

**Castle Oak Golf Course
Groundwater Monitoring Report
Third Quarter 2023
R5-1993-0240-002**

Prepared for

City of Lone

October 13, 2023

Prepared by



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Castle Oak Golf Course
Groundwater Monitoring Report
Third Quarter 2023
R5-1993-0240-002

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October 13, 2023

City of Lone
Amy Gedney, Acting City Manager
1 East Main Street
Lone, CA 95640

RE: Castle Oak Golf Course
Third Quarter 2023 Groundwater Monitoring Report
R5-1993-0240-002

Dear Ms. Gedney:

This report summarizes the 3rd Quarter 2023 groundwater monitoring and analytical sampling event associated with Monitoring and Reporting Program (MRP) R5-1993-0240-002.

AUTHORIZATION

The services provided by Dellavalle Laboratory, Inc. (DLI), Provost and Pritchard Consulting Group, and Del Tech Geotechnical Support Services (Del-Tech) were authorized by the City of Lone and Dellavalle Project Manager, Lisa Rubin.

CASTLE OAK GOLF COURSE GROUNDWATER MONITORING NETWORK

As of 14 August 2023, the Castle Oak Golf Course groundwater monitoring network consists of three (3) groundwater monitoring wells and three (3) piezometers (**Table 1-Network Site Descriptions**). Unable to access piezometer CO P-4 due to very tall weeds and grass.

Table 1. Network Site Descriptions

Monitoring Wells	Monument	Piezometers	Monument
CO MW-1	Flush	CO P-1	Post
CO MW-2	Post	CO P-2	Post
CO MW-3	Post	CO P-4	Post

As required by California Business and Professions Code Section 7835, groundwater monitoring site locations, potentiometric measurements, groundwater elevations, and analytical results summary discussions have been prepared by a Licensed California Geologist and are presented in **Attachment 1 - Groundwater Elevation and Analytical Results Discussion**. Groundwater elevations and depth to water measurements (DTW) with historical graph trends are presented in **Attachment 2 - Groundwater Monitoring Network Measurements and Graphs**.

GROUNDWATER MONITORING & SAMPLING

Prior to purging and sampling, Del-Tech measured DTW in all monitoring wells and piezometers. DTW was measured from the north side and top edge of well casing. DTW measurements (ft) are subtracted from the depth of well (ft) to determine standing water column (SWC) measurements in feet. The SWC is multiplied by the gallons per foot of depth (0.1632 for 2-inch diameter well casing) to determine calculated purge volume. All well casings are 2-inch polyvinyl chloride.

Dedicated Waterra tubing and check-ball systems are installed at each well, and all monitoring wells were purged and sampled with an inertial pump. Each monitoring well was purged to remove standing water within the well casing that may not be representative of formation water. Purge water samples were monitored in the field for temperature, pH, electrical conductivity (EC), oxidation-reduction potential (ORP), turbidity, and dissolved oxygen (DO). All purged water was released to the ground.

Instrument calibration was carried out daily in the field prior to measuring purge parameters. Field records for water sampling events are included in **Attachment 3 - Field Records**.

Groundwater samples were collected for laboratory analysis after a minimum of three well casing volumes of water had been removed and the field parameters for purge water had stabilized. During sampling, DTW measurements were taken and recorded for draw-down after each purge. The following target criteria for three consecutive measurements were used to define stabilization:

- ◆ +/- 0.2 for pH
- ◆ +/- 10% for EC
- ◆ +/- 2.0 degrees Celsius
- ◆ +/- 20mv for ORP

Samples were collected in the appropriate laboratory prepared containers, labeled, and placed directly into an ice cooled chest and delivered under chain-of-custody protocols by the project manager to DLI's analytical laboratory. Samples for metals analysis were filtered prior to preservation and digestion using a 0.45-micron filter.

October 13, 2023

As requested, groundwater samples were analyzed at DLI for pH, electrical conductivity (EC), total dissolved solids (TDS), Nitrate-N ($\text{NO}_3\text{-N}$), ammonia as nitrogen ($\text{NH}_4\text{-N}$), dissolved iron (Fe), and dissolved manganese (Mn). Samples for total coliform organisms (TCO), dissolved arsenic (As), and Volatile Organic Carbons (VOCs), were contracted out to BSK Associates (BSK).

DLI's analytical laboratory is certified by the Environmental Laboratory Accreditation Program (Certificate No. 1595) for the analyses provided herein. BSK is certified by the Environmental Laboratory Accreditation Program (Certificate No. 1180) for the analyses provided herein.

Historical water quality trends and graphs are presented in **Attachment 4 - Historical Water Quality Data and Graphs**. Copies of the laboratory analytical reports for this quarter are included in **Attachment 5 - Reports of Water Analysis (Monitoring Wells)**.

LIMITATIONS STATEMENT

This report has been reviewed by a Professional Geologist in the State of California. DLI's professional services were performed consistent with generally accepted environmental principles and practices in California at the time the services were performed. Data in this report, prior to 28 November 2022, was based on data collected and provided by others. No guarantee or warranty, expressed or implied, is made.

This Report was prepared for the sole use of Dischargers regulated under R5-1993-0240-002, Provost & Pritchard Consulting Group, and involved regulatory agencies. It may not be used or relied upon by any other person(s) without the express written consent and authorization of the City of Lone and DLI. If any errors are found in the information used for this report, the inferences and conclusions shall not be considered valid unless the changes or errors are reviewed by the supervising Professional Geologist and re-approved in writing. Any questions regarding the content of this document should be directed to the DLI Project Manager or the City Manager for Lone.

If you have any questions concerning this report, please do not hesitate to call me at (408) 667-7661 or e-mail inquiries to l.rubin@dellavallelab.com.

Thank you,



Lisa A. Rubin, CCA

Attachments

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Attachment 1
Groundwater Elevation and Analytical
Results Discussion



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October 30, 2023

Lisa Rubin, CCA
Dellavalle Laboratory, Inc.
1910 W. McKinley Avenue #110
Fresno, CA 93728

RE: Castle Oaks Golf Course, Groundwater Monitoring Report, Third Quarter 2023, Groundwater Elevation and Analytical Results Discussion

Dear Ms. Rubin:

This document was prepared by Provost & Pritchard Consulting Group (Provost & Pritchard) for Dellavalle Laboratory, Inc. (DLI) for the Castle Oaks Golf Course in Lone, California, which is subject to Monitoring and Reporting Program (MRP) R5-93-0240-002. The following discussion is based on the information presented in the Castle Oak Golf Course, Groundwater Monitoring Report, Third Quarter 2023, R5-1993-0240 (report) prepared by DLI.

GROUNDWATER ELEVATION

Well locations and depth to water measurements for the third quarter 2023 groundwater sampling event at the Castle Oaks site are provided in Attachment 2 of the DLI report. Top of casing elevations were obtained from the previous consultant's work product, provided by the City of Lone. Groundwater elevations were calculated and are shown on the enclosed Groundwater Elevation Map, prepared by a Provost & Pritchard Professional Geologist. The calculated groundwater gradient across the Castle Oaks site based on the contours for the sample date is approximately 0.004 feet per foot (ft/ft) to the southwest. According to the discussion by the previous consultant, groundwater gradient has been historically to the southwest at approximately 0.004 to 0.007 ft/ft and has been calculated by Provost & Pritchard as 0.004 ft/ft southwest since 4th quarter 2022. Thus, this quarter's gradient is consistent with historical flow.

Based on hydrographs produced using historical groundwater elevations at the site, seasonal trends are not apparent in MW-1 and the remainder of wells are generally highest in the winter and lowest in the summer, though not consistently in a particular quarter. Groundwater elevation has overall been trending very slightly downward over time. This quarter groundwater levels in the monitoring wells decreased between 0.4 and 2.8 feet from the previous quarter. From the third quarter of 2022 to this quarter the groundwater levels increased between 0.2 and 3.8 feet in the monitoring wells. Two of the three piezometers were measured and had water levels 2.1 to 3.4 feet lower than the previous quarter and were dry in third quarter 2022.

ANALYTICAL RESULTS

Based on the laboratory report in Attachment 5 of the DLI report, this quarter ammonia, arsenic, iron, and volatile organic compounds (VOCs) were not detected in the groundwater samples analyzed. Total coliform bacteria (TCO) and was detected only in CO MW-3. The field pH ranged from 5.70 in CO MW-2, historically the lowest, to 6.84 in CO MW-1 which is often highest. Field electrical conductivity (EC) and total dissolved solids (TDS) had the lowest concentrations upgradient in CO MW-1 and highest in CO MW-2, which is consistent with historical spatial trends. Nitrate as nitrogen (NO₃-N) had the highest concentration upgradient in CO MW-1, consistent with historical spatial trends. Manganese was highest in CO MW-3 and lowest in CO MW-2, within historic trends, but was higher than typical in CO MW-1.

\\ppeng.com\pzd\data\clients\Dellavalle-1020\102022001-Lone WWTP & Castle Oak GW Consulting\600 Deliverables\Castle Oaks\2023 Q3\2023 Q3 CO Discussion.docx

Based on the graphs in Attachment 4 of the DLI report, most constituent concentrations appear to be relatively consistent over time, with the following exceptions. NO₃-N appears to be historically increasing in CO MW-1 and recently in CO MW-2 and -3. EC and TDS appear to be gradually increasing recently in CO MW-3 and had a notable increase this quarter in CO MW-2. Iron appears to have decreased in CO MW-3 historically but has been consistent recently.

Groundwater limitations are not set for this site in the associated Waste Discharge Requirements and so concentrations are compared to respective primary or secondary maximum concentration limits (MCLs) identified in Title 22 of the California Code of Regulations. Based on the analyte concentrations in the table in Attachment 4 of the DLI report, secondary MCLs were exceeded for pH and EC in CO MW-2, TDS in CO MW-2 and MW-3, and for manganese in CO MW-1 and MW-3.

LIMITATIONS

This document has been prepared for the sole use of DLI, the City of Lone, and involved regulatory agencies. Any other person or entity without the express written consent of Provost & Pritchard Consulting Group may not rely upon this document.

Provost & Pritchard's professional services were performed consistent with generally accepted environmental principles and practices in California at the time the services were performed.

No assessment can eliminate uncertainty regarding the potential for recognized environmental conditions. This document is intended to reduce, but not eliminate this uncertainty, recognizing reasonable limits of time and cost. Subsurface variations cannot be known, or entirely accounted for, despite exhaustive testing. This document should not be regarded as a guarantee that no further recognized environmental conditions are present on or beneath the site, beyond that which could have been detected within the scope of work.

In developing this report, Provost & Pritchard has relied on information that was prepared or provided by others. Provost & Pritchard assumes that this information is accurate and correct, unless noted. Changes in existing conditions at the site due to time lapse, natural causes, or operations on adjoining properties, may deem the information inappropriate.

No guarantee or warranty, expressed or implied, is made.

Respectfully,



Darylyn Tachella, PG
Senior Geologist

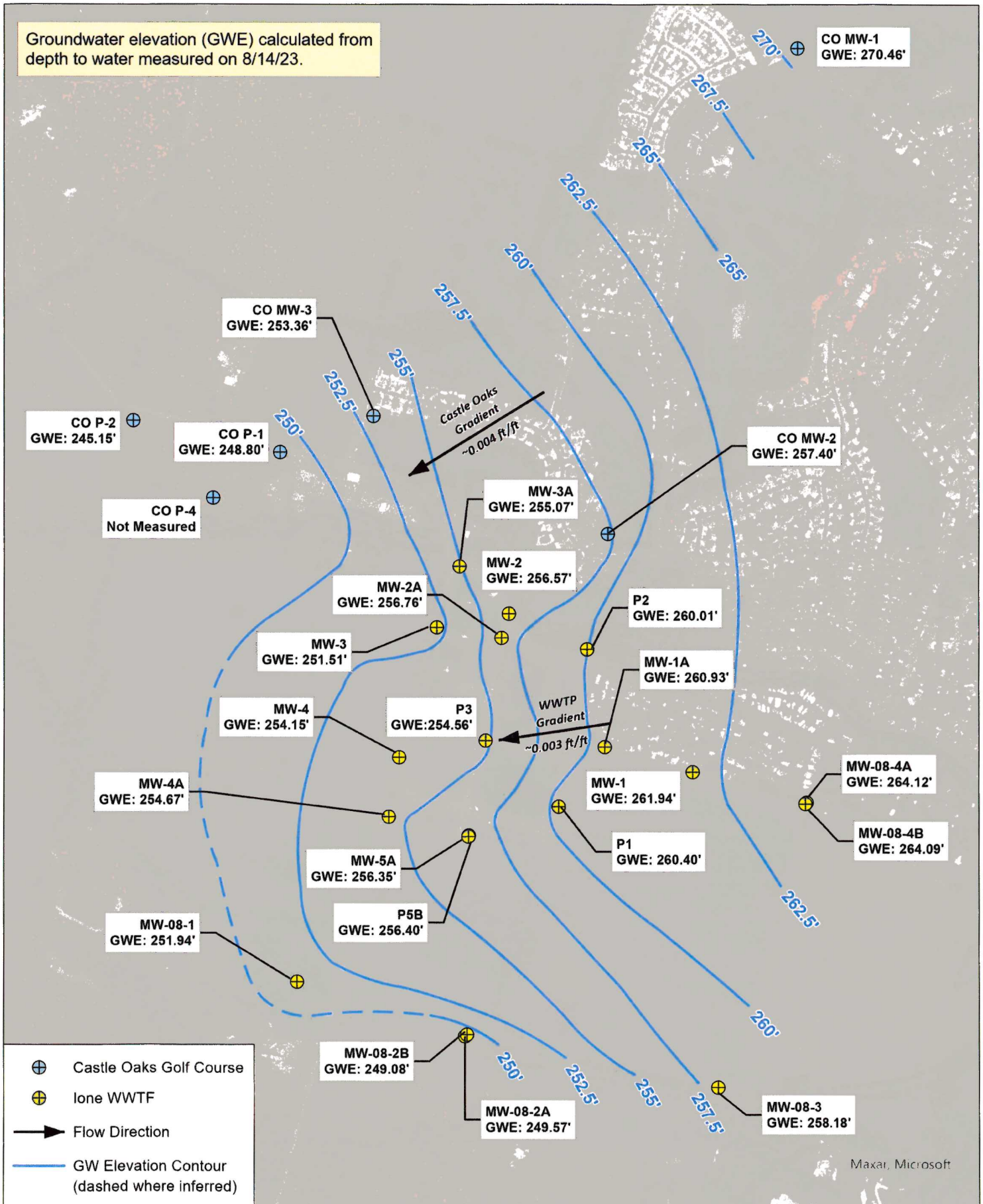
Enclosure: Groundwater Elevation Map for 8/14/23

OCTOBER 2023 Monthly Monitoring Report

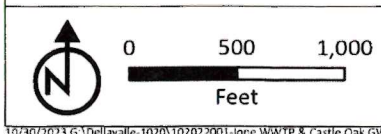
Castle Oaks Golf Course Tertiary Treatment Plant
 WDRs Order No. RS-1993-0240
 WDIID: 58030109001

Influent Flow Monitoring				Effluent Monitoring									
Date	CDCR Flow	ARSA Flow	Combined Influent	Daily Flow	Turbidity (Filter Effluent)	Chlorine	Total Coliform	BOD5 @ 20°C	pH	Nitrate (as N)	Total Arsenic	Electrical Conductivity	
Units	MGD	MGD	MGD	MGD	NTU	mg/L	MPN/100 mL	mg/L	SU	mg/L	mg/L	umhos/cm	
Frequency	Continuous	Continuous	Continuous	Continuous	Continuous	Daily	Daily	Weekly	Weekly	Weekly	Monthly	Monthly	
Sample Type	Recorder	Recorder	Recorder	Recorder	Calculated (4-hr average)	Grab	Grab	Grab	Grab	Grab	Grab	Grab	
Limit, Average (Maximum)	N/A	N/A	N/A	N/A	10	N/A	2.2 (23)	30 (45)	6.0 - 9.0	10	N/A	NA	
10/1/2023	0.790		0.790	0.762	1.53	2.9	2						
10/2/2023	0.864		0.864	0.840	0.86	3.3	<1.8						
10/3/2023	0.855		0.855	0.832	1.82	4.2	1.8						
10/4/2023	0.878		0.878	0.853	0.70	3.4	4	<5.0	7.3	2.5	<10	390	
10/5/2023	0.859		0.859	0.834	0.93	5.1	<1.8						
10/6/2023	0.636		0.636	0.612	0.52	4.7	<1.8						
10/7/2023	0.630		0.630	0.605	0.77	4.2	<1.8						
10/8/2023	0.514		0.514	0.494	0.58	4.4	<1.8						
10/9/2023	0.581		0.581	0.557	0.60	6.7	<1.8						
10/10/2023	0.575		0.575	0.552	0.37	4.5	<1.8	<5.0	7.2	9.9			
10/11/2023	0.574		0.574	0.550	0.26	4.7	6.8						
10/12/2023	0.59		0.590	0.565	0.28	4.5	<1.8						
10/13/2023	0.565		0.565	0.541	0.24	5.0	7.8						
10/14/2023	0.597		0.597	0.571	0.22	4.7	<1.8						
10/15/2023	0.576		0.576	0.551	0.18	5.5	<1.8						
10/16/2023	0.486		0.486	0.462	0.27	5.8	<1.8						
10/17/2023	0.593		0.593	0.565	0.29	5.2	<1.8	<5.0	7.1	10			
10/18/2023	0.608		0.608	0.585	0.25	4.8	<1.8						
10/19/2023	0.525		0.525	0.502	0.18	5.4	<1.8						
10/20/2023	0.593		0.593	0.568	0.21	7.4	<1.8						
10/21/2023	0.618		0.618	0.591	0.16	4.3	<1.8						
10/22/2023	0.522		0.522	0.501	0.16	6.6	4.5						
10/23/2023	0.575		0.575	0.550	0.24	8.0	<1.8						
10/24/2023	0.579		0.579	0.543	0.29	5.4	<1.8	<5.0	7.2	8.2			
10/25/2023	0.600		0.600	0.585	0.21	4.9	<1.8						
10/26/2023	0.674		0.674	0.648	0.33	5.3	2						
10/27/2023	0.53		0.530	0.509	0.29	4.9	<1.8						
10/28/2023	0.577		0.577	0.554	0.26	4.5	2						
10/29/2023	0.484		0.484	0.464	0.24	5.1	<1.8						
10/30/2023	0.571		0.571	0.547	0.30	5.6	<1.8						
10/31/2023	0.582		0.582	0.556	0.29	6.0	<1.8						
Minimum	0.484	0.000	0.484	0.462	0.16	2.9	<1.8	<5.0	7.1	2.5	<10	390	
Maximum	0.878	0.000	0.878	0.853	1.82	8	7.8	<5.0	7.3	10	<10	390	
Average	0.619	0.000	0.619	0.595	0.45	5.1	2.0	<5.0	7.2	7.7	<10	390	
Count	31	0.000	31	31	31	31	31	4	4	4	1	1	
Total	19,201	0.000	19,201	18,447									

Groundwater elevation (GWE) calculated from depth to water measured on 8/14/23.



