKS-61 Downgradient	EP	505.51	12	10/22/2019	24.20	481.31
JKS-61 Downgradient	EP	505.51	13	4/23/2020	23.74	481.77
JKS-61 Downgradient	EP	505.51	14	10/15/2020	24.60	480.91

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc)	Water Level (ft msl)

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water

TABLE 1
Groundwater Elevations Summary - CCR Unit Wells
CPS Energy - Calaveras Power Station

Well	CCR Unit	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc	(ft msl	Do Wat Leveler

rvation Wells
Wels

TABLE 2
Groundwater Elevations Summary - Non-CCR Unit Observation Wells
CPS Energy - Calaveras Power Station

Well	Well Elevation (ft msl)	Event No.	Date	Depth to Water (ft btoc)	Water No. (ft msl)

FIGURES

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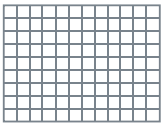

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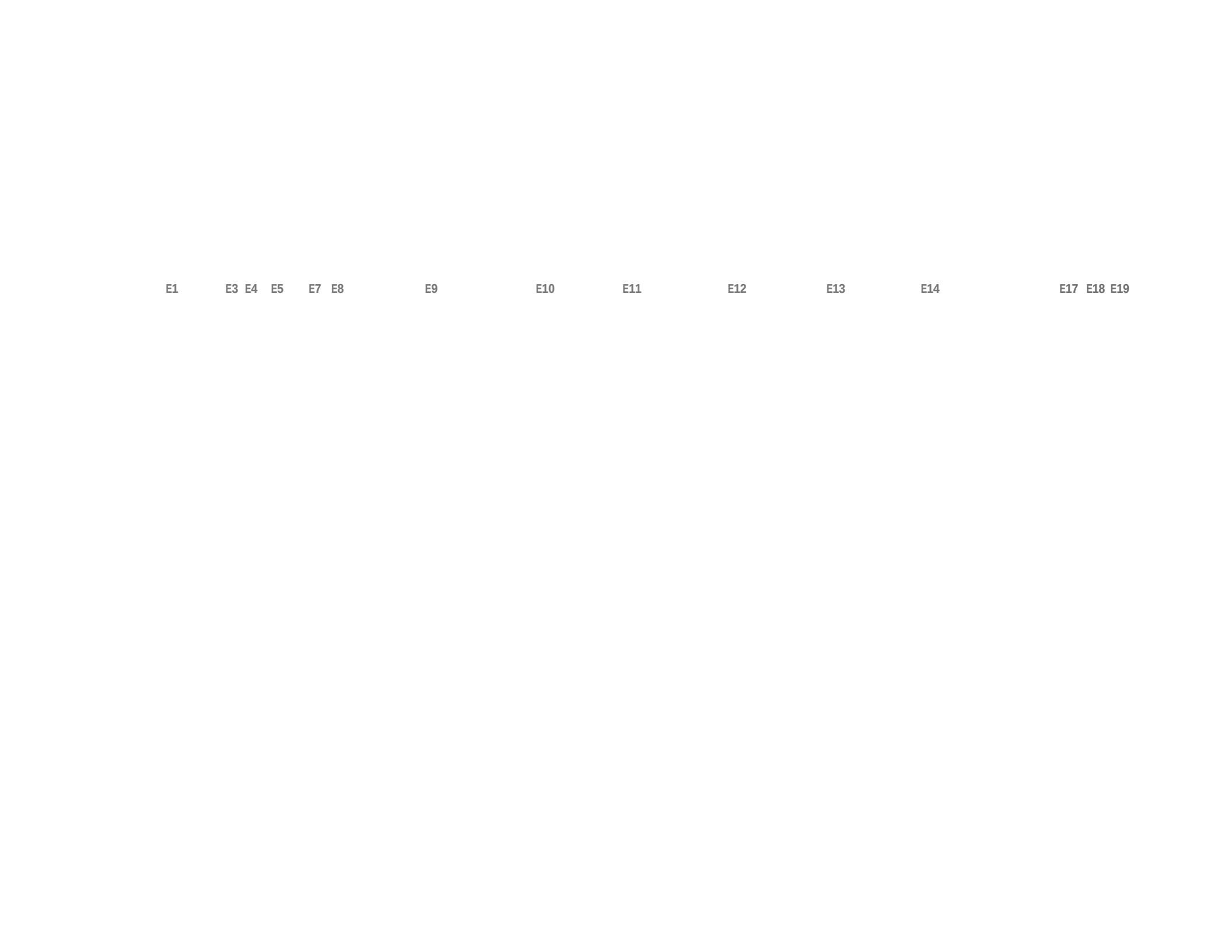
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Laboratory Data Packages