Maxar, Microsoft



Groundwater Elevation Map Lone WWTF & Castle Oaks Golf Course

PROVOST & PRITCHARD

Attachment 2
Groundwater Monitoring Network
Measurements and Graphs



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Historical Groundwater Monitoring Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp. Metered	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW1	11/30/01		280.75	10.33	270.42							
MW1	3/20/02		280.75	9.08	271.67							
MW1	6/12/02		280.75	8.12	272.63							
MW1	9/17/02		280.75	9.06	271.69							
MW1	12/9/02		280.75	12.29	268.46							
MW1	3/28/03		280.75	10.37	270.38							
MW1	6/17/03		280.75	8.32	272.43							
MW1	10/1/03		280.75	9.32	271.43							
MW1	12/31/03		280.75	10.30	270.45							
MW1	3/31/04		280.75	9.16	271.59							
MW1	6/30/04		280.75	9.09	271.66							
MW1	9/30/04		280.75	8.99	271.76							
MW1	1/3/05		280.75	10.07	270.68							
MW1	4/5/05		280.75	7.76	272.99							
MW1	7/1/05		280.75	7.91	272.84							
MW1	10/21/05		280.75	9.16	271.59							
MW1	3/8/06		280.75	8.39	272.36							
MW1	5/30/06		280.75	8.09	272.66							
MW1	8/30/06		280.75	8.74	272.01							
MW1	11/30/06		280.75	11.21	269.54							
MW1	2/27/07		280.75	9.83	270.92							
MW1	5/31/07		280.75	8.40	272.35							
MW1	8/30/07		280.75	8.23	272.52							

Historical Groundwater Monitoring Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	Measured gal	Metered deg C	Metered std units	Metered umhs/cm	Metered mg/L	Metered Mv	Metered NTU
MW1	11/30/07	280.75	11.69	269.06								
MW1	6/30/08	280.75	8.50	272.25								
MW1	9/30/08	280.75	13.61	267.14								
MW1	11/30/08	280.75	12.92	267.83								
MW1	12/31/08	280.75	12.56	268.19								
MW1	3/12/09	280.75	8.89	271.86	7.0	18.0	6.80	565				
MW1	6/17/09	280.75	8.33	272.42	5.0	20.9	6.45	640		5.06	-15.9	-15.9
MW1	9/22/09	280.75	7.99	272.76	3.0	24.21	6.61	576		4.84	96.8	96.8
MW1	12/15/09	280.75	10.11	270.64	5.0	20.52	7.51	582		3.56	39.0	39.0
MW1	3/24/10	280.75	8.86	271.89	5.0	17.65	6.58	643		4.92	71.3	71.3
MW1	6/23/10	280.75	9.06	271.69	5.0	18.55	6.60	680		6.60	101.4	101.4
MW1	9/24/10	280.75	8.69	272.06	5.0	23.30	6.57	587		4.05	280.5	280.5
MW1	12/14/10	280.75	9.66	271.09	5.0	19.61	6.92	598		4.49	104.1	104.1
MW1	3/29/11	280.75	7.49	273.26	5.0	17.10	6.54	614		3.95	-136.8	-136.8
MW1	6/22/11					Bent closed, unable to sample						
MW1	9/15/11	280.75	9.29	271.46	5.0	20.81	6.37	586		5.02	79.4	
MW1	12/13/11	280.75	11.01	269.74	4.0	19.49	6.45	591		3.66	55.0	
MW1	3/22/12	280.75	10.13	270.62	4.0	17.09	6.60	590		4.15	63.7	
MW1	6/27/12	280.28	9.84	270.44	5.0	19.46	6.86	582		6.34	88.2	
MW1	9/25/12	280.28	10.28	270.00	4.0	23.87	6.90	606		4.05	49.9	
MW1	12/18/12	280.28	10.92	269.36	10.0	20.49	6.75	578		3.20	144.4	
MW1	3/11/13	280.28	10.30	269.98	6.0	18.46	6.62	590		4.29	126.0	

Historical Groundwater Monitoring Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
			Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umh/cm	mg/L	Mv	NTU
MW1	6/26/13		280.28	8.14	272.14	5.0	21.39	6.50	500	4.16	160.4	
MW1	9/13/13		280.28	12.44	267.84	3.0	21.18	6.57	609	3.15	203.4	
MW1	12/12/13		280.28	13.40	266.88	2.0	21.60	6.74	610	2.00	90.2	
MW1	3/5/14		280.28	11.44	268.84	4.0	18.90	6.59	504	3.02	179.4	
MW1	6/16/14		280.28	12.62	267.66	4.0	19.59	6.63	624	2.10	96.4	
MW1	9/17/14		280.28	11.35	268.93	4.0	21.66	6.55	571	1.32	132.6	
MW1	12/19/14		280.28	10.42	269.86	6.0	21.98	6.76	519	2.71	169.3	
MW1	3/23/15		280.28	10.09	270.19	6.0	18.90	6.56	602	3.00	58.1	
MW1	6/10/15		280.28	10.04	270.24	5.0	19.36	5.93	562	3.33	135.1	
MW1	9/16/15		280.28	9.72	270.56	5.0	23.05	6.51	591	4.45	101.5	
MW1	12/15/15		280.28	11.92	268.36	4.0	21.97	6.72	567	2.24	45.6	
MW1	3/29/16		280.28	8.44	271.84	5.0	18.12	6.58	606	3.66	138.9	
MW1	6/20/16		280.28	10.84	269.44	4.0	18.89	6.32	595	2.72	151.2	
MW1	9/7/16		280.28	8.69	271.59	5.0	23.08	6.43	604	5.69	276.9	
MW1	12/7/16		280.28	11.15	269.13	4.0	21.4	6.63	566	1.65	85.2	
MW1	3/8/17		280.28	7.87	272.41	5.0	17.5	6.63	615	4.44	221.7	
MW1	6/15/17		280.28	9.49	270.79	5.0	18.0	6.58	595	3.49	222.2	
MW1	9/14/17		280.28	8.59	271.69	5.0	23.4	6.58	547	4.33	255.4	
MW1	12/6/17		280.28	10.64	269.64	4.0	20.9	6.62	564	4.04	155.7	
MW1	3/9/18		280.28	10.64	269.64	4.0	18.7	6.74	674	3.70	158	

Historical Groundwater Monitoring Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged,		Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
						Measured	gal.						
	Units:			Probe	Calculated			Metered	Metered	Metered	Metered	Metered	Metered
			ft. msl	ft	ft. msl	gal		deg C	std units	umhs/cm	mg/L	Mv	NTU
MW1		6/15/18	280.28	10.13	270.15	3.5		17.1	6.53	675	3.60	156	
MW1		9/17/18	280.28	8.79	271.49	4.5		20.1	6.59	670	4.10	140	
MW1		12/17/18	280.28	13.02	267.26	3.0		19.9	6.67	640	2.60	170	
MW1		3/18/19	280.28	7.91	272.37	5.0		17.3	6.74	520	6.80	162	
MW1		5/13/19	280.28	6.54	273.74	4.0		16.8	6.72	576	5.60	157	
MW1		9/16/19	280.28	8.72	271.56	4.5		22.9	6.60	540	6.80	69	
MW1		12/16/19	280.28	11.25	269.03	3.0		19.7	6.68	489	2.29	204	
MW1		3/16/19	280.28	10.33	269.95	3.5		16.9	6.80	412	7.12	181	
MW1		6/16/20	280.28	10.69	269.59	3.5		18.5	6.75	555	3.38	208	
MW1		9/14/20	280.28	9.09	271.19	4.0		20.9	6.75	535	3.14	199	
MW1		12/15/20	280.28	10.77	269.51	3.5		15.9	6.79	564	3.35	221	
MW1		3/17/21	280.28	9.83	270.45	4.0		17.3	6.88	510	3.81	205	
MW1		6/22/21	280.28	10.55	269.73	3.5		19.0	6.79	515	4.13	128	
MW1		9/21/21	280.28	13.11	267.17	2.5		19.2	6.46	545	3.06	206	
MW1		12/14/21	280.28	9.81	270.47	4.0		17.9	6.66	214	7.17	238	
MW1		3/16/22	280.28	10.92	269.36	3.5		17.6	6.44	377	4.01	177	
MW1		6/15/22	280.28	11.94	268.34	3.0		19.6	6.31	463	2.36	200	
MW1		9/22/22	280.28	13.57	266.71	2.5		19.2	6.46	545	3.06	206	
MW1		11/28/22	280.28	10.14	270.14	6.0		21.6	6.75	581	3.90	232	165
MW1		3/2/23	280.28	8.58	271.70	6.0		17.7	6.96	534	1.90	138	92
MW1		5/17/23	280.28	9.38	270.90	4.5		18.8	6.79	499	1.40	147	73
MW1		8/14/23	280.28	9.82	270.46	6.0		21.9	6.84	531	1.80	118	93

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Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW2		11/30/01	272.01		259.34							
MW2		3/20/02	272.01		260.05							
MW2		6/12/02	272.01		259.26							
MW2		9/17/02	272.01		258.12							
MW2		12/9/02	272.01		259.08							
MW2		3/28/03	272.01		259.59							
MW2		6/17/03	272.01		259.09							
MW2		10/1/03	272.01		257.93							
MW2		12/31/03	272.01		259.92							
MW2		3/31/04	272.01		259.72							
MW2		6/30/04	272.01		258.51							
MW2		9/30/04	272.01		257.67							
MW2		1/3/05	272.01		261.09							
MW2		4/5/05	272.01		262.26							
MW2		7/1/05	272.01		258.93							
MW2		10/21/05	272.01		258.46							
MW2		3/8/06	272.01	10.16	261.85							
MW2		5/30/06	272.01	12.11	259.90							
MW2		8/23/06	272.01	13.41	258.60							
MW2		11/30/06	272.01	14.16	257.85							
MW2		2/27/07	272.01	11.45	260.56							

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Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
Method		Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW2	5/31/07	272.01	13.54	258.47							
MW2	8/30/07	272.01	14.02	257.99							
MW2	11/30/07	272.01	13.09	258.92							
MW2	6/30/08	272.01	13.17	258.84							
MW2	9/30/08	272.01	13.90	258.11							
MW2	11/30/08	272.01	13.71	258.30							
MW2	12/31/08	272.01	13.56	258.45							
MW2	3/12/09	272.01	11.56	260.45	7.0	16.4	6.20	1,326			
MW2	6/17/09	272.01	13.40	258.61	8.0	17.6	6.02	1,505	1.63	-35.8	
MW2	9/22/09	272.01	13.63	258.38	3.0	18.35	6.07	1,359	2.41	29.8	
MW2	12/15/09	272.01	12.56	259.45	5.0	18.10	6.83	1,187	1.82	21.0	
MW2	3/24/10	272.01	12.06	259.95	6.0	16.35	6.14	1,317	3.91	79.4	
MW2	6/23/10	272.01	13.23	258.78	5.0	16.61	6.09	1,383	4.43	108.2	
MW2	9/24/10	272.01	13.43	258.58	5.0	18.03	5.92	1,478	1.93	49.9	
MW2	12/14/10	272.01	12.25	259.76	5.0	17.51	6.24	1,266	1.86	-63.3	
MW2	3/29/11	272.01	8.64	263.37	8.0	16.32	5.95	1,603	2.43	-169.4	
MW2	6/23/11	272.01	12.91	259.10	5.0	15.87	5.91	1,698	3.14	-49.4	
MW2	9/15/11	272.01	13.20	258.81	5.0	18.08	6.01	1,684	1.36	-113.1	

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Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW2		12/13/11	272.01	13.09	258.92	5.0	18.21	5.72	1,349	1.80	3.9	
MW2		3/22/12	272.01	11.17	260.84	6.0	16.00	5.74	1,215	2.92	84.8	
MW2		6/27/12	272.01	13.65	258.36	5.0	16.27	5.90	1,459	5.00	66.2	
MW2		9/25/12	272.01	13.64	258.37	5.0	18.11	5.56	1,482	1.96	69.5	
MW2		12/18/12	272.01	12.53	259.48	6.0	18.01	5.90	1,305	1.46	37.9	
MW2		3/11/13	272.01	13.20	258.81	6.0	16.32	5.91	1,416	2.93	147.7	
MW2		6/26/13	272.01	13.91	258.10	5.0	17.48	5.67	1,312	2.86	197.4	
MW2		9/13/13	272.01	14.33	257.68	5.0	17.38	5.39	1,387	4.11	170.3	
MW2		12/12/13	272.01	14.44	257.57	5.0	18.17	5.93	1,219	2.17	58.8	
MW2		3/5/14	272.01	12.40	259.61	5.0	16.39	5.93	1,226	3.31	173.1	
MW2		6/16/14	272.01	13.57	258.44	7.0	16.87	5.84	1,356	1.58	47.8	
MW2		9/17/14	272.01	14.45	257.56	6.0	18.22	5.87	1,246	0.61	174.1	
MW2		12/19/14	272.01	11.10	260.91	6.0	18.34	6.01	953	1.01	186.6	
MW2		3/23/15	272.01	12.67	259.34	5.0	16.56	5.63	1,206	0.36	36.7	
MW2		6/10/15	272.01	12.72	259.29	5.0	16.69	5.49	1,210	0.29	101.0	
MW2		9/16/15	272.01	14.45	257.56	5.0	18.67	5.72	1,382	1.14	87.6	
MW2		12/15/15	272.01	12.44	259.57	6.0	18.47	5.90	1,331	2.04	45.2	
MW2		3/29/16	272.01	11.23	260.78	6.0	16.27	5.71	1,461	0.36	126.7	
MW2		6/20/16	272.01	13.08	258.93	5.0	16.53	5.61	1,502	1.02	174.1	
MW2		9/7/16	272.01	13.68	258.33	5.0	18.17	5.61	1,532	0.42	271.0	

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Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
Method		Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
	Units:	ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW2	12/7/16	272.01	12.30	259.71	5.0	18.3	5.75	1,354	0.42	2.5	
MW2	3/8/17	272.01	10.08	261.93	7.0	15.9	5.72	1,611	1.67	200	
MW2	6/15/17	272.01	12.97	259.04	6.0	16.2	5.60	2,016	0.60	180.2	
MW2	9/14/17	272.01	13.87	258.14	5.0	18.4	5.80	1,874	1.22	174.4	
MW2	12/6/17	272.01	13.17	258.84	5.0	18.7	5.76	1,679	0.96	143.7	
MW2	3/9/18	272.01	12.68	259.33	7.0	16.7	5.89	1,881	1.9	60	
MW2	6/15/18	272.01	13.23	258.78	6.0	16.2	5.77	1,854	2.3	213	
MW2	9/17/18	272.01	13.81	258.20	5.5	18.0	5.95	1,942	4.7	228	
MW2	12/17/18	272.01	13.39	258.62	6.0	17.5	6.07	1,500	3.2	229	
MW2	3/18/19	272.01	10.97	261.04	7.0	16.1	5.94	1,333	5.4	220	
MW2	5/13/19	272.01	12.60	259.41	6.0	16.1	5.89	1,415	4.4	215	
MW2	9/16/19	272.01	13.75	258.26	5.5	18.6	5.78	1,675	3.6	48	
MW2	12/16/19	272.01	12.28	259.73	6.5	17.7	5.79	1,421	1.52	254	
MW2	3/16/20	272.01	12.27	259.74	6.5	14.3	5.91	1,519	1.99	252	
MW2	6/16/20	272.01	13.65	258.36	6.5	16.5	5.88	1,500	1.35	252	
MW2	9/14/20	272.01	14.28	257.73	5.5	18.2	5.83	1,569	1.87	247	
MW2	12/15/20	272.01	13.29	258.72	6.0	16.9	5.96	1,527	2.79	239	
MW2	3/17/21	272.01	12.37	259.64	6.5	15.3	6.02	1,153	2.45	245	
MW2	6/22/21	272.01	13.50	258.51	6.0	17.0	5.81	1,181	1.59	188	
MW2	9/21/21	272.01	14.94	257.07	5.0	18.3	5.61	1,253	2.08	239	