Appendix B

(*Data Packages Available Upon Request***)**

Statistical Analysis

N: number of data points
DF: degrees of freedom
statistic: Kruskal Wallis test statisti

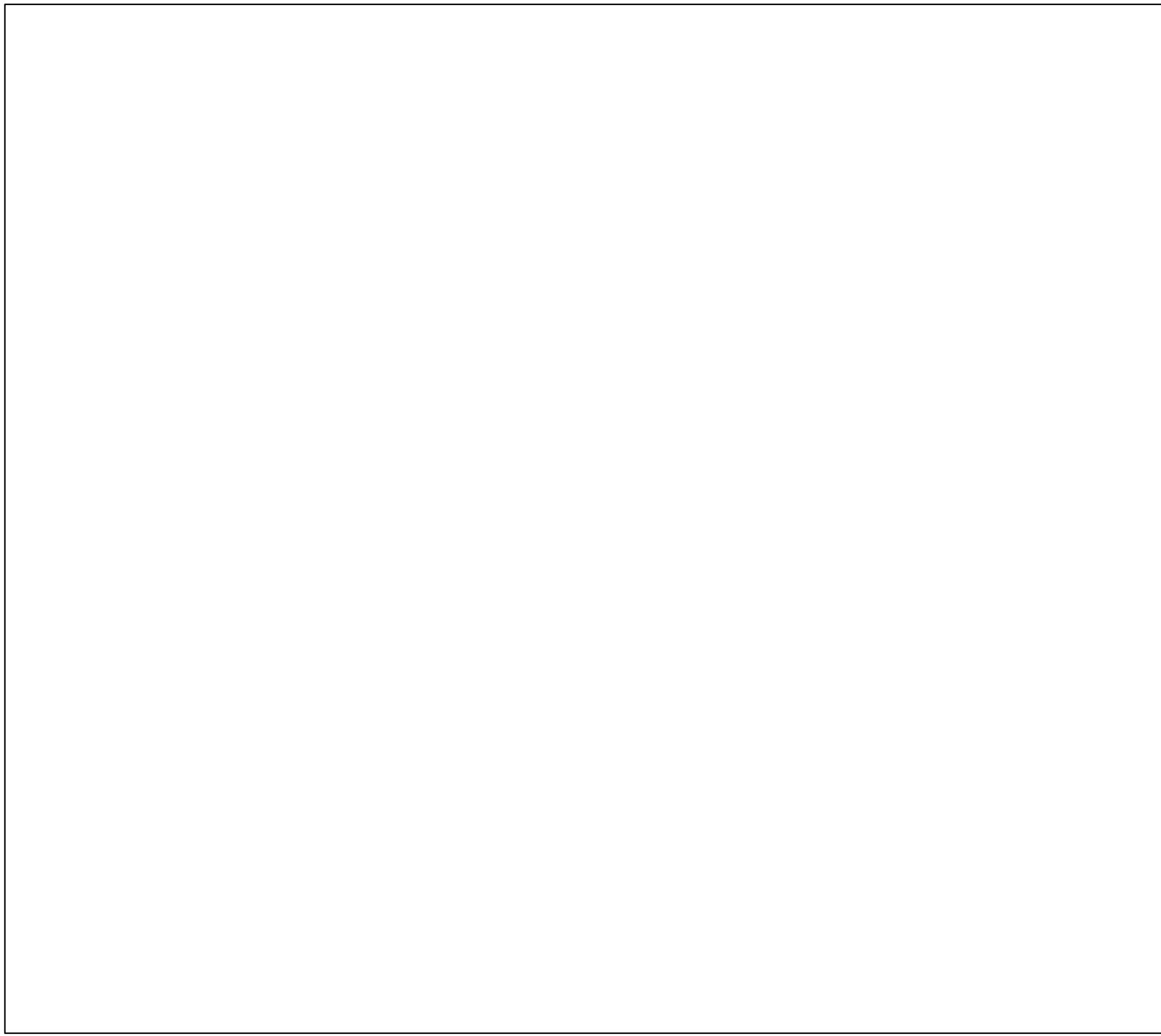
Appendix

Appendix C ‖ Table 3
Potential Outliers in Upgradient Wells
Calaveras Power Station
SRH Pond

Well	Sample	Date	Analyte	Units	Detect	Concentration	UPL type	Distribution	Statistical Outlier	Visual Outlier	Normal Outlier	Log Statistical Outlier	Log Visual Outlier	Lognormal Outlier

Appendix C π Table 4
Mann Kendall Test for Trends in Upgradient Wells
Calaveras Power Station
SRH Pond

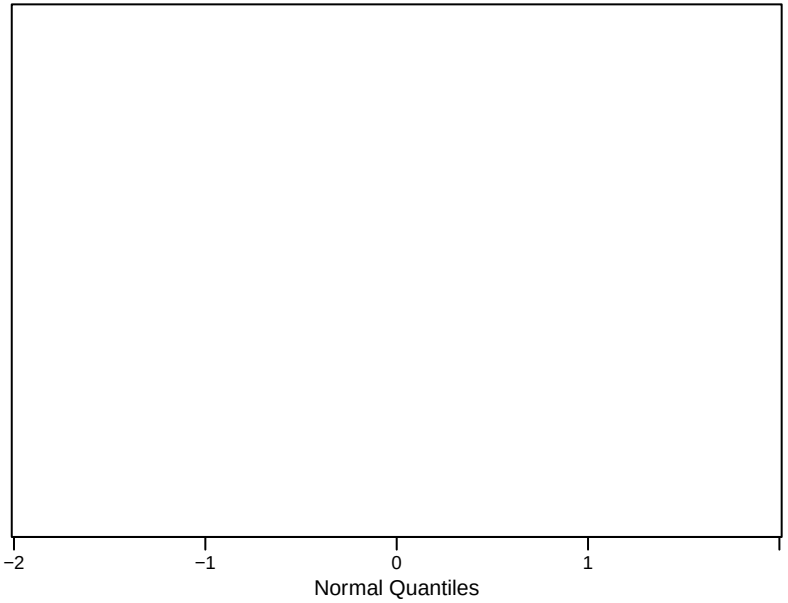
Analyte	UPL Type	Well	N	Num



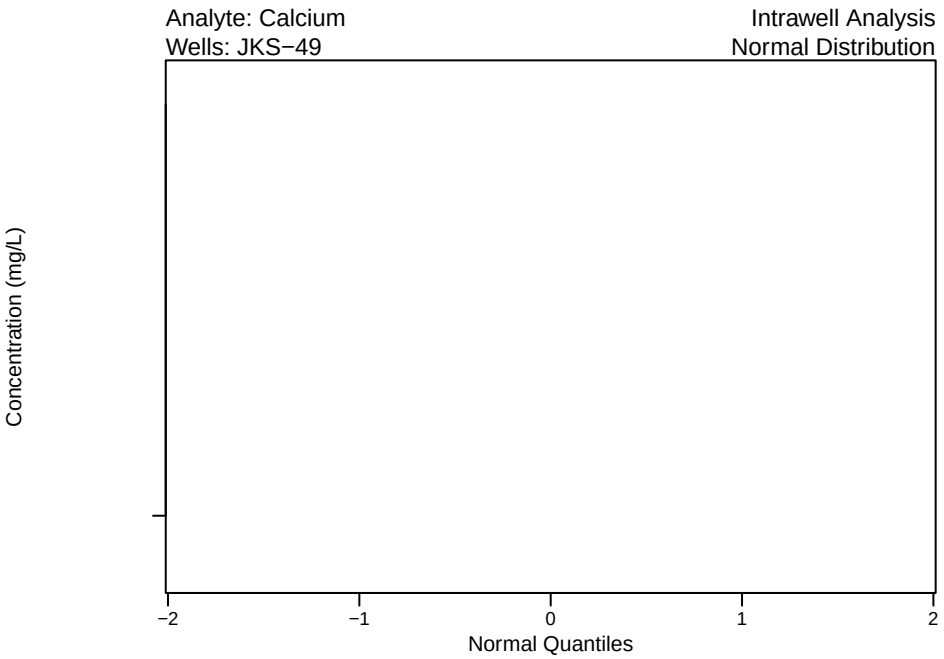
Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient Wells