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Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW2		12/14/21	272.01	11.43	260.58	7.0	17.3	5.84	669	4.43	274	
MW2		3/16/22	272.01	12.27	259.74	6.5	15.3	5.72	800	1.87	216	
MW2		6/15/22	272.01	13.01	259.00	6.0	17.0	5.52	1,060	1.85	223	
MW2		9/22/22	272.01	14.80	257.21	5.0	18.3	5.61	1,253	2.68	239	
MW2		11/28/22	272.01	14.75	257.26	6.0	18.3	6.30	1370	3.10	228	413
MW2		03/02/23	272.01	11.20	260.81	9.0	15.7	5.96	1327	2.30	157	293
MW2		05/17/23	272.01	13.06	258.95	6.0	16.0	5.89	1490	0.90	171	287
MW2		08/14/23	272.01	14.61	257.40	6.0	18.0	5.70	1924	1.60	199	7

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Sample ID	Method	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Units:		ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW3		11/30/01	264.86	9.86	255.00							
MW3		3/20/02	264.86	8.86	256.00							
MW3		6/12/02	264.86	10.54	254.32							
MW3		9/17/02	264.86	11.12	253.74							
MW3		12/9/02	264.86	10.26	254.60							
MW3		3/28/03	264.86	9.87	254.99							
MW3		6/17/03	264.86	10.37	254.49							
MW3		10/1/03	264.86	11.19	253.67							
MW3		12/31/03	264.86	9.58	255.28							
MW3		3/31/04	264.86	9.26	255.60							
MW3		6/30/04	264.86	10.74	254.12							
MW3		9/30/04	264.86	11.41	253.45							
MW3		1/3/05	264.86	8.90	255.96							
MW3		4/5/05	264.86	6.72	258.14							
MW3		7/1/05	264.86	9.77	255.09							
MW3		10/21/05	264.86	10.50	254.36							
MW3		3/8/06	264.86	7.54	257.32							
MW3		5/24/06	264.86	8.84	256.02							
MW3		8/23/06	264.86	10.93	253.93							
MW3		11/30/06	264.86	10.51	254.35							
MW3		2/27/07	264.86	8.17	256.69							
MW3		5/31/07	264.86	10.53	254.33							
MW3		8/30/07	264.86	11.16	253.7							
MW3		11/30/07	264.86	10.29	254.57							

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Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Method	Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
	Units:	ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW3	6/30/08	264.86	10.71	254.15							
MW3	9/30/08	264.86	11.35	253.51							
MW3	11/30/08	264.86	10.90	253.96							
MW3	12/31/08	264.86	10.23	254.63							
MW3	3/12/09	264.86	8.60	256.26	5.0	17.5	6.70	475			
MW3	6/17/09	264.86	10.39	254.47	40.0	18.30	6.34	482	2.78	-27.1	
MW3	9/22/09	264.86	11.00	253.86	3.0	18.19	6.58	490	2.88	-2.7	
MW3	12/15/09	264.86	10.13	254.73	10.0	18.22	7.36	510	2.07	11.5	
MW3	3/24/10	264.86	8.95	255.91	11.0	17.64	6.56	555	3.84	-6.1	
MW3	6/23/10	264.86	10.03	254.83	10.0	17.79	6.53	543	3.78	63.7	
MW3	9/24/10	264.86	11.19	253.67	9.0	18.08	6.44	494	2.14	-24.1	
MW3	12/14/10	264.86	9.78	255.08	10.0	18.03	6.72	484	1.40	-28.8	
MW3	3/29/11	264.86	4.23	260.63	13.0	17.47	6.41	505	2.88	-130.9	
MW3	6/23/11	264.86	9.53	255.33	11.0	16.63	6.34	523	1.51	-18.7	
MW3	9/15/11	264.86	10.62	254.24	10.0	17.39	6.60	515	1.11	-82	
MW3	12/13/11	264.86	10.50	254.36	10.0	17.71	5.98	539	1.35	-17.6	
MW3	3/22/12	264.86	9.24	255.62	11.0	16.84	6.01	531	1.66	8.7	
MW3	6/27/12	264.86	10.91	253.95	10.0	16.91	6.12	567	1.83	45.7	
MW3	9/25/12	264.86	11.26	253.60	10.0	17.60	6.23	587	2.74	109.3	
MW3	12/18/12	264.86	9.96	254.90	11.0	17.80	6.51	542	1.55	14.5	
MW3	3/11/13	264.86	10.33	254.53	10.0	17.04	6.38	566	3.35	140.5	
MW3	6/26/13	264.86	11.30	253.56	10.0	17.11	5.42	543	2.24	208.2	
MW3	9/13/13	264.86	11.82	253.04	9.0	17.60	6.07	600	2.99	90.7	
MW3	12/12/13	264.86	11.73	253.13	9.0	17.55	6.41	544	1.52	74.4	

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Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Method	Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
	Units:	ft. msl	ft	ft. msl	gal	deg C	std units	umhs/cm	mg/L	Mv	NTU
MW3	3/5/14	264.86	9.61	255.25	11.0	17.29	6.81	591	2.54	68.3	
MW3	6/16/14	264.86	11.26	253.60	12.0	17.69	6.62	657	5.47	57.8	
MW3	9/17/14	264.86	12.61	252.25	9.0	17.87	6.44	596	0.09	2.7	
MW3	12/19/14	264.86	9.41	255.45	11.0	17.94	6.57	550	0.67	162.2	
MW3	3/23/15	264.86	9.79	255.07	8.0	17.28	6.35	606	0.08	41.5	
MW3	6/10/15	264.86	10.45	254.41	10.0	17.08	6.37	571	0.17	71.3	
MW3	9/16/15	264.86	12.62	252.24	9.0	17.79	6.44	597	1.27	-32.3	
MW3	12/15/15	264.86	10.51	254.35	13.0	17.94	6.47	574	1.15	43.8	
MW3	3/29/16	264.86	8.40	256.46	11.0	17.11	6.41	566	0.12	63.5	
MW3	6/20/16	264.86	10.67	254.19	13.0	16.90	6.25	599	0.96	28.3	
MW3	9/7/16	264.86	11.84	253.02	12.0	17.63	6.11	635	0.34	180.4	
MW3	12/7/16	264.86	9.94	254.92	11.0	18.0	6.45	591	0.34	-118.3	
MW3	3/7/17	264.86	6.45	258.41	7.0	16.7	6.38	544	0.16	83.7	
MW3	6/15/17	264.86	9.78	255.08	20.0	16.2	6.40	612	2.91	86.1	
MW3	9/14/17	264.86	11.44	253.42	10.0	17.3	6.35	630	1.44	28.6	
MW3	12/6/17	264.86	10.26	254.60	10.0	18.0	6.41	631	0.81	79.4	
MW3	3/9/18	264.86	9.92	254.94	9.0	17.4	6.58	797	1.4	36	
MW3	6/15/18	264.86	10.32	254.54	9.0	16.8	6.52	893	2.0	118	
MW3	9/17/18	264.86	11.39	253.47	8.5	17.3	6.59	913	5.0	131	
MW3	12/17/18	264.86	10.45	254.41	9.0	18.0	6.51	830	1.4	124	
MW3	3/18/19	264.86	7.60	257.26	10.5	17.6	6.51	620	2.5	159	
MW3	5/13/19	264.86	9.60	255.26	9.5	17.4	6.50	740	1.9	126	
MW3	9/16/19	264.86	11.11	253.75	8.5	18.3	6.45	794	3.1	35	
MW3	12/16/19	264.86	9.70	255.16	9.5	18.6	6.45	723	1.55	198	
MW3	3/16/19	264.86	10.51	254.35	9.0	15.6	6.53	750	1.33	231	

Historical Groundwater Monitoring Data
Castle Oaks Golf Course
City of Ione
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Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Volume Purged, gal.	Temp.	Field pH	Field EC	Dissolved Oxygen	Oxidation/Reduction Potential	Turbidity
	Method	Surveyed	Probe	Calculated	Measured	Metered	Metered	Metered	Metered	Metered	Metered
	Units:	ft. msl	ft	ft. msl	gal	deg C	std units	umhscm	mg/L	Mv	NTU
MW3	6/16/20	264.86	11.02	253.84	8.5	18.0	6.53	774	1.13	219	
MW3	9/14/20	264.86	12.35	252.51	8.0	18.7	6.55	789	1.68	219	
MW3	12/15/20	264.86	12.99	251.87	8.5	16.5	6.65	804	2.95	218	
MW3	3/17/21	264.86	9.86	255.00	9.0	17.2	6.72	745	2.07	224	
MW3	6/22/21	264.86	11.41	253.45	8.5	18	6.53	729	1.89	183	
MW3	9/21/21	264.86	12.50	252.36	8.0	18.5	6.36	753	1.84	224	
MW3	12/14/21	264.86	9.48	255.38	9.5	17.6	6.60	455	2.67	269	
MW3	3/16/22	264.86	10.05	254.81	9.0	17.2	6.47	524	1.59	211	
MW3	6/15/22	264.86	11.19	253.67	8.5	18.3	6.21	668	1.92	201	
MW3	9/22/22	264.86	12.68	252.18	8.5	18.5	6.36	753	1.84	224	
MW3	11/28/22	264.86	11.86	253.00	9.0	18.6	7.36	724	2.60	192	415
MW3	03/02/23	264.86	7.85	257.01	12.0	16.8	6.76	739	0.70	94	1000+
MW3	05/17/23	264.86	8.70	256.16	9.0	18.6	6.62	705	1.20	106	1000+
MW3	08/14/23	264.86	11.50	253.36	9.0	19.0	6.49	732	3.20	126	127

Historical Groundwater Monitoring Data
 Castle Oaks Golf Course
 City of Ione
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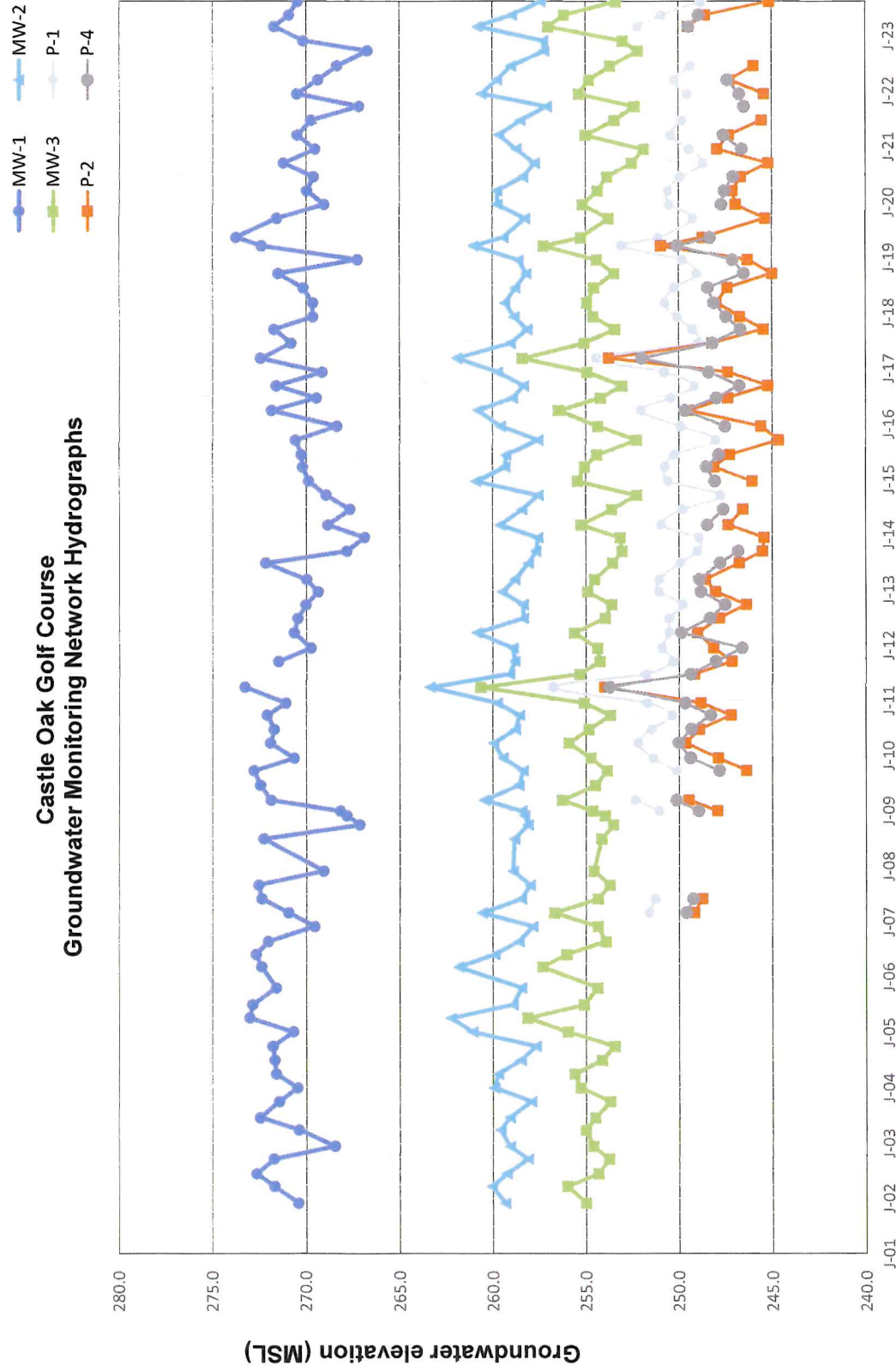
Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation
Method		Surveyed	Probe	Calculated	Method		Surveyed	Probe	Calculated	Method		Surveyed	Probe	Calculated
Units:		ft. msl	ft	ft. msl	Units:		ft. msl	ft	ft. msl	Units:		ft. msl	ft	ft. msl
P1	Latitude	38.3557	Longitude	-120.9627	P2	Latitude	38.35629	Longitude	-120.9663	P4	Latitude	38.35481	Longitude	-120.9643
P1	4/4/07	264.80	13.20	251.60	P2	4/4/07	261.55	12.37	249.18	P4	4/4/07	264.41	14.81	249.60
P1	5/18/07	264.80	13.54	251.26	P2	5/18/07	261.55	12.80	248.75	P4	5/18/07	264.41	15.18	249.23
P1	1/13/09	264.80	13.73	251.07	P2	1/13/09	261.55	13.62	247.93	P4	1/13/09	264.41	15.46	248.95
P1	3/11/09	264.80	12.47	252.33	P2	3/11/09	261.55	12.08	249.47	P4	3/11/09	264.41	14.28	250.13
P1	9/22/09	264.80	14.67	250.13	P2	9/22/09	261.55	15.17	246.38	P4	9/22/09	264.41	16.58	247.83
P1	12/15/09	264.80	13.43	251.37	P2	12/15/09	261.55	13.66	247.89	P4	12/15/09	264.41	15.04	249.37
P1	3/24/10	264.80	12.61	252.19	P2	3/24/10	261.55	11.91	249.64	P4	3/24/10	264.41	14.39	250.02
P1	6/23/10	264.80	13.34	251.46	P2	6/23/10	261.55	12.65	248.90	P4	6/23/10	264.41	15.08	249.33
P1	9/24/10	264.80	14.44	250.36	P2	9/24/10	261.55	14.35	247.20	P4	9/24/10	264.41	16.11	248.30
P1	12/13/10	264.80	13.09	251.71	P2	12/13/10	261.55	12.72	248.83	P4	12/13/10	264.41	14.74	249.67
P1	3/29/11	264.80	8.05	256.75	P2	3/29/11	261.55	7.54	254.01	P4	3/29/11	264.41	10.68	253.73
P1	6/22/11	264.80	13.04	251.76	P2	6/22/11	261.55	12.39	249.16	P4	6/22/11	264.41	15.05	249.36
P1	9/13/11	264.80	14.50	250.30	P2	9/13/11	261.55	14.39	247.16	P4	9/13/11	264.41	16.40	248.01
P1	12/12/11	264.80	13.91	250.89	P2	12/12/11	261.55	13.40	248.15	P4	12/12/11	264.41	17.78	246.63
P1	3/20/12	264.80	14.29	250.51	P2	3/20/12	261.55	12.54	249.01	P4	3/20/12	264.41	14.53	249.88
P1	6/25/12	264.80	14.29	250.51	P2	6/25/12	261.55	13.71	247.84	P4	6/25/12	264.41	16.08	248.33
P1	9/25/12	264.80	15.02	249.78	P2	9/25/12	261.55	15.17	246.38	P4	9/25/12	264.41	16.88	247.53
P1	12/17/12	264.80	13.74	251.06	P2	12/17/12	261.55	13.51	248.04	P4	12/17/12	264.41	15.59	248.82
P1	3/11/13	264.80	13.75	251.05	P2	3/11/13	261.55	12.97	248.58	P4	3/11/13	264.41	15.50	248.91
P1	6/26/13	264.80	14.87	249.93	P2	6/26/13	261.55	14.78	246.77	P4	6/26/13	264.41	16.62	247.79
P1	9/11/13	264.80	15.80	249.00	P2	9/11/13	261.55	16.03	245.52	P4	9/11/13	264.41	17.59	246.82
P1	12/10/13	264.80	15.88	248.92	P2	12/10/13	261.55	16.11	245.44	P4	12/10/13	264.41	dry	dry
P1	3/4/14	264.80	13.84	250.96	P2	3/4/14	261.55	14.2	247.35	P4	3/4/14	264.41	15.93	248.48
P1	6/16/14	264.80	15.04	249.76	P2	6/16/14	261.55	14.98	246.57	P4	6/16/14	264.41	16.79	247.62
P1	9/17/14	264.80	17.05	247.75	P2	9/17/14	261.55	dry	dry	P4	9/17/14	264.41	dry	dry
P1	12/17/14	264.80	14.24	250.56	P2	12/17/14	261.55	15.47	246.08	P4	12/17/14	264.41	16.34	248.07
P1	3/23/15	264.80	14.05	250.75	P2	3/23/15	261.55	13.43	248.12	P4	3/23/15	264.41	15.89	248.52
P1	6/10/15	264.80	14.56	250.24	P2	6/10/15	261.55	14.26	247.29	P4	6/10/15	264.41	16.54	247.87
P1	9/16/15	264.80	16.80	248.00	P2	9/16/15	261.55	16.89	244.66	P4	9/16/15	264.41	dry	dry