Analyte: Boron
Wells: JKS−49

Intrawell Analysis
Normal Distribution



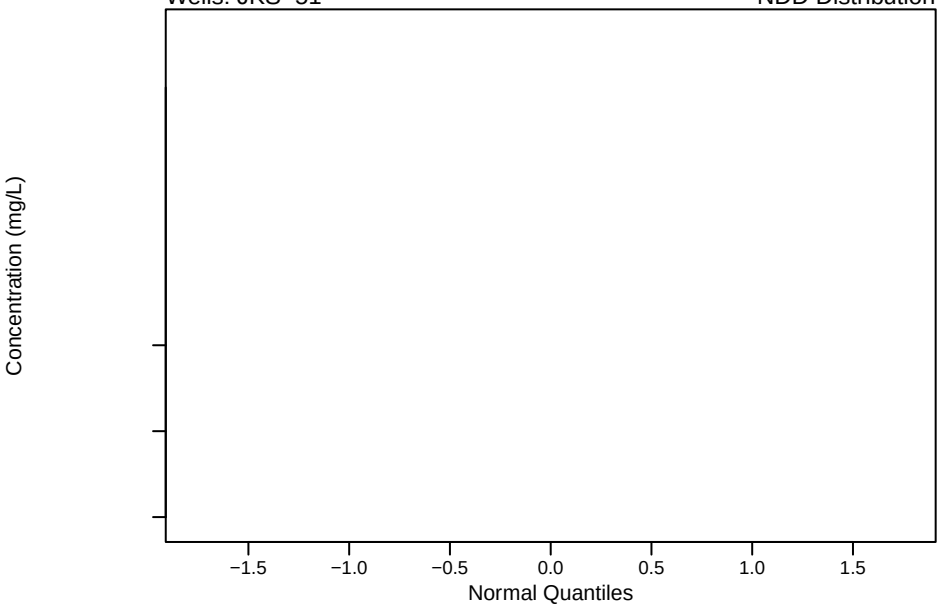
Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient Wells



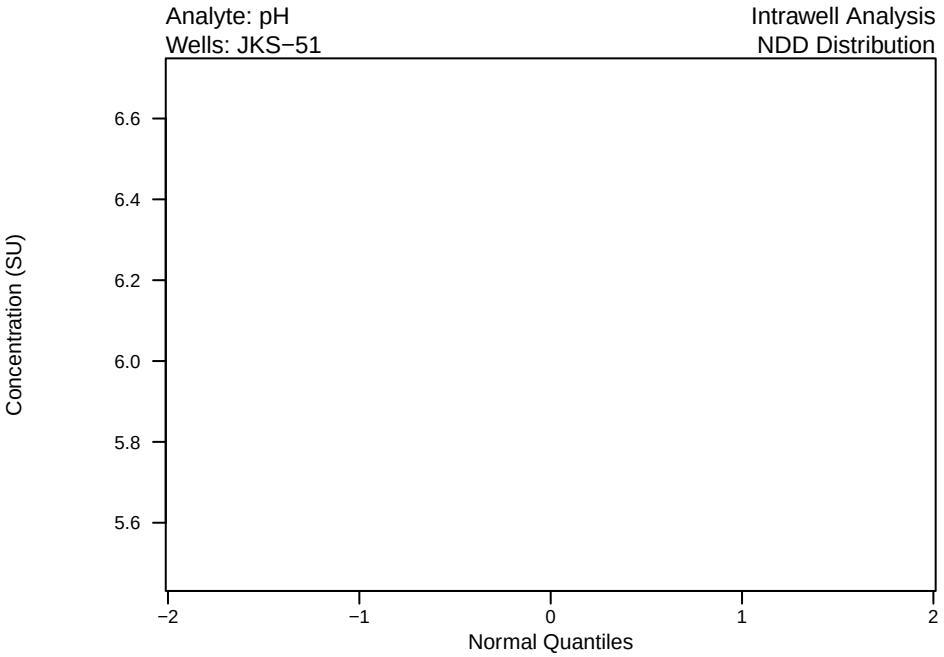
Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient Wells