Historical Groundwater Monitoring Data
 Castle Oaks Golf Course
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 R5-1993-0240-002

Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation	Sample ID	Date	Survey Mark Elevation	Depth to Water	Ground Water Elevation
Method		Surveyed	Probe	Calculated	Method		Surveyed	Probe	Calculated	Method		Surveyed	Probe	Calculated
Units:		ft. msl	ft	ft. msl	Units:		ft. msl	ft	ft. msl	Units:		ft. msl	ft	ft. msl
P1	12/15/15	264.80	14.90	249.90	P2	12/15/15	261.55	15.94	245.61	P4	12/15/15	264.41	16.89	247.52
P1	3/29/16	264.80	12.76	252.04	P2	3/29/16	261.55	12.09	249.46	P4	3/29/16	264.41	14.74	249.67
P1	6/20/16	264.80	14.38	250.42	P2	6/20/16	261.55	14.18	247.37	P4	6/20/16	264.41	16.43	247.98
P1	9/7/16	264.80	15.64	249.16	P2	9/7/16	261.55	16.32	245.23	P4	9/7/16	264.41	17.66	246.75
P1	12/7/16	264.80	14.03	250.77	P2	12/7/16	261.55	14.16	247.39	P4	12/7/16	264.41	16.02	248.39
P1	3/8/17	264.80	10.37	254.43	P2	3/8/17	261.55	7.78	253.77	P4	3/8/17	264.41	12.41	252.00
P1	6/13/17	264.80	15.88	248.92	P2	6/13/17	261.55	13.34	248.21	P4	6/13/17	264.41	16.22	248.19
P1	9/12/17	264.80	15.56	249.24	P2	9/12/17	261.55	16.09	245.46	P4	9/12/17	264.41	17.72	246.69
P1	12/4/17	264.80	14.72	250.08	P2	12/4/17	261.55	14.83	246.72	P4	12/4/17	264.41	16.96	247.45
P1	3/9/18	264.80	14.04	250.76	P2	3/9/18	261.55	13.58	247.97	P4	3/9/18	264.41	16.29	248.12
P1	6/14/18	264.80	14.57	250.23	P2	6/14/18	261.55	14.15	247.40	P4	6/14/18	264.41	15.97	248.44
P1	9/17/18	264.80	15.80	249.00	P2	9/17/18	261.55	16.55	245.00	P4	9/17/18	264.41	17.90	246.51
P1	12/17/18	264.80	15.01	249.79	P2	12/17/18	261.55	15.23	246.32	P4	12/17/18	264.41	17.29	247.12
P1	3/18/19	264.80	11.74	253.06	P2	3/18/19	261.55	10.58	250.97	P4	3/18/19	264.41	14.34	250.07
P1	5/10/19	264.80	13.70	251.1	P2	5/10/19	261.55	12.84	248.71	P4	5/10/19	264.41	16.10	248.31
P1	9/15/19	264.80	15.59	249.21	P2	9/15/19	261.55	16.18	245.37	P4	9/15/19	264.41	dry	dry
P1	12/15/19	264.80	14.30	250.50	P2	12/15/19	261.55	14.60	246.95	P4	12/15/19	264.41	16.70	247.71
P1	3/15/19	264.80	14.23	250.57	P2	3/15/19	261.55	14.44	247.11	P4	3/15/19	264.41	16.87	247.54
P1	6/14/20	264.80	14.89	249.91	P2	6/14/20	261.55	14.88	246.67	P4	6/14/20	264.41	17.33	247.08
P1	9/14/20	264.80	16.16	248.64	P2	9/14/20	261.55	16.35	245.20	P4	9/14/20	264.41	dry	dry
P1	12/13/20	264.80	15.39	249.41	P2	12/13/20	261.55	13.62	247.93	P4	12/13/20	264.41	17.80	246.61
P1	3/16/21	264.80	14.38	250.42	P2	3/16/21	261.55	14.24	247.31	P4	3/16/21	264.41	16.81	247.60
P1	6/20/21	264.80	15.00	249.80	P2	6/20/21	261.55	16.00	245.55	P4	6/20/21	264.41	dry	dry
P1	9/21/21	264.80	dry	dry	P2	9/21/21	261.55	dry	dry	P4	9/21/21	264.41	17.93	246.48
P1	12/14/21	264.80	15.27	249.53	P2	12/14/21	261.55	16.13	245.42	P4	12/14/21	264.41	17.68	246.73
P1	3/16/22	264.80	14.60	250.20	P2	3/16/22	261.55	14.28	247.27	P4	3/16/22	264.41	17.03	247.38
P1	6/12/22	264.80	15.45	249.35	P2	6/12/22	261.55	15.56	245.99	P4	6/12/22	264.41	dry	dry
P1	9/24/22	264.80	dry	dry	P2	9/24/22	261.55	dry	dry	P4	9/24/22	264.41	dry	dry
P1	11/28/22	264.80	dry	dry	P2	11/28/22	261.55	dry	dry	P4	11/28/22	264.41	dry	dry
P1	3/2/23	264.80	12.59	252.21	P2	3/2/23	261.55	12.07	249.48	P4	3/2/23	264.41	14.95	249.46
P1	5/17/23	264.80	13.90	250.90	P2	5/17/23	261.55	12.97	248.58	P4	5/17/23	264.41	15.49	248.92
P1	8/14/23	264.80	16.00	248.80	P2	8/14/23	261.55	16.40	245.15	P4	8/14/23	264.41	Unable to access	Unable to access

**Castle Oak Golf Course
Groundwater Monitoring Network Hydrographs**



Note: P-4 was inaccessible.

**Attachment 3
Field Records**



1910 W. McKinley Avenue, Suite 110 • Fresno, California 93728-1298
Phone (559) 233-6129 • (800) 228-9896 • Fax (559) 268-8174
website: dellavallelab.com



MONITORING WELL FIELD LOG

PROJECT SUMMARY – CO MW 1

SAMPLING DATE	PROJECT NAME	PROJECT ADDRESS	SITE CONTACT	PROJECT MANAGER
8/14/2023	Castle Oak Golf Course Monitoring Well Network	Ione, CA	Kathy Stone	Lisa Rubin

SITE OVERVIEW

LOCATION	MONUMENT WELL CASING	DIAMETER OF CASING/GALLONS PER FOOT DEPTH	DEPTH OF WELL (FT)	DEPTH OF PUMP (FT)	DEPTH TO WATER (FT)	STANDING WATER COLUMN (FT)
Lat: 38.363526 Long: -120.950034	Flush/PVC	2 inches / 0.1632	17.21	15	9.82	7.39

METHOD OVERVIEW

CALCULATED PURGE VOLUME (GALLON)	PURGE AND SAMPLING METHOD	SAMPLER	SAMPLE TIME	DEPTH TO WATER AT SAMPLING TIME (FT)	ANALYSIS PERFORMED	LAB ANALYSIS
1.21	Waterra Inertial Pump	Del-Tech Antonio Morales	10:32	9.90	See Chain of Custody	Dellavalle Laboratory, Inc.

FIELD SUMMARY

TIME	ACTUAL VOLUME PURGED (GAL)	PUMP RATE (GPM)	PH (UNITS)	EC (µS/CM)	TEMP (CELSIUS)	O.R.P (MVOLTS)	TURBIDITY (N.T.U)	DO (PPM)	COLOR	ODOR
10:25	0	1	6.63	607	21.9	194	95	2.5		
10:27	2	1	6.76	531	21.6	157	105	2.3		
10:29	2	1	6.81	533	21.7	135	98	1.7		
10:31	2	1	6.84	531	21.9	118	93	1.8	tan	none
sampled										

MONITORING WELL FIELD LOG

PROJECT SUMMARY – CO MW 2

SAMPLING DATE	PROJECT NAME	PROJECT ADDRESS	SITE CONTACT	PROJECT MANAGER
8/14/2023	Castle Oak Golf Course Monitoring Well Network	Ione, CA	Kathy Stone	Lisa Rubin

SITE OVERVIEW

LOCATION	MONUMENT WELL CASING	DIAMETER OF CASING/GALLONS PER FOOT DEPTH	DEPTH OF WELL (FT)	DEPTH OF PUMP (FT)	DEPTH TO WATER (FT)	STANDING WATER COLUMN (FT)
Lat: 38.354154 Long: -120.954648	Post/PVC	2 inches / 0.1632	24.83	22	14.61	10.22

METHOD OVERVIEW

CALCULATED PURGE VOLUME (GALLON)	PURGE AND SAMPLING METHOD	SAMPLER	SAMPLE TIME	DEPTH TO WATER AT SAMPLING TIME (FT)	ANALYSIS PERFORMED	LAB ANALYSIS
1.67	Waterra Inertial Pump	Del-Tech Antonio Morales	10:01	15.50	See Chain of Custody	Dellavalle Laboratory, Inc.

FIELD SUMMARY

TIME	ACTUAL VOLUME PURGED (GAL)	PUMP RATE (GPM)	PH (UNITS)	EC (µS/CM)	TEMP (CELSIUS)	O.R.P (MVOLTS)	TURBIDITY (N.T.U)	DO (PPM)	COLOR	ODOR
9:54	0	1	6.00	1910	18.2	222	23	1.0		
9:56	2	1	5.73	1928	18.2	212	15	1.4		
9:58	2	1	5.72	1920	18.0	204	11	1.7		
10:00	2	1	5.70	1924	18.0	199	7	1.6	clear	none

MONITORING WELL FIELD LOG

PROJECT SUMMARY – CO MW 3

SAMPLING DATE	PROJECT NAME	PROJECT ADDRESS	SITE CONTACT	PROJECT MANAGER
8/14/2023	Castle Oak Golf Course Monitoring Well Network	Ione, CA	Kathy Stone	Lisa Rubin

SITE OVERVIEW

LOCATION	MONUMENT WELL CASING	DIAMETER OF CASING/GALLONS PER FOOT DEPTH	DEPTH OF WELL (FT)	DEPTH OF PUMP (FT)	DEPTH TO WATER (FT)	STANDING WATER COLUMN (FT)
Lat: 38.356405 Long: -120.960409	Post/PVC	2 inches / 0.1632	28.09	26	11.50	16.59

METHOD OVERVIEW

CALCULATED PURGE VOLUME (GALLON)	PURGE AND SAMPLING METHOD	SAMPLER	SAMPLE TIME	DEPTH TO WATER AT SAMPLING TIME (FT)	ANALYSIS PERFORMED	LAB ANALYSIS
2.71	Waterra Inertial Pump	Del-Tech Antonio Morales	9:22	25.10	See Chain of Custody	Dellavalle Laboratory, Inc.

FIELD SUMMARY

TIME	ACTUAL VOLUME PURGED (GAL)	PUMP RATE (GPM)	PH (UNITS)	EC (µS/CM)	TEMP (CELSIUS)	O.R.P (MVOLTS)	TURBIDITY (N.T.U)	DO (PPM)	COLOR	ODOR
9:12	0	1	7.00	815	19.6	127	16	3.5		
9:15	3	1	6.52	772	18.7	130	106	2.8		
9:18	3	1	6.48	736	18.9	130	120	3.3		
9:21	3	1	6.49	732	19.0	126	127	3.2	Light brown	none
sampled										

NOTES

WELL INSPECTION REPORT(S)	WEATHER	QUALITY CONTROL AND CONTAINMENT
Slow recharge in MW-3 Unable to access field for CO P-4.	83-98 degrees Fahrenheit. Clear with winds 2-3 mph	All measurements are made from the north side and top edge of the well casing. Dedicated purge tubing and water purged to the ground. Pump cleaned as necessary.

INSTRUMENTATION

TYPE OF INSTRUMENTATION	MANUFACTURER	SERIAL NO.
6P Multi Meter	Myron L Company	6223581
Turbidity Meter	Oakton	98703
Dissolved Oxygen Meter	Milwaukee	2290134991
D.T.W Meter	Heron Instruments, Inc.	I2FF2102146EC

CALIBRATIONS

TYPE OF INSTRUMENT	DATE	STANDARD MEASUREMENTS	PRE-CALIBRATED READING	CALIBRATED READING
pH Meter	8/14/23	4 units	4.01	4.00
		7 units	6.80	7.00
		10 units	10.01	10.00
Electrical Conductivity	8/14/23	1413 μ S/cm	1416	1413
Turbidity	8/14/23	20 NTU	20	20
Dissolved Oxygen	8/14/23	100 %	100	100

Note: Upon completing the initial readings of the instruments, the instruments are adjusted to the calibration standard solutions that are being used at the time and at the current ambient temperature.

Attachment 4
Historical Water Quality Data and Graphs



1910 W. McKinley Avenue, Suite 110 • Fresno, California 93728-1298
Phone (559) 233-6129 • (800) 228-9896 • Fax (559) 268-8174
website: dellavallelab.com

Historical Groundwater Quality Data
Castle Oaks Golf Course
City of Lone
R5-1993-0240-002

Sample ID	Method/Analysis	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
			SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
	Units		MPN/100ml	MPN/100ml	mg/L	mg/L	units	unhcs/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW1	11/30/01		4																
MW1	3/20/02		8		3.5	ND			353										
MW1	6/12/02		4		3.8	ND			342										
MW1	9/17/02		ND		0.5	ND			337										
MW1	12/9/02		ND		2.4	ND			384										
MW1	3/28/03		17		2.6	ND			381										
MW1	6/17/03		ND		8.9	ND			392										
MW1	10/1/03		2	ND	2.0	ND			332										
MW1	12/31/03		ND	ND	2.3	ND			370										
MW1	3/31/04		ND	ND	6.2	ND			370								0.41	0.02	
MW1	6/30/04		ND	ND	3.2	ND			335								0.25	ND	
MW1	9/30/04		ND	ND	1.2	ND			282								0.26	ND	
MW1	1/3/05		ND	ND	4.3	ND			332			ND	ND	ND		0.0036	11.0	0.18	ND
MW1	4/5/05		2	ND	20.0	ND			405			ND	ND	ND		ND	ND	ND	NM
MW1	7/1/05		2	ND	4.7	ND			344			ND	ND	ND		ND	ND	ND	NM
MW1	10/21/05		2	ND	1.2	ND			317			ND	ND	ND		ND	ND	ND	1.3
MW1	3/8/06		4	ND	8.0	ND			354			ND	ND	ND		ND	ND	ND	0.84
MW1	5/30/06		ND	ND	7.2	ND			359			ND	ND	ND		ND	0.139	ND	1.4
MW1	8/30/06		ND	ND	2.5	ND			300			ND	ND	ND	34	ND	ND	ND	0.68
MW1	12/8/06		ND	ND	4.1	ND			411			ND	ND	ND	27	0.0048	4.6	0.17	0.39
MW1	3/8/07		ND	ND	4.6	ND			382			ND	ND	ND	51	ND	ND	ND	0.91

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Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
Units:		MPN/100ml	MPN/100ml	mg/L	mg/L	units	umhS/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW1	6/19/07	ND	ND	5.6	ND			377			ND	ND	46	37	ND	0.085	ND	0.72
MW1	9/27/07	ND	ND	3.2	ND			363			ND	ND	72	36	ND	ND	ND	0.98
MW1	12/13/07	ND	ND	4.4	ND			439			ND	ND			0.0043	12.4	0.24	0.61
MW1	6/30/08	ND	ND	5.8	ND			357			ND	ND	78	34	ND	0.490	0.095	0.82
MW1	11/30/08	ND	ND	5.2	ND			385			ND	ND	58	27	0.055	13.60	0.205	0.62
MW1	12/31/08	ND	ND	5.4	ND			374			ND	ND	60	27	0.003	9.98	0.142	0.29
MW1	3/12/09	14	ND	7.6	ND			376			ND	ND	60	27	ND	0.173	ND	0.50
MW1	6/17/09	ND	ND	7.1	0.04			370		ND	ND	0.024	72	32				0.63
MW1	9/22/09	ND	ND	5.7	0.025			340		ND	ND	ND						
MW1	12/15/09	ND	ND	6.0	ND			360		ND	ND	ND						
MW1	3/24/10	14	ND	6.9	0.049			380		ND	0.076	0.0042						
MW1	6/23/10	4	ND	6.3	ND			380		ND	0.022	0.0038						
MW1	9/24/10	280	ND	3.8	ND			420		ND	0.047	0.0030						
MW1	12/14/10	2.0		5.0	ND			360		ND	ND	0.0013						
MW1	3/29/11	23		11.0	0.059			360		ND	0.084	0.0019						
MW1	6/22/11																	
Bent closed unable to sample																		
MW1	9/15/11	30		5.9	ND			410		ND	0.0054	ND						
MW1	12/13/11	80	ND	5.7	ND			390		0.0089	0.0057	ND						
MW1	3/22/12	ND		6.2	ND			350		ND	0.0220	0.0011						
MW1	6/27/12	8.0	ND	5.7	ND			390		ND	0.0067	ND						
MW1	9/25/12	ND		5.4	ND			370		ND	ND	0.0031						