Analyte: Fluoride
Wells: JKS−51

Intrawell Analysis
NDD Distribution

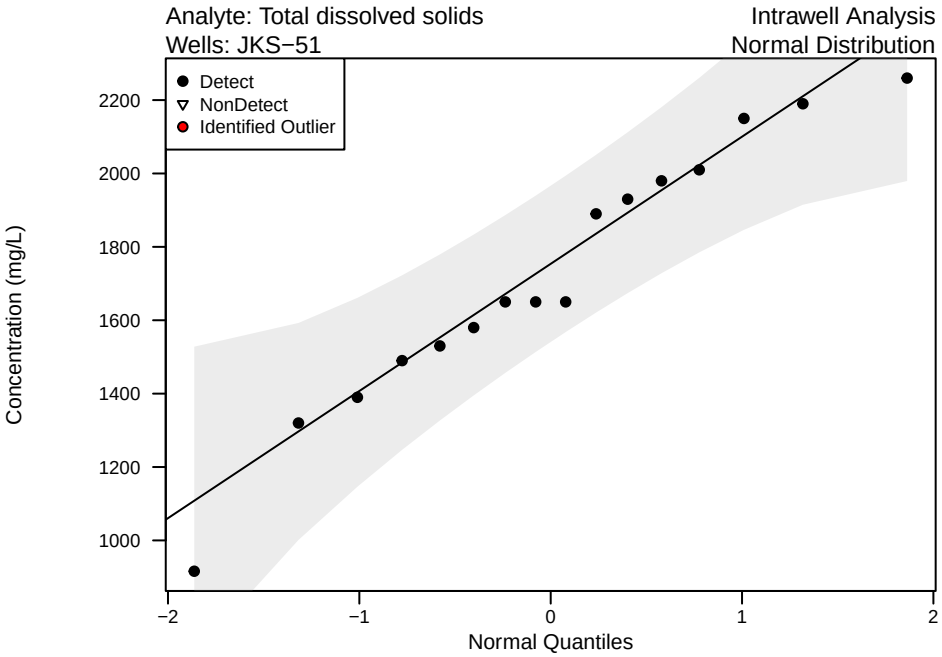


Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient Wells



Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient WellsAppendix

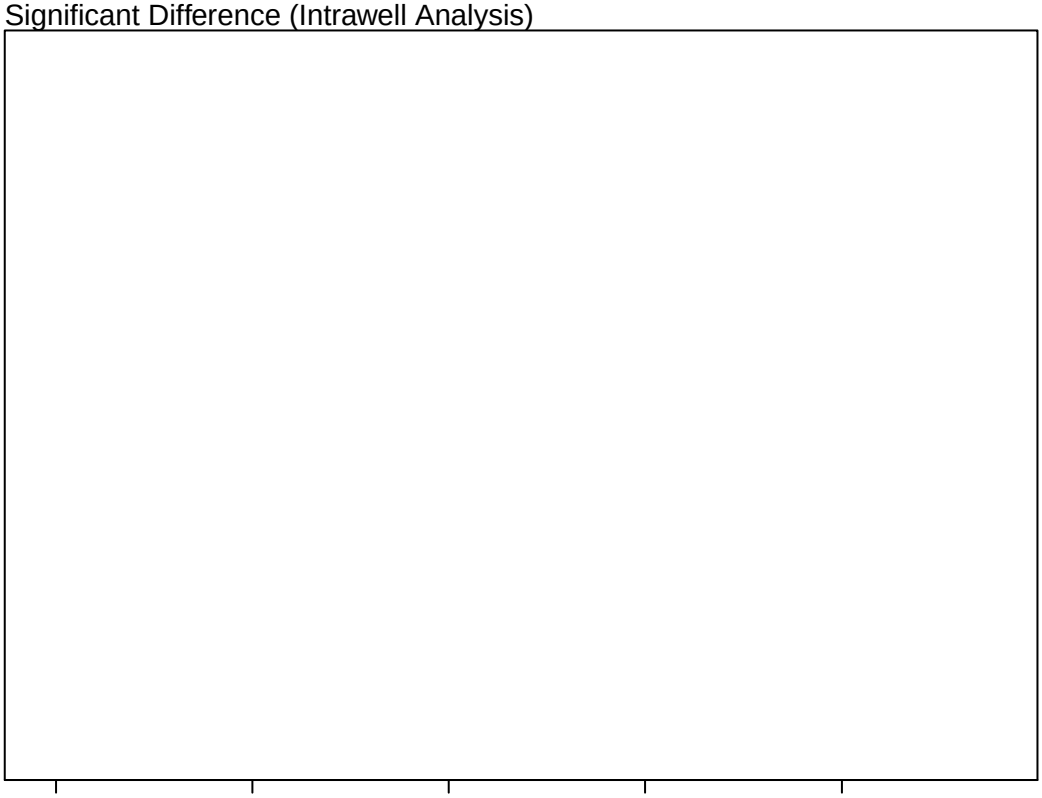
Appendix C − Figure 2
Unit: SRH Pond
QQ Plots of Upgradient Wells



Intentionally left blank,
not Lognormal/NDD distribution.

Appendix C − Figure 3
Unit: SRH Pond
Timeseries of Upgradient Wells

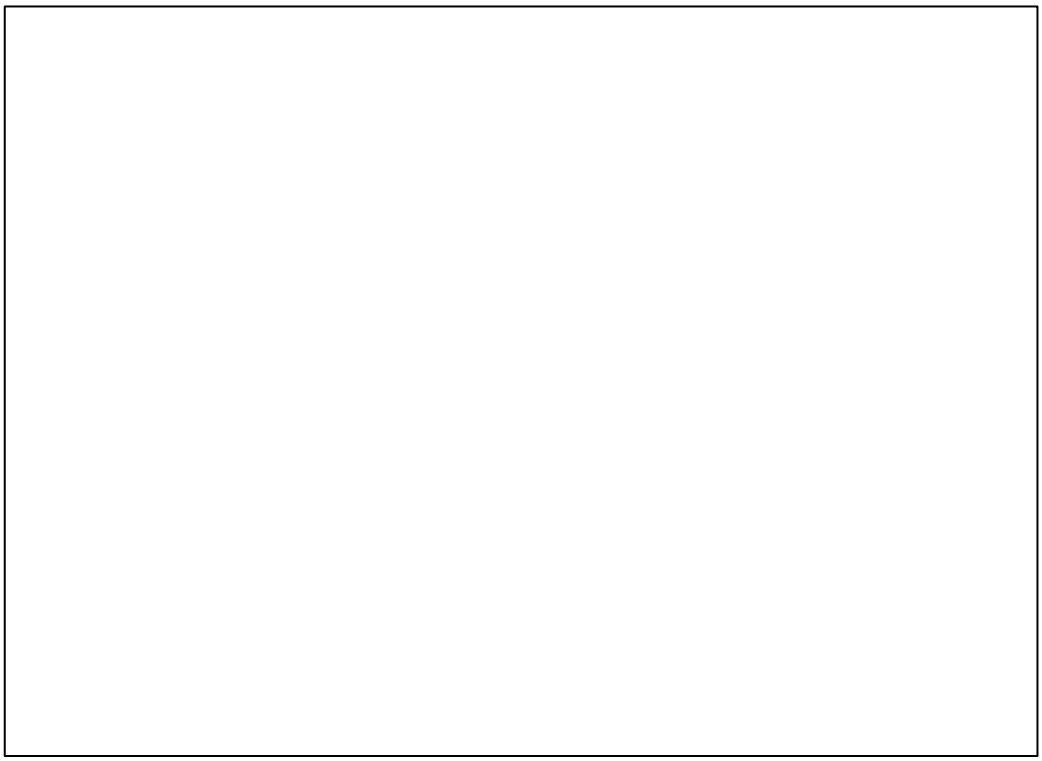
Chemical: Boron
Significant Difference (Intrawell Analysis)