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Sample ID	Method/Analysis	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
			SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
	Units:		MPN/100ml	MPN/100ml	mg/L	mg/L	units	unh/s/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW1		12/18/12	ND		5.6	ND			320		ND	ND	ND						
MW1		3/11/13	33		5.5	ND			360		ND	0.039	ND						
MW1		6/26/13	22		5.4	0.025			300		ND	0.220	0.016						
MW1		9/13/13	50		6.2	0.019			350		ND	0.520	0.099						
MW1		12/12/13	4.0		6.3	0.061			360		ND	0.036	0.033						
MW1		3/5/14	> 1600		5.5	0.029			260		ND	1.300	0.110						
MW1		6/16/14	ND		7.1	ND			360		0.0130	ND	0.011						
MW1		9/17/14	23		5.4	ND			340		ND	0.088	0.0042						
MW1		12/19/14	50		4.3	ND			330		ND	ND	ND						
MW1		3/23/15	ND		7.1	ND			420		ND	ND	ND						
MW1		6/10/15	ND		6.9	ND			440		ND	ND	ND						
MW1		9/16/15	2.0		4.0	ND			380		0.00078	ND	ND						
MW1		12/15/15	13		5.0	ND			410		0.00043	ND	ND						
MW1		3/29/16	ND		14.0	ND			480		ND	ND	ND						
MW1		6/20/16	1.8		7.3	0.025			420		0.00038	0.030	0.0040						
MW1		9/7/16	2.0		6.7	ND			380		ND	ND	0.010						
MW1		12/7/16	ND		6.2	ND			360		ND	0.140	0.011						
MW1		3/8/17	2.0		19.0	ND			410		ND	ND	0.00025						
MW1		6/15/17	ND		9.9	0.098			440		ND	ND	0.00060						
MW1		9/14/17	ND		5.8	ND			370		0.00099	ND	0.00023						

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Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
Units		MPN/100ml	MPN/100ml	mg/L	mg/L	units	umh/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW1	12/6/17	2.0		7.1	0.028			360		ND	ND	0.00042						
MW1	3/9/18	8		7.9	0.024			360		0.00040	ND	0.0028						
MW1	6/15/18	220		7.5	0.025			440		ND	ND	0.00048						
MW1	9/17/18	920		7.0	0.075			350		0.00043	ND	0.016						
MW1	12/17/18	49		7.0	0.23			390		ND	ND	0.00089						
MW1	3/18/19	920		9.9	ND			380		0.00039	ND	0.0037						
MW1	5/13/19	920		8.5	0.11			370		ND	0.036	0.0021						
MW1	9/16/19	350		4.0	0.096			330		0.00046	0.14	0.0040						
MW1	12/16/19	920		7.1	ND			300		0.00074	ND	0.0120						
MW1	3/16/19	920		14.0	0.072			270		ND	0.11	0.0043						
MW1	6/16/20	920		6.8	0.080			350		ND	0.048	0.018						
MW1	9/14/20	240		7.0	0.081			370		0.00058	ND	0.053						
MW1	12/15/20	9.3		6.6	0.089			290		0.00040	ND	0.017						
MW1	3/17/21	34		6.6	0.086			340		ND	ND	0.019						
MW1	6/22/21	ND		6.5	0.087			370		0.00003	ND	0.007						
MW1	9/21/21	79		7.5	0.087			350		0.00073	ND	0.0085						
MW1	12/14/21	920		8.9	ND			220		0.00047	0.049	0.033						
MW1	3/16/22	17		7.3	0.074			310		ND	ND	0.0010						
MW1	6/15/22	ND		8.0	0.11			380		ND	ND	0.0029						

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Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	SM 5310 B	
Units:		MPN/100ml	MPN/100ml	mg/L	mg/L	units	umh/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW1	9/22/22	350		9.0	ND			370		0.00077	ND	0.0044						
MW1	11/28/22	1.1		6.8	ND	7.0	751	337		ND	ND	ND						
MW1	3/2/23	17		10.7	ND	6.8	574	347	ND	ND	ND	ND						
MW1	5/17/23	<1.8		7.7	ND	6.9	585	310	ND	ND	ND	ND						
MW1	8/14/23	<1.8		7.3	ND	6.9	504	365	ND	ND	ND	0.08						

NM - Not Measured
ND - Not Detected

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Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500- H ⁺	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
Units:		MPN/100ml	MPN/100ml	mg/L	mg/L	units	uuals/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW2	11/30/01	ND																
MW2	3/20/02	ND		1.20	ND			901										
MW2	6/12/02	ND		0.70	ND			984										
MW2	9/17/02	ND		0.62	ND			1060										
MW2	12/9/02	ND		0.36	ND			1090										
MW2	3/28/03	ND		0.80	ND			832										
MW2	6/17/03	> 2400		0.85	ND			942										
MW2	10/1/03	2	ND	0.29	ND			1040										
MW2	12/31/03	2	ND	0.20	ND			829										
MW2	3/31/04	ND	ND	0.59	ND			800								0.37	0.03	
MW2	6/30/04	ND	ND	0.66	ND			938								0.16	ND	
MW2	9/30/04	ND	ND	0.46	ND			1010								0.23	ND	
MW2	1/3/05	2	ND	0.43	ND			833			0.060	ND			ND	0.25	ND	1.7
MW2	4/5/05	2	ND	4.30	ND			912			ND	ND			ND	0.07	ND	
MW2	7/1/05	ND	ND	13.00	ND			1190			ND	ND			ND	0.06	ND	
MW2	10/21/05	ND	ND	4.20	ND			1700			ND	0.030			ND	ND	ND	4.4
MW2	3/8/06	ND	ND	6.90	ND			1190			ND	0.020			ND	1.44	0.02	3.5
MW2	5/30/06	ND	ND	7.00	ND			977			ND	ND			ND	0.232	0.020	2.3
MW2	8/23/06	ND	ND	6.30	ND			1250			ND	0.021	160	87	ND	0.1	0.025	4.0
MW2	12/8/06	ND	ND	1.80	ND			1360			ND	0.020	175	82	ND	ND	0.025	2.7
MW2	3/8/07	ND	ND	1.00	ND			1370			ND	ND	177	81	ND	ND	ND	2.9
MW2	6/19/07	ND	ND	0.31	ND			1250			ND	0.009	154	91	ND	ND	0.0095	2.8
MW2	9/27/07	ND	ND	0.19	ND			1140			ND	0.013	155	100	ND	0.025	0.012	2.6
MW2	12/13/07	ND	ND	0.16	ND			1030			0.052	0.014			ND	0.2	0.017	2.0
MW2	6/30/08	ND	ND	0.10	ND			1020			ND	0.016	135	88	ND	0.12	0.018	2.4

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Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500 H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.7	EPA 200.7	SM 5310 B	
Units		MPN/100ml	MPN/100ml	mg/L	mg/L	units	units/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW2	11/30/08	ND	ND	0.08	ND			1,010			0.022	0.018	142	90	ND	0.056	0.018	2.4
MW2	12/31/08	ND	17	0.16	ND			969			ND	0.021	134	92	0.0024	8.74	0.093	1.7
MW2	3/12/09	ND	ND	0.14	ND			947			0.053	0.018	156	81	ND	0.506	0.020	1.9
MW2	6/17/09	ND	ND	0.19	0.027			1100		ND	0.053	0.028	160	83				1.8
MW2	9/22/09	ND	ND	0.10	ND			1100		0.020	0.190	0.036						
MW2	12/15/09	ND	ND	0.17	0.029			870		ND	0.300	0.034						
MW2	3/24/10	ND	ND	0.16	0.034			920		ND	0.110	0.029						
MW2	6/23/10	900	240	0.26	ND			1100		ND	0.087	0.029						
MW2	9/24/10	> 1600	2	0.32	ND			1300		ND	0.16	0.033						
MW2	12/14/10	> 1600		0.06	ND			940		ND	0.31	0.032						
MW2	3/29/11	ND		0.58	ND			1100		ND	0.029	0.037						
MW2	6/23/11	500		2.50	ND			1100		ND	ND	0.036						
MW2	9/15/11	ND		0.25	ND			1200		ND	ND	0.033						
MW2	12/13/11	40	ND	0.18	ND			980		0.013	0.0170	0.034						
MW2	3/22/12	17		0.27	ND			810		0.0089	0.0220	0.027						
MW2	6/27/12	4.0	ND	0.19	0.025			1100		ND	ND	0.034						
MW2	9/25/12	11		0.13	ND			1100		ND	0.130	0.035						
MW2	12/18/12	ND		0.09	ND			830		ND	0.120	0.033						
MW2	3/11/13	ND		0.13	ND			960		ND	0.076	0.036						
MW2	6/26/13	26		0.07	0.11			1000		0.0096	0.430	0.031						
MW2	9/13/13	ND		0.12	ND			1000		ND	0.290	0.024						
MW2	12/12/13	ND		0.21	0.039			960		ND	1.100	0.095						
MW2	3/5/14	ND		0.11	0.034			770		0.013	0.044	0.011						
MW2	6/16/14	ND		0.15	ND			980		0.018	ND	0.0091						
MW2	9/17/14	ND		0.14	ND			820		ND	0.059	0.019						

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Sample ID	Method/Analysis	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
	Units		MPN/100ml	MPN/100ml	mg/L	mg/L	units	uMhos/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	SM 5310 B
MW2	12/19/14		ND		0.14	ND			600		ND	ND	0.011						
MW2	3/23/15		4.0		0.08	ND			840		ND	ND	0.014						
MW2	6/10/15		ND		0.09	ND			900		0.00059	ND	0.020						
MW2	9/16/15		ND		0.11	ND			920		0.00065	ND	0.022						
MW2	12/15/15		ND		0.06	ND			960		0.00052	ND	0.0044						
MW2	3/29/16		170		0.34	ND			940		ND	ND	0.014						
MW2	6/20/16		ND		0.30	1.2			1000		ND	ND	0.015						
MW2	9/7/16		ND		0.21	0.033			1000		ND	ND	0.023						
MW2	12/7/16		ND		0.21	ND			960		0.00044	ND	0.033						
MW2	3/8/17		ND		1.30	ND			1100		ND	ND	0.0070						
MW2	6/15/17		ND		5.90	0.083			1500		0.00087	ND	0.019						
MW2	9/14/17		ND		0.98	ND			1400		0.0010	ND	0.029						
MW2	12/6/17		13		0.65	0.057			1100		0.00057	ND	0.034						
MW2	3/9/18		5		0.65	0.057			1100		0.00057	ND	0.034						
MW2	6/15/18		650		0.46	0.028			1200		ND	ND	0.024						
MW2	9/17/18		79		0.10	0.092			1200		0.00078	0.084	0.023						
MW2	12/7/18		7.8		0.12	0.10			920		0.00038	ND	0.024						
MW2	3/18/19		170		0.92	ND			960		0.00043	ND	0.011						
MW2	5/13/19		240		2.60	0.071			980		ND	0.20	0.018						
MW2	9/16/19		920		0.40	0.10			1100		ND	ND	0.023						
MW2	12/16/19		540		0.41	ND			960		0.00073	0.068	0.035						
MW2	3/16/20		8.2		0.24	ND			1100		ND	0.075	0.032						
MW2	6/16/20		350		4.00	ND			1000		ND	0.074	0.048						
MW2	9/14/20		280		0.26	0.079			1100		ND	ND	0.022						
MW2	12/15/20		20		0.13	0.039			1100		ND	ND	0.022						

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City of Ione
R5-1993-0240-002

Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500 H ⁺	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
	Units	MPN/100ml	MPN/100ml	mg/L	mg/L	units	uohm/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	MCL	2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW2	3/17/21	130		0.20	0.070			860		ND	ND	0.034						
MW2	6/22/21	240		0.16	0.11			920		0.00057	ND	0.029						
MW2	9/21/21	170		0.51	0.63			880		ND	ND	0.024						
MW2	12/14/21	350		0.47	ND			680		0.00062	ND	0.0038						
MW2	3/16/22	26		0.46	0.068			750		ND	ND	0.0056						
MW2	6/15/22	33		0.38	0.11			870		ND	ND	0.023						
MW2	9/22/22	NM		0.33	0.07			920		0.00069	ND	0.016						
MW2	11/28/22	ND		0.30	ND	6.3	1440	890		ND	ND	ND						
MW2	03/02/23	ND		1.90	ND	6.0	1430	850	ND	ND	ND	ND						
MW2	05/17/23	<1.8		3.4	ND	5.9	1740	923	ND	ND	ND	ND						
MW2	08/14/23	<1.8		1.0	ND	5.9	1840	1420	ND	ND	ND	0.02						

NM - Not Measured
ND - Not Detected

Historical Groundwater Quality Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500 H ⁺	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	SM 5310 B
Units:		MPN/100ml	MPN/100ml	mg/L	mg/L	units	umh/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW3	11/30/01	ND																
MW3	3/20/02	ND		0.15	ND			350										
MW3	6/12/02	ND		ND	ND			307										
MW3	9/17/02	ND		ND	ND			297										
MW3	12/9/02	ND		0.20	ND			289										
MW3	3/28/03	ND		0.12	ND			219										
MW3	6/17/03	ND		0.17	ND			280										
MW3	10/1/03	ND	ND	0.06	ND			278										
MW3	12/31/03	ND	ND	0.07	ND			358										
MW3	3/31/04	ND	ND	0.15	ND			290								15.8	0.18	
MW3	6/30/04	ND	ND	0.07	ND			283								22.8	0.13	
MW3	9/30/04	ND	ND	ND	ND			259								11.0	0.13	
MW3	1/3/05	ND	ND	0.20	ND			232			3.07	0.120			0.0089	8.1	0.12	3.8
MW3	4/5/05	ND	ND	0.21	ND			291			1.95	0.120			0.014	3.88	0.12	
MW3	7/1/05	ND	ND	ND	ND			292			1.21	0.130			0.017	6.22	0.16	
MW3	10/21/05	> 2400	ND	0.09	ND			249			4.70	0.130			0.011	9.20	0.13	6.1
MW3	3/8/06	ND	ND	0.11	ND			290			2.30	0.130			0.0074	2.3	0.14	2.8
MW3	5/24/06	ND	ND	ND	ND			306			1.03	0.099			0.026	48.2	0.192	4.4
MW3	8/23/06	ND	ND	ND	ND			256			4.20	0.130	26	31	0.0074	5.8	0.13	5.9
MW3	12/8/06	ND	ND	ND	ND			294			4.30	0.120	26	32	0.0057	7.2	0.13	5.7
MW3	3/8/07	ND	ND	0.30	ND			337			2.17	0.148	30	30.1	0.0077	4.7	0.15	3.7
MW3	6/19/07	ND	ND	0.19	ND			382			3.70	0.130	33	39	0.005	5.6	0.14	2.9
MW3	9/27/07	ND	ND	0.13	ND			321			4.00	0.130	35	34	0.011	4.4	0.14	2.7
MW3	12/13/07	ND	ND	0.09	ND			358			2.90	0.140	NM	NM	0.012	7.3	0.14	2.3
MW3	6/30/08	ND	ND	0.10	ND			287			3.00	0.110	35	32	0.020	24.00	0.16	2.0

Historical Groundwater Quality Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Method/Analysis	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
	Units		MPN/100ml	MPN/100ml	mg/L	mg/L	SM 4500 H+	units/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	MCL		2.2	2.2	10	ND		900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW3	11/30/08		ND	ND	0.29	ND			424			2.94	0.118	36	31	0.012	11.40	0.14	2.0
MW3	12/31/08		ND	ND	ND	ND			320			2.18	0.140	36	33	0.0056	3.73	0.125	1.3
MW3	3/12/09		ND	ND	0.07	ND			313			2.15	0.129	34	29	0.0056	5.340	0.128	1.50
MW3	6/17/09		ND	ND	0.21	0.091			350		ND	2.20	0.091	31	30				3.0
MW3	9/22/09		ND	ND	0.08	0.095			340		ND	2.80	0.120						
MW3	12/15/09		ND	ND	0.08	0.13			350		ND	1.00	0.100						
MW3	3/24/10		2	ND	0.09	0.1			310		ND	3.10	0.120						
MW3	6/23/10		ND	ND	0.10	0.073			320		ND	3.20	0.110						
MW3	9/24/10		ND	ND	0.04	0.071			350		0.0078	2.60	0.120						
MW3	12/14/10		23		0.06	0.076			300		ND	3.70	0.097						
MW3	3/29/11		23		0.03	0.15			300		ND	3.50	0.100						
MW3	6/23/11		ND		0.13	0.080			310		0.0098	3.90	0.100						
MW3	9/15/11		110		0.08	0.11			360		0.0083	3.80	0.099						
MW3	12/13/11		500	ND	0.11	0.070			500		0.013	3.50	0.100						
MW3	3/22/12		300		0.20	0.088			340		0.0076	2.60	0.100						
MW3	6/27/12		2	ND	0.03	0.066			380		ND	3.10	0.100						
MW3	9/25/12		ND		0.10	0.066			390		ND	1.40	0.110						
MW3	12/18/12		ND		0.05	0.088			300		ND	3.00	0.095						
MW3	3/11/13		ND		0.12	0.036			380		ND	1.20	0.12						
MW3	6/26/13		300		0.05	0.14			400		ND	0.77	0.13						
MW3	9/13/13		ND		0.13	0.019			410		ND	0.41	0.13						
MW3	12/12/13		ND		0.04	0.10			410		ND	0.97	0.17						
MW3	3/5/14		23		0.20	0.068			300		ND	1.30	0.12						
MW3	6/16/14		ND		0.37	ND			410		0.0150	ND	0.13						
MW3	9/17/14		ND		0.18	ND			400		ND	0.32	0.15						