Appendix C − Figure 3
Unit: SRH Pond

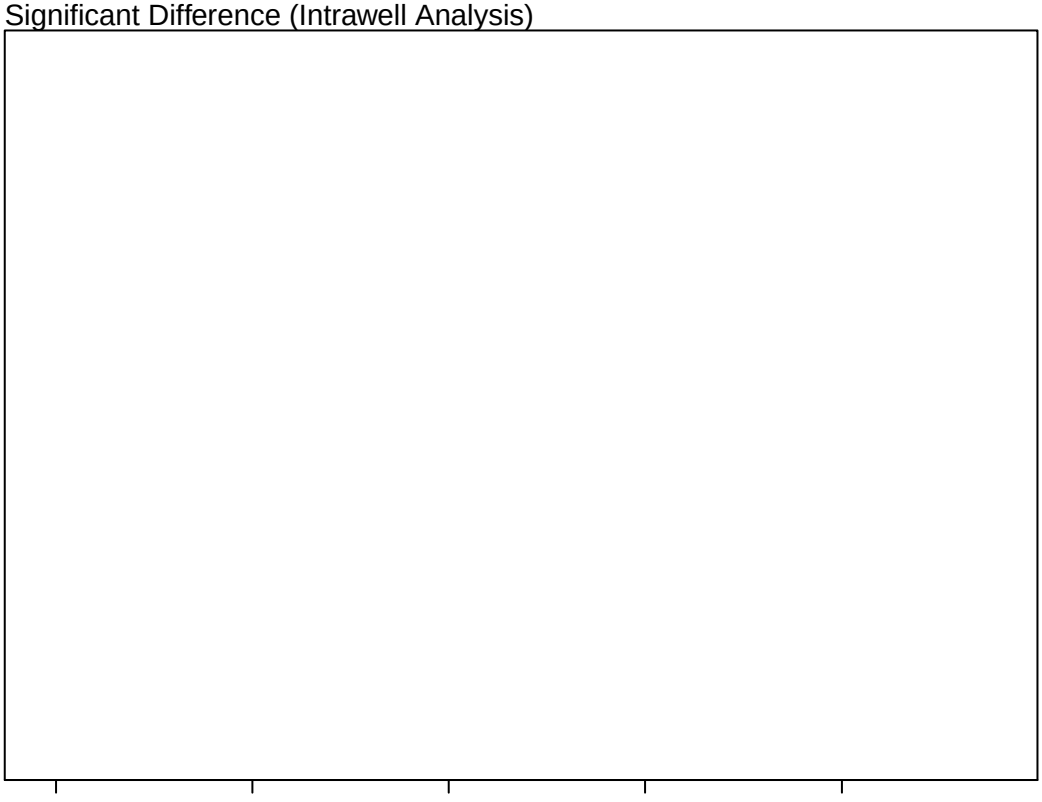
Appendix C − Figure 3
Unit: SRH Pond
Timeseries of Upgradient Wells

Chemical: pH



Appendix C − Figure 3
Unit: SRH Pond
Timeseries of Upgradient Wells

Chemical: Total dissolved solids
Significant Difference (Intrawell Analysis)



April 2021 Groundwater SamplinrDau

ERM

q105.9601 Tc125.52 291 Tw281.88 cm/Im0 Do98 refBT1qs/TT0 1 T8i0.58.14 2 Tc18.14 371 rq653.

ATTACHMENT 1 APRIL AND AUGUST 2021 GROUNDWATER SAMPLE RESULTS

Constituent	Units	2020 LPL - BAP	2020 UPL - BAP	BAP Downgradient JKS-48 4/13/2021 N	BAP Downgradient JKS-50R 4/13/2021 N	BAP Downgradient JKS-52 4/13/2021 N	BAP Downgradient JKS-55 4/13/2021 N	BAP Downgradient JKS-56 4/13/2021 N
Boron	mg/L	--	2.65	2.19	5.18	2.51	0.762	3.16
Calcium	mg/L	--	387	140	139	209	146	111
Chloride	mg/L	--	607	477	110	470	440	176
Fluoride	mg/L	--						

Constituent	Units	2020 LPL - SRH	2020 UPL - SRH	SRH Pond Downgradient JKS-52 4/13/2021 N	SRH Pond Downgradient JKS-53 4/13/2021 N	SRH Pond Downgradient JKS-54 4/13/2021 N
Boron	m					