Historical Groundwater Quality Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Date	Method/Analysis	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
		Units	MPN/100ml	MPN/100ml	mg/L	mg/L	units	uM/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
		MCL	2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	SM 5310 B
MW3	12/19/14		ND		0.30	0.034			360		ND	0.84	0.11						
MW3	3/23/15		ND		0.14	ND			420		0.0027	0.76	0.098						
MW3	6/10/15		ND		0.24	ND			440		0.0026	0.64	0.096						
MW3	9/16/15		ND		0.11	0.031			410		0.0028	0.90	0.130						
MW3	12/15/15		ND		0.04	0.088			430		0.0035	0.83	0.093						
MW3	3/29/16		14		0.23	ND			400		ND	0.39	0.073						
MW3	6/20/16		ND		0.05	ND			440		-0.0029	0.59	0.089						
MW3	9/7/16		ND		0.38	0.029			450		0.0020	0.37	0.120						
MW3	12/7/16		ND		0.17	0.044			400		0.0024	0.46	0.120						
MW3	3/7/17		ND		0.06	ND			370		0.0021	0.53	0.079						
MW3	6/15/17		ND		0.22	0.14			410		0.0026	0.68	0.084						
MW3	9/14/17	> 1600			0.05	0.16			410		0.0032	2.200	0.130						
MW3	12/6/17	540			0.40	0.038			440		0.0019	0.340	0.110						
MW3	3/9/18	10			0.69	0.059			480		0.0014	ND	0.086						
MW3	6/15/18	540			0.58	0.059			550		0.00074	ND	0.150						
MW3	9/17/18	49			0.60	0.12			490		0.0011	ND	0.17						
MW3	12/17/18	1600			0.54	0.210			500		ND	ND	0.31						
MW3	3/18/19	12			0.60	0.062			440		0.00078	ND	0.11						
MW3	5/13/19	> 1600			0.55	0.09			480		0.0010	ND	0.13						
MW3	9/16/19	920			0.97	0.11			550		0.00088	0.34	0.17						
MW3	12/16/19	920			0.92	ND			430		0.0011	0.13	0.14						
MW3	3/16/19	170			1.20	0.069			490		ND	0.065	0.14						
MW3	6/16/20	33			0.79	0.077			480		ND	0.053	0.16						
MW3	9/14/20	22			1.10	0.084			510		ND	ND	0.21						
MW3	12/15/20	27			1.70	0.11			490		ND	ND	0.21						

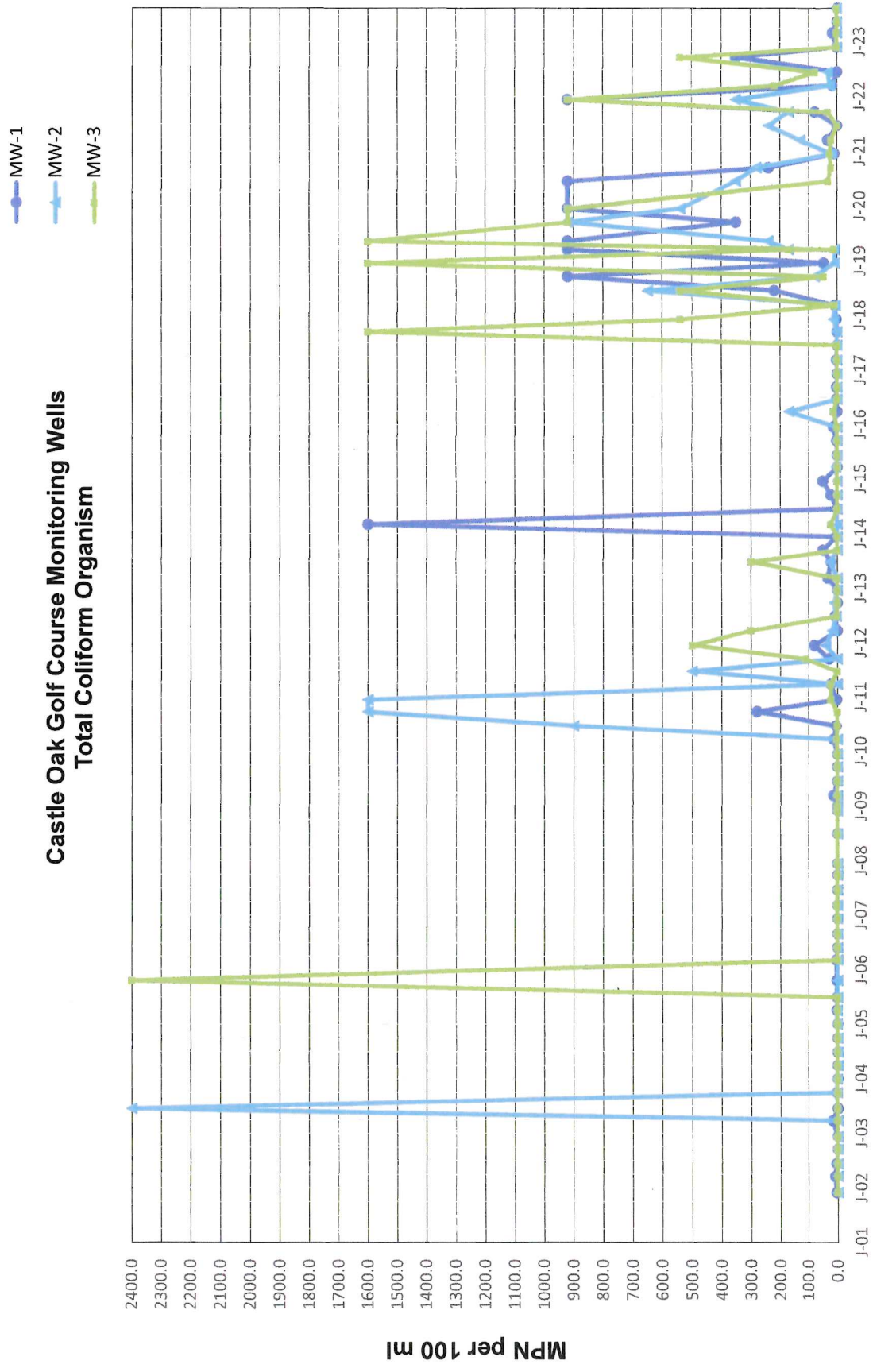
Historical Groundwater Quality Data
Castle Oaks Golf Course
City of Ione
R5-1993-0240-002

Sample ID	Date	Total Coliform Bacteria (TCO)	Fecal Coliform Bacteria (FCO)	Nitrate as N (NO ₃ -N)	Ammonia as N (NH ₄ -N)	pH	EC	Total Dissolved Solids (TDS)	VOC	Dissolved Arsenic	Dissolved Iron	Dissolved Manganese	Chloride	Total Sodium	Total Arsenic	Total Iron	Total Manganese	TOC
Method/Analysis		SM 9221 B	SM 9221 E	EPA 300.0	SM 4500	SM 4500 H+	SM 2510 B	SM 2540 C	EPA 524.2	EPA 200.8	EPA 200.7	EPA 200.7	EPA 300.0	EPA 200.7	EPA 200.8	EPA 200.7	SM 5310 B	
Units		MPN/100ml	MPN/100ml	mg/L	mg/L	units	uohs/cm	mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MCL		2.2	2.2	10			900-1600	500		0.010	0.3	0.05	250		0.010	0.3	0.05	
MW3	3/17/21	21		1.40	0.071			470		ND	ND	0.080						
MW3	6/22/21	ND		1.50	0.14			530		0.00066	ND	0.11						
MW3	9/21/21	33		1.80	0.10			530		ND	ND	0.18						
MW3	12/14/21	920		0.85	0.17			460		0.0013	ND	0.13						
MW3	3/16/22	220		0.75	0.088			480		0.00074	ND	0.083						
MW3	6/15/22	79		1.00	0.088			560		0.00074	ND	0.11						
MW3	9/22/22	540		1.60	0.084			530		0.00083	ND	0.14						
MW3	11/28/22	1.1		0.70	ND	6.8	610	525		ND	ND	0.12						
MW3	03/02/23	2		0.70	ND	6.5	776	560	ND	ND	ND	0.11						
MW3	05/17/23	<1.8		1.1	ND	6.5	811	160	ND	ND	ND	0.14						
MW3	08/14/23	2		0.3	ND	6.5	687	560	ND	ND	ND	0.10						

NM - Not Measured

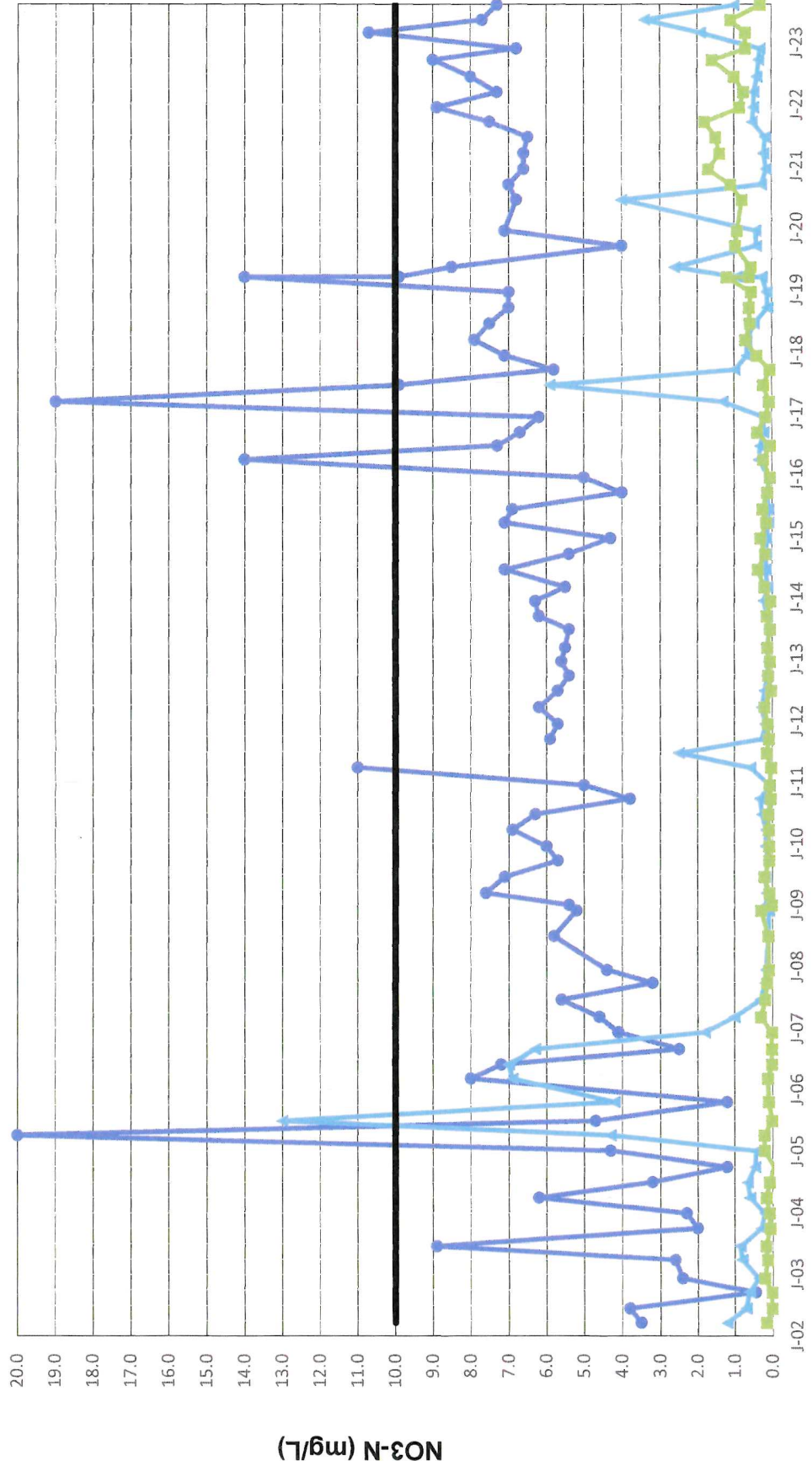
ND - Not Detected

**Castle Oak Golf Course Monitoring Wells
Total Coliform Organism**



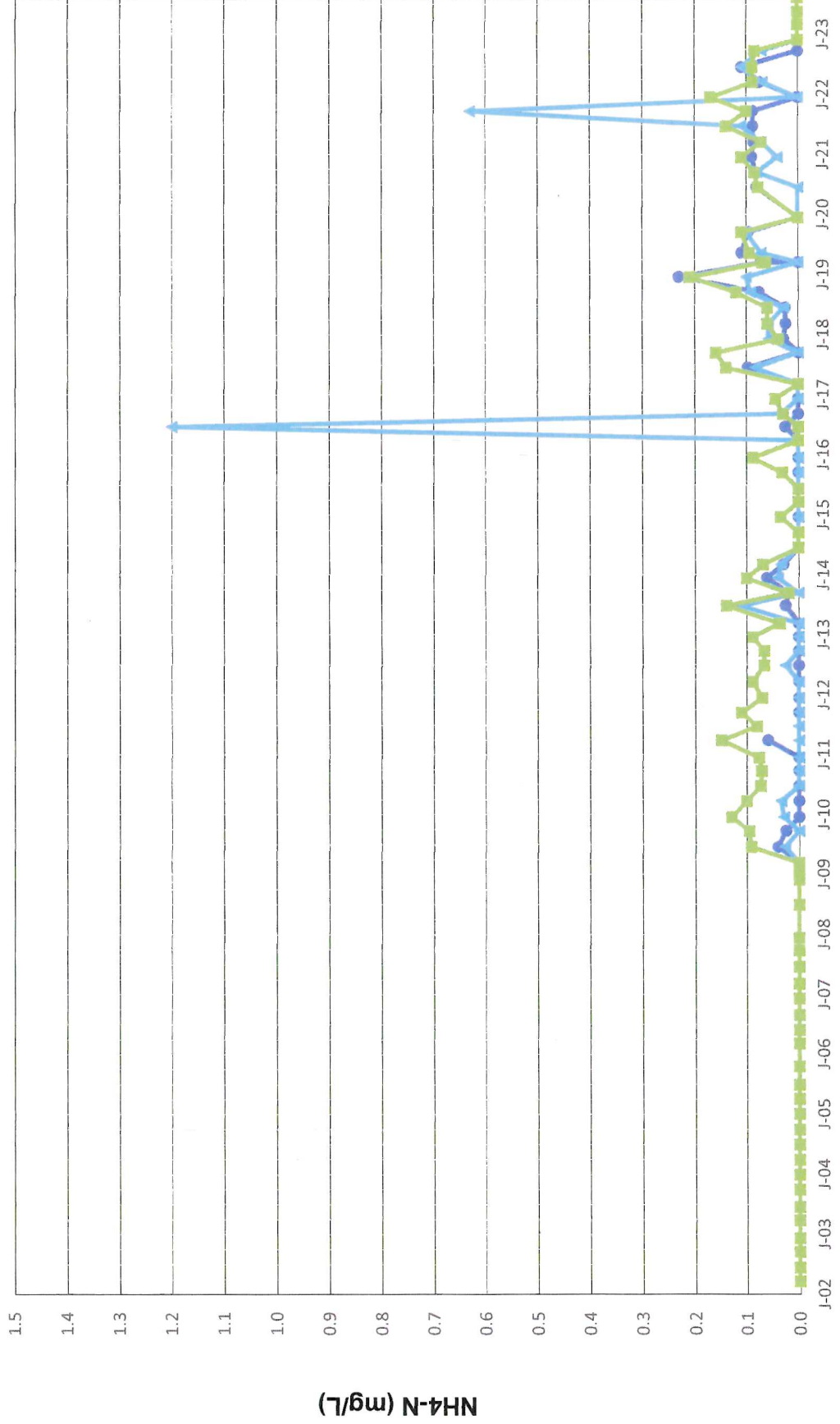
**Castle Oak Golf Course Monitoring Wells
Nitrate as N (NO3-N)**

● MW-1
● MW-2
■ MW-3
— Primary MCL



**Castle Oak Golf Course Monitoring Wells
Ammonia as N (NH4-N)**

MW-1
MW-2
MW-3

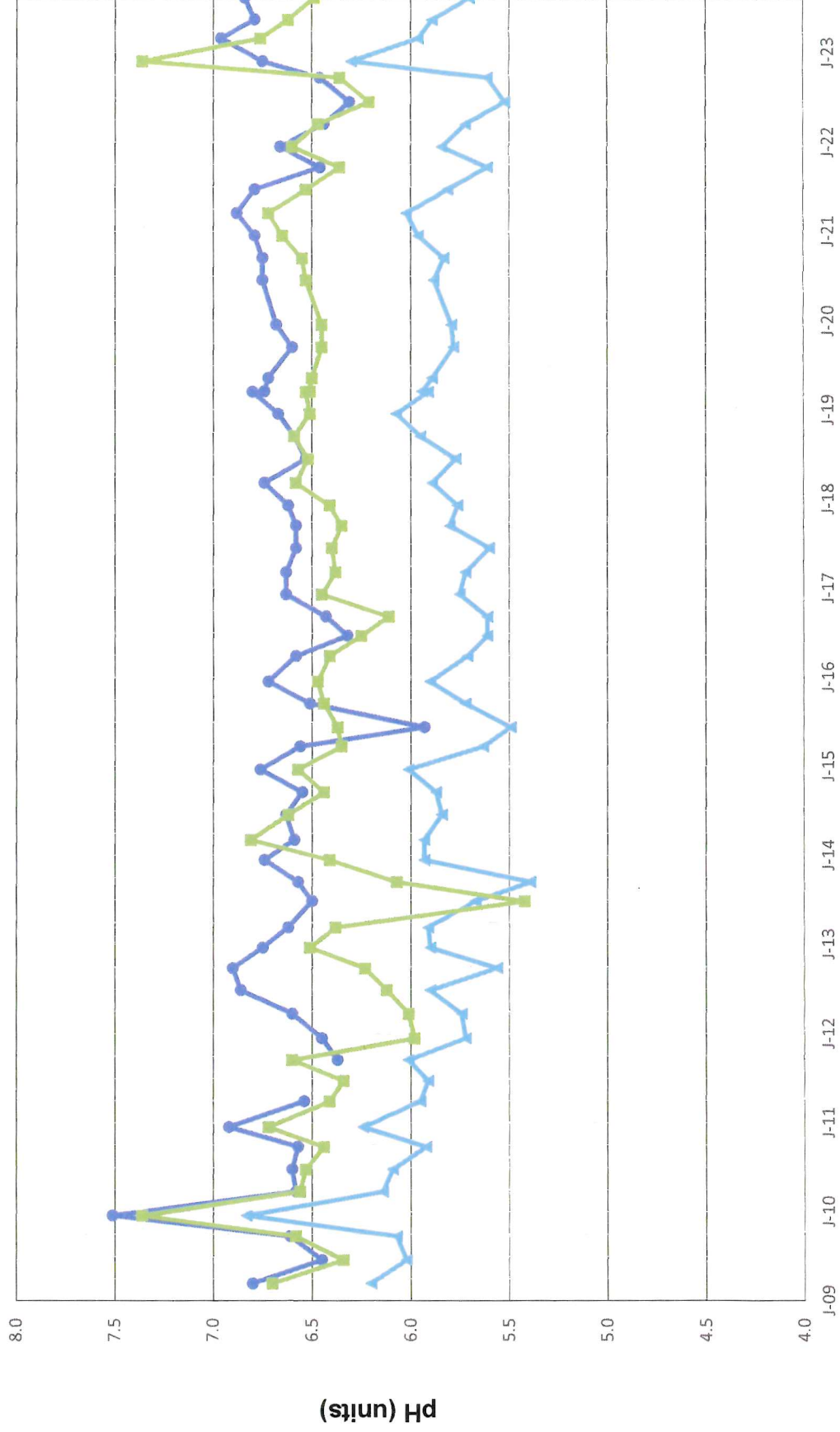


**Castle Oak Golf Course Monitoring Wells
Field pH**

MW-1

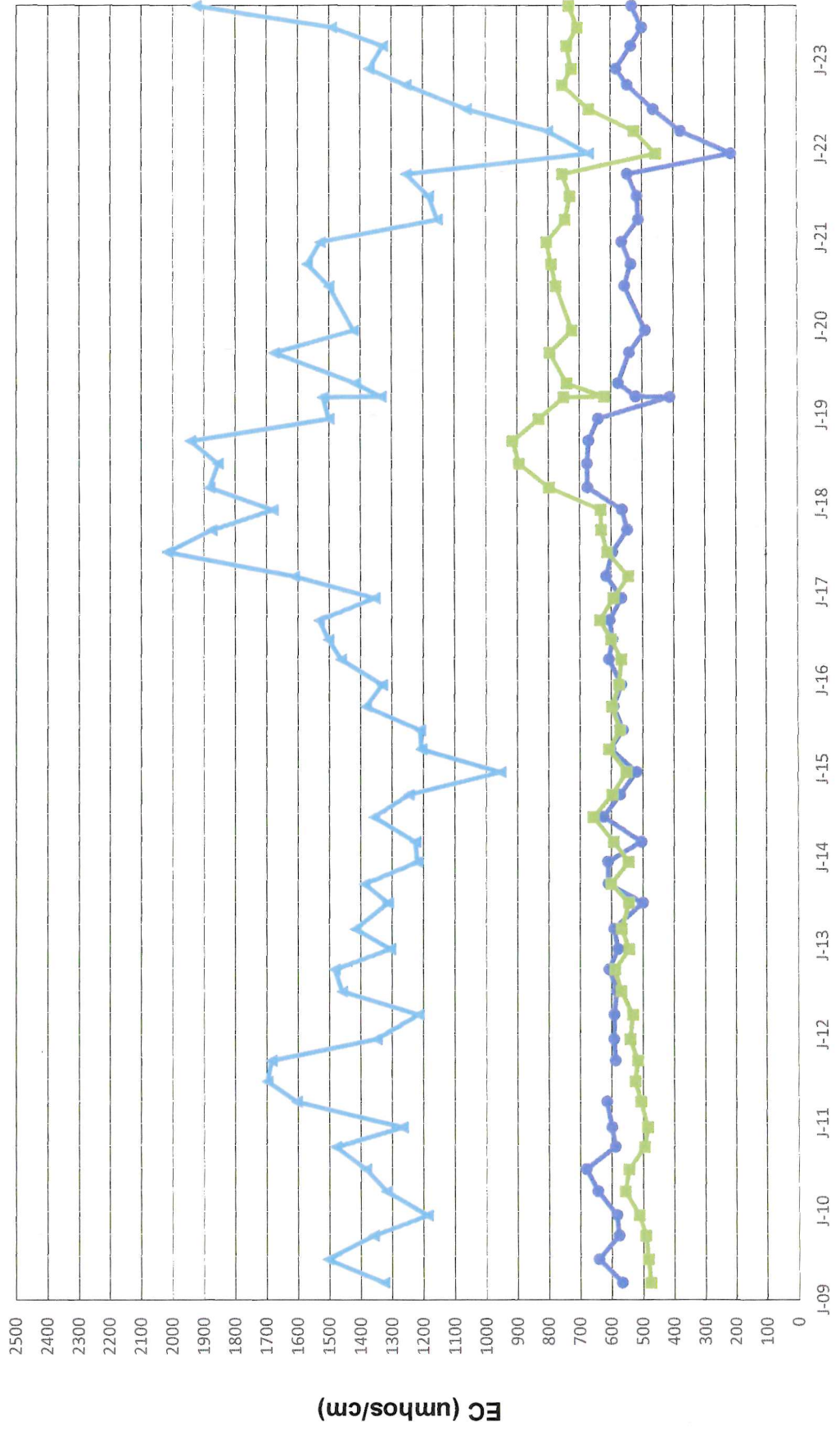
MW-2

MW-3



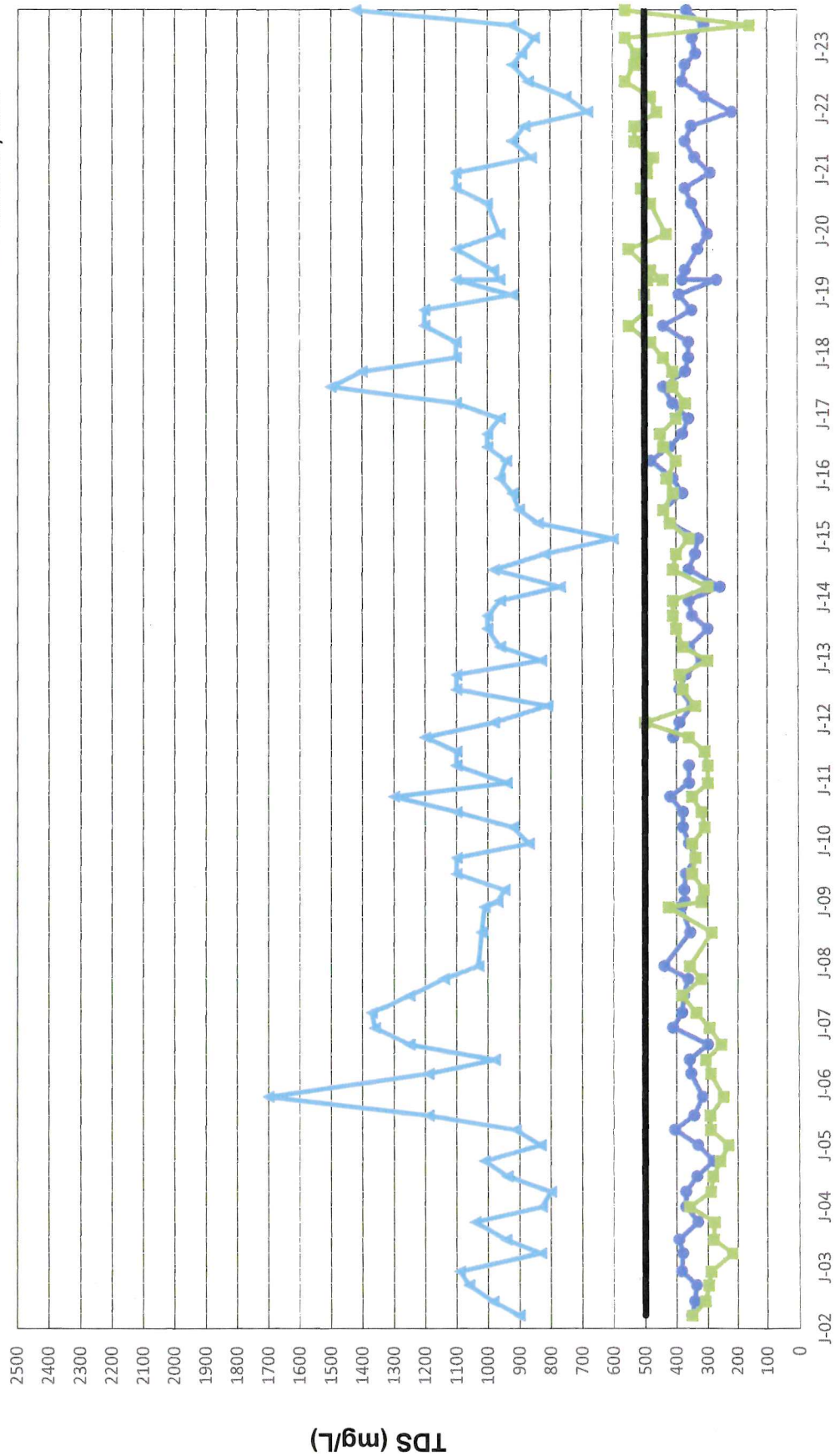
**Castle Oak Golf Course Monitoring Wells
Field Electrical Conductivity (EC)**

MW-1
MW-2
MW-3



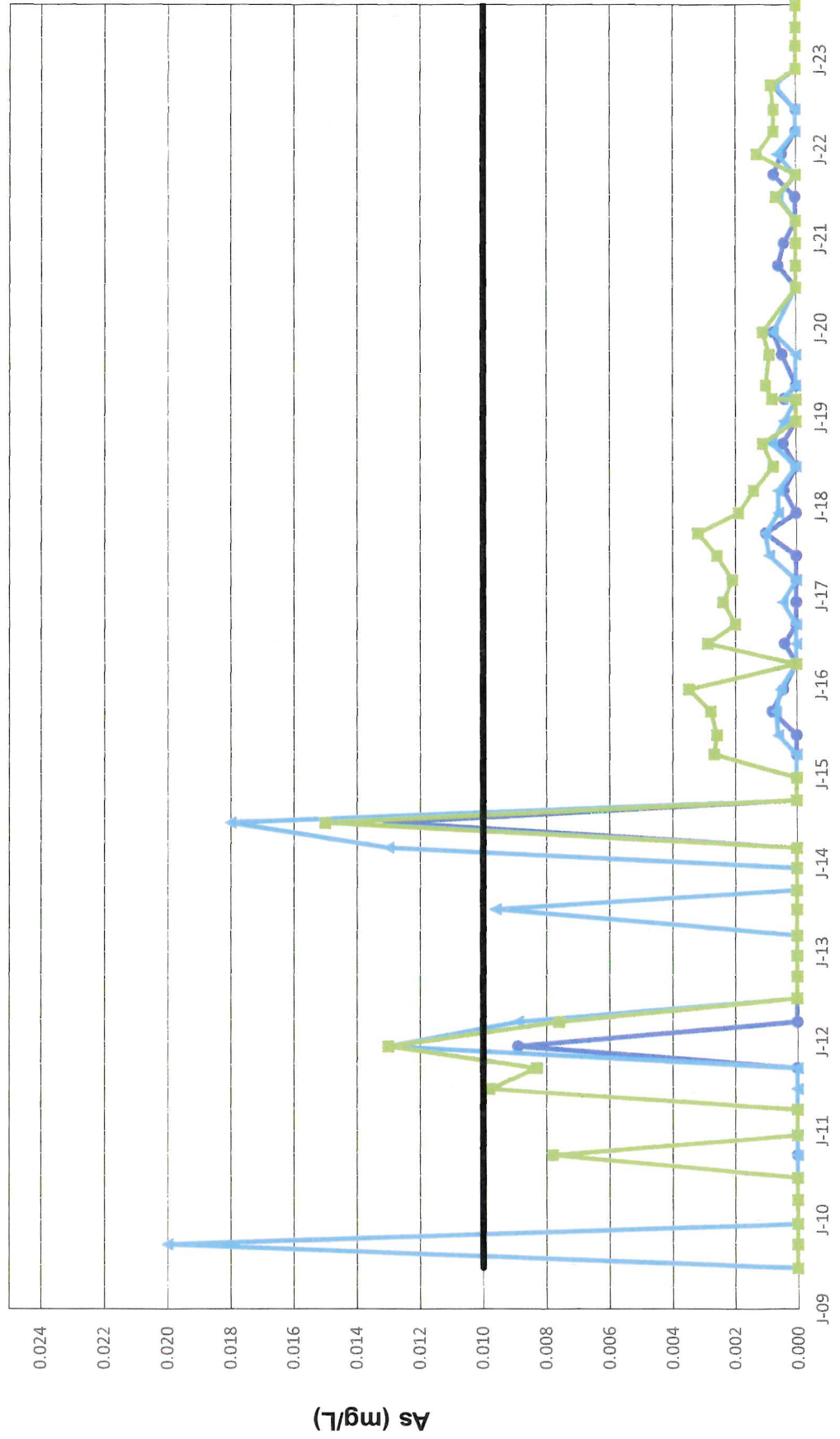
**Castle Oak Golf Course Monitoring Wells
Total Dissolved Solids (TDS)**

● MW-1
● MW-2
● MW-3
— Secondary MCL



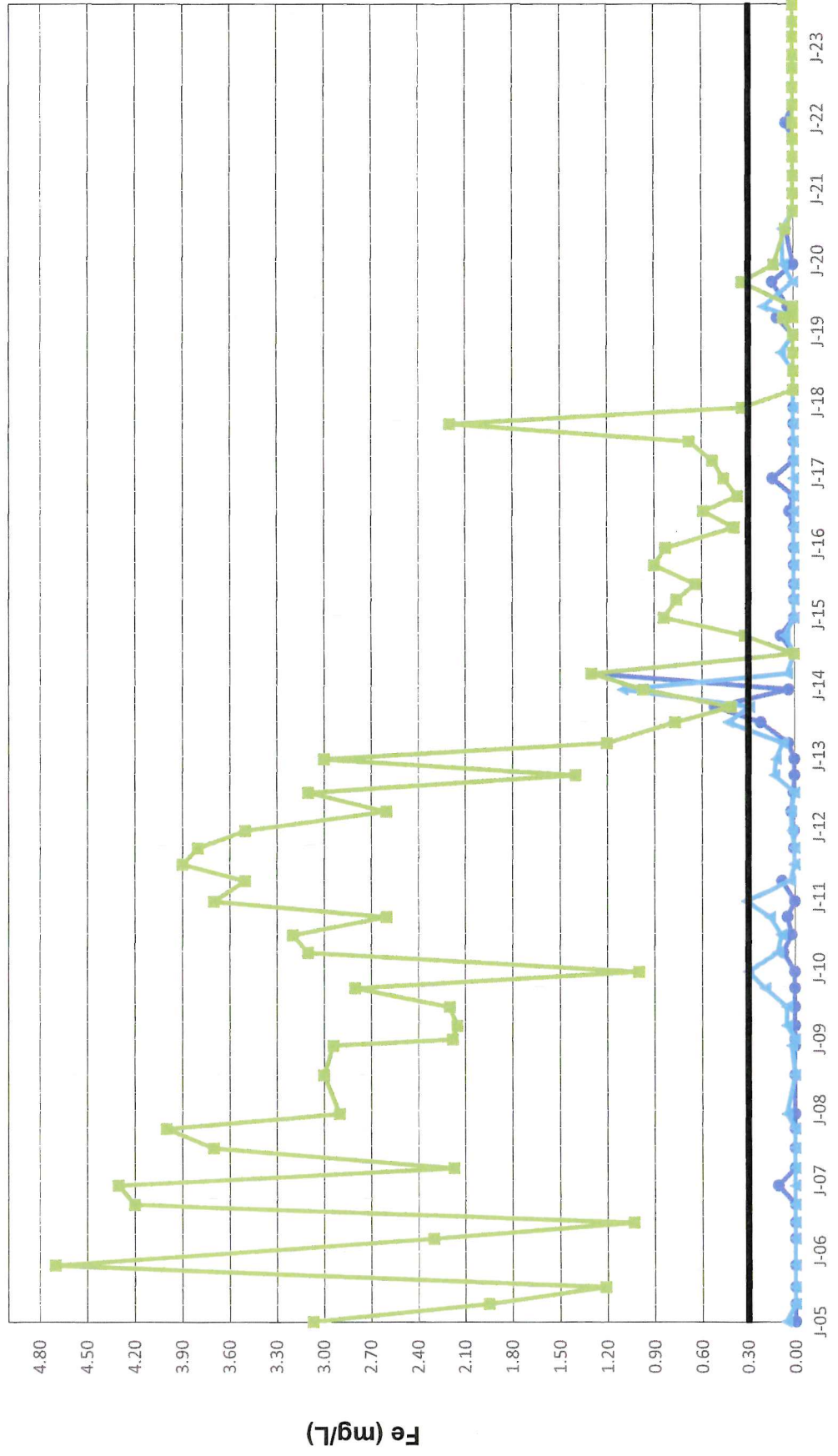
**Castle Oak Golf Course Monitoring Wells
Dissolved Arsenic (As)**

MW-1
MW-2
MW-3
Primary MCL



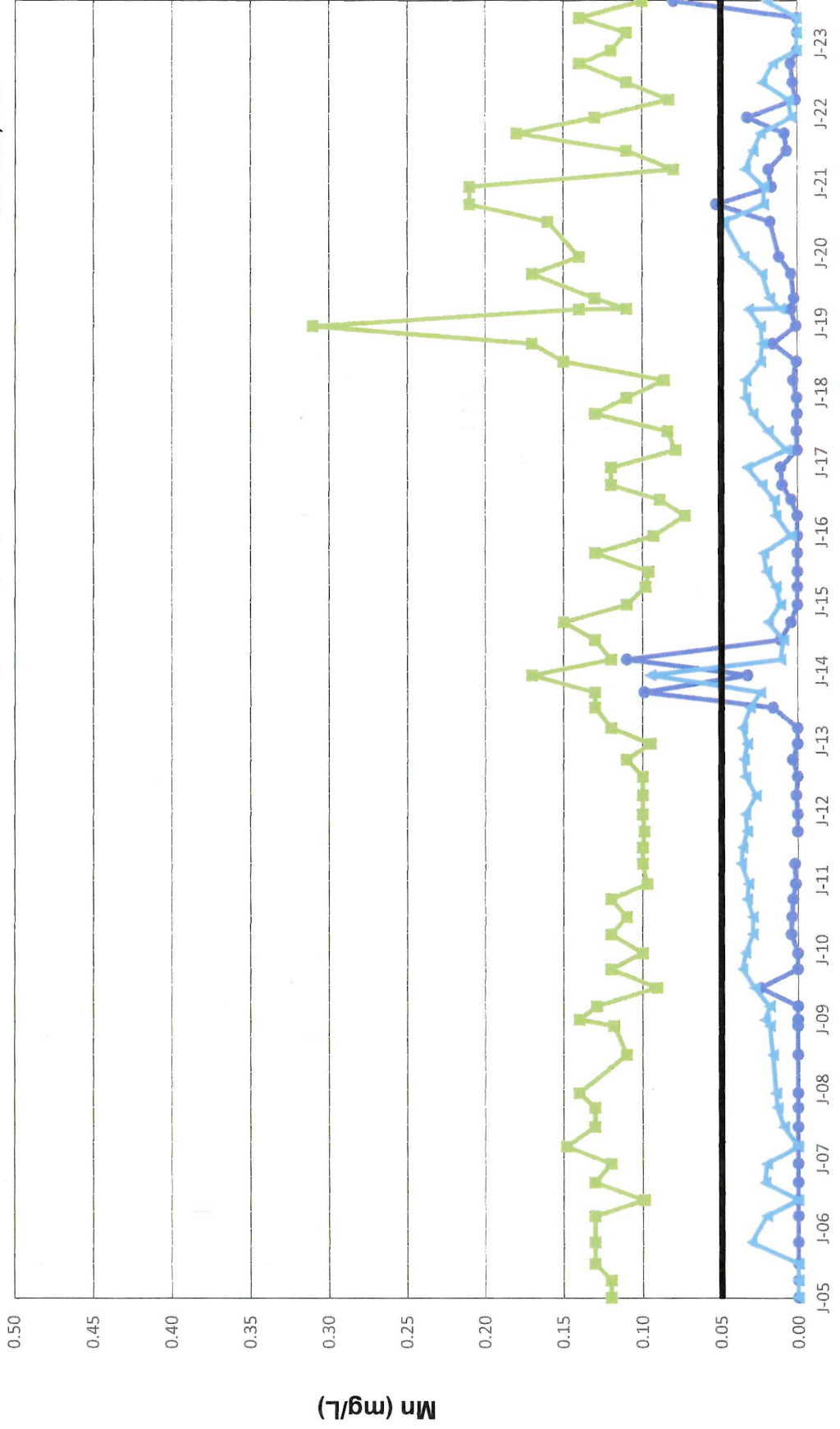
Castle Oak Golf Course Monitoring Wells
Dissolved Iron (Fe)

MW-1
MW-2
MW-3
Secondary MCL



**Castle Oak Golf Course Monitoring Wells
Dissolved Manganese (Mn)**

MW-1
MW-2
MW-3
Secondary MCL



Attachment 5
Reports of Water Analysis
(Monitoring Wells)

DELLAVALLE™
LABORATORY INC

1910 W. McKinley Avenue, Suite 110 • Fresno, California 93728-1298
Phone (559) 233-6129 • (800) 228-9896 • Fax (559) 268-8174
website: dellavallelab.com

DELLAVALLETM

LABORATORY INC

City of Ione
1 East Main Street
Ione, CA 95640

Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23H1313-01	CO MW-1	Monitoring Well	Antonio Del-Tech		08/14/2023 10:32
23H1313-02	CO MW-2	Monitoring Well	Antonio Del-Tech		08/14/2023 10:01
23H1313-03	CO MW-3	Monitoring Well	Antonio Del-Tech		08/14/2023 9:22

Default Cooler Temperature on Receipt °C: 3.3
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.



Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

The results in this report apply to the samples as received and were analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. Dellavalle Laboratory, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

DELLAVALLETM

LABORATORY INC

City of Ione
1 East Main Street
Ione, CA 95640

Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf
Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Sample Results

Sample: CO MW-1
23H1313-01 (Water)

Sampled: 8/14/2023 10:32
Sampled By: Antonio Del-Tech

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	0.50	mmhos/cm	0.01	1		08/15/23 17:00	SM 2510 B		BEH0723
Electrical Conductivity umhos	504	umhos/cm	10.0	1		08/15/23 17:00	SM 2510 B		BEH0723
Iron	ND	mg/L	0.10	1		08/16/23 14:15	EPA 200.7		BEH0771
Manganese	0.08	mg/L	0.02	1		08/16/23 14:15	EPA 200.7		BEH0771
Ammonia (as N)	ND	mg/L	0.500	1		08/16/23 10:57	SM 4500-NH3 H		BEH0702
Nitrite Nitrogen as NO2N	ND	mg/L	0.4	1	1	08/15/23 19:48	EPA 300.0		BEH0726
Nitrate Nitrogen as NO3N	7.3	mg/L	0.1	1	10	08/15/23 19:48	EPA 300.0		BEH0726
pH	6.9	units	1.0	1		08/15/23 17:00	SM 4500-H+	H	BEH0723
Total Filterable Solids (TDS)	365	mg/L	10.0	1		08/16/23 15:09	SM 2540 C		BEH0718

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City of Ione
1 East Main Street
Ione, CA 95640

Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Sample Results (Continued)

**Sample: CO MW-2
23H1313-02 (Water)**

Sampled: 8/14/2023 10:01
Sampled By: Antonio Del-Tech

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	1.84	mmhos/cm	0.01	1		08/15/23 17:02	SM 2510 B		BEH0723
Electrical Conductivity umhos	1840	umhos/cm	10.0	1		08/15/23 17:02	SM 2510 B		BEH0723
Iron	ND	mg/L	0.10	1		08/16/23 14:16	EPA 200.7		BEH0771
Manganese	0.02	mg/L	0.02	1		08/16/23 14:16	EPA 200.7		BEH0771
Ammonia (as N)	ND	mg/L	0.500	1		08/16/23 10:58	SM 4500-NH3 H		BEH0702
Nitrite Nitrogen as NO2N	ND	mg/L	0.4	1	1	08/15/23 20:09	EPA 300.0		BEH0726
Nitrate Nitrogen as NO3N	1.0	mg/L	0.1	1	10	08/15/23 20:09	EPA 300.0		BEH0726
pH	5.9	units	1.0	1		08/15/23 17:02	SM 4500-H+	H	BEH0723
Total Filterable Solids (TDS)	1420	mg/L	10.0	1		08/16/23 15:09	SM 2540 C		BEH0718

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LABORATORY INC

City of Ione
1 East Main Street
Ione, CA 95640

Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Sample Results (Continued)

Sample: **CO MW-3**
23H1313-03 (Water)

Sampled: 8/14/2023 9:22
Sampled By: Antonio Del-Tech

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	0.69	mmhos/cm	0.01	1		08/15/23 17:03	SM 2510 B		BEH0723
Electrical Conductivity umhos	687	umhos/cm	10.0	1		08/15/23 17:03	SM 2510 B		BEH0723
Iron	ND	mg/L	0.10	1		08/16/23 14:17	EPA 200.7		BEH0771
Manganese	0.10	mg/L	0.02	1		08/16/23 14:17	EPA 200.7		BEH0771
Ammonia (as N)	ND	mg/L	0.500	1		08/16/23 10:59	SM 4500-NH3 H		BEH0702
Nitrite Nitrogen as NO2N	ND	mg/L	0.4	1	1	08/15/23 20:29	EPA 300.0		BEH0726
Nitrate Nitrogen as NO3N	0.3	mg/L	0.1	1	10	08/15/23 20:29	EPA 300.0		BEH0726
pH	6.5	units	1.0	1		08/15/23 17:03	SM 4500-H+	H	BEH0723
Total Filterable Solids (TDS)	560	mg/L	10.0	1		08/16/23 15:09	SM 2540 C		BEH0718

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LABORATORY INC

City of Ione
1 East Main Street
Ione, CA 95640

Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf
Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control

Analyte	Result/Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0702									
Blank (BEH0702-BLK1)									
Ammonia (as N)	ND	0.500	mg/L	Prepared: 8/15/2023 Analyzed: 8/16/2023					
Blank (BEH0702-BLK2)									
Ammonia (as N)	ND	0.500	mg/L	Prepared: 8/15/2023 Analyzed: 8/16/2023					
LCS (BEH0702-BS1)									
Ammonia (as N)	10.4	0.500	mg/L	9.990		104	90-110		
LCS (BEH0702-BS2)									
Ammonia (as N)	10.1	0.500	mg/L	9.990		101	90-110		
Duplicate (BEH0702-DUP1)									
Ammonia (as N)	ND	0.500	mg/L	Source: 23H1173-02		Prepared: 8/15/2023 Analyzed: 8/16/2023			10
Duplicate (BEH0702-DUP2)									
Ammonia (as N)	ND	0.500	mg/L	Source: 23H1316-04		Prepared: 8/15/2023 Analyzed: 8/16/2023			10
Matrix Spike (BEH0702-MS1)									
Ammonia (as N)	10.9	0.500	mg/L	9.990	ND	109	90-110		
Matrix Spike (BEH0702-MS2)									
Ammonia (as N)	10.3	0.500	mg/L	9.990	ND	103	90-110		
Reference (BEH0702-SRM1)									
Ammonia (as N)	5.94		mg/L	5.470		109	90-110		

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Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0718									
Blank (BEH0718-BLK1)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	ND	10.0	mg/L						
LCS (BEH0718-BS1)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	22.5	10.0	mg/L	2000		1.12	0-200		
Duplicate (BEH0718-DUP1)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	2540	10.0	mg/L		2420			4.84	10
Duplicate (BEH0718-DUP2)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	310	10.0	mg/L		290			6.67	10
Reference (BEH0718-SRM1)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	320		mg/L	325.0		98.5	90-110		
Reference (BEH0718-SRM2)				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Total Filterable Solids (TDS)	487		mg/L	495.0		98.3	90-110		

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Submitted By: Todd Waklee
Ranch: R5-1993-0240-002 Castle Oak Golf Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control (Continued)

Analyte	Result/Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0723									
Blank (BEH0723-BLK1)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	ND	0.01	mmhos/cm						
pH	5.4	1.0	units						
Electrical Conductivity umhos	ND	10.0	umhos/cm						
Blank (BEH0723-BLK2)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	ND	0.01	mmhos/cm						
pH	7.3	1.0	units						
Electrical Conductivity umhos	ND	10.0	umhos/cm						
Blank (BEH0723-BLK3)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	ND	0.01	mmhos/cm						
pH	6.7	1.0	units						
Electrical Conductivity umhos	ND	10.0	umhos/cm						
Duplicate (BEH0723-DUP1)					Source: 23H0088-01 Prepared & Analyzed: 8/15/2023				
pH	8.4	1.0	units		8.4			0.237	10
Electrical Conductivity	1.25	0.01	mmhos/cm		1.26			0.748	10
Electrical Conductivity umhos	1250	10.0	umhos/cm		1260			0.748	10
Duplicate (BEH0723-DUP2)					Source: 23H1361-04 Prepared & Analyzed: 8/15/2023				
pH	7.5	1.0	units		7.5			0.266	10
Electrical Conductivity	0.43	0.01	mmhos/cm		0.43			1.12	10
Electrical Conductivity umhos	426	10.0	umhos/cm		431			1.12	10
Reference (BEH0723-SRM1)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	523		umhos/cm		538.0	97.1	90-110		
Reference (BEH0723-SRM2)					Prepared & Analyzed: 8/15/2023				
pH	5.8		units		5.820	99.8	28178-101.7		
Reference (BEH0723-SRM3)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	939		umhos/cm		1000	93.9	90-110		
Electrical Conductivity umhos	939		umhos/cm		1000	93.9	90-110		
Reference (BEH0723-SRM4)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	941		umhos/cm		1000	94.1	90-110		
Electrical Conductivity umhos	941		umhos/cm		1000	94.1	90-110		
Reference (BEH0723-SRM5)					Prepared & Analyzed: 8/15/2023				
Electrical Conductivity	950		umhos/cm		1000	95.0	90-110		
Electrical Conductivity umhos	950		umhos/cm		1000	95.0	90-110		

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Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0723 (Continued)									
Reference (BEH0723-SRM6)									
pH	4.0		units	4.000		100	97.5-102.5		
Reference (BEH0723-SRM7)									
pH	4.0		units	4.000		100	97.5-102.5		
Reference (BEH0723-SRM8)									
pH	4.0		units	4.000		100	97.5-102.5		

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Quality Control (Continued)

Analyte	Result/Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0726									
Blank (BEH0726-BLK1)									
				Prepared & Analyzed: 8/15/2023					
Nitrate Nitrogen as NO3N	ND	0.1	mg/L						
Nitrite Nitrogen as NO2N	ND	0.4	mg/L						
Blank (BEH0726-BLK2)									
				Prepared & Analyzed: 8/15/2023					
Nitrate Nitrogen as NO3N	ND	0.1	mg/L						
Nitrite Nitrogen as NO2N	ND	0.4	mg/L						
Blank (BEH0726-BLK3)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Nitrate Nitrogen as NO3N	ND	0.1	mg/L						
Nitrite Nitrogen as NO2N	ND	0.4	mg/L						
LCS (BEH0726-BS1)									
				Prepared & Analyzed: 8/15/2023					
Nitrate Nitrogen as NO3N	5.1	0.1	mg/L	5.000		102	90-110		
Nitrite Nitrogen as NO2N	5.3	0.4	mg/L	5.000		106	90-110		
LCS (BEH0726-BS2)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Nitrate Nitrogen as NO3N	5.1	0.1	mg/L	5.000		103	90-110		
Nitrite Nitrogen as NO2N	5.4	0.4	mg/L	5.000		107	90-110		
Duplicate (BEH0726-DUP1)									
				Source: 23H1316-01		Prepared & Analyzed: 8/15/2023			
Nitrate Nitrogen as NO3N	1.2	0.1	mg/L		1.3			2.91	10
Nitrite Nitrogen as NO2N	ND	0.4	mg/L		ND				10
Duplicate (BEH0726-DUP2)									
				Source: 23H1449-10		Prepared: 8/15/2023 Analyzed: 8/16/2023			
Nitrate Nitrogen as NO3N	0.3	0.1	mg/L		0.3			1.21	10
Nitrite Nitrogen as NO2N	ND	0.4	mg/L		ND				10
Matrix Spike (BEH0726-MS1)									
				Source: 23H1316-01		Prepared & Analyzed: 8/15/2023			
Nitrate Nitrogen as NO3N	6.4	0.1	mg/L	5.000	1.3	102	90-110		
Nitrite Nitrogen as NO2N	5.0	0.4	mg/L	5.000	ND	99.5	90-110		
Matrix Spike (BEH0726-MS2)									
				Source: 23H1449-10		Prepared: 8/15/2023 Analyzed: 8/16/2023			
Nitrate Nitrogen as NO3N	5.5	0.1	mg/L	5.000	0.3	103	90-110		
Nitrite Nitrogen as NO2N	5.1	0.4	mg/L	5.000	ND	101	90-110		
Reference (BEH0726-SRM1)									
				Prepared & Analyzed: 8/15/2023					
Nitrate Nitrogen as NO3N	10.4		mg/L	10.00		104	90-110		
Nitrite Nitrogen as NO2N	1.0		mg/L	1.000		102	90-110		
Reference (BEH0726-SRM2)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Nitrate Nitrogen as NO3N	10.2		mg/L	10.00		102	90-110		
Nitrite Nitrogen as NO2N	1.0		mg/L	1.000		99.5	90-110		

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Ranch: R5-1993-0240-002 Castle Oak Golf
Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control
(Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BEH0726 (Continued)

Reference (BEH0726-SRM3)

Prepared: 8/15/2023 Analyzed: 8/16/2023

Nitrate Nitrogen as NO3N	10.2	mg/L	10.00	102	90-110
Nitrite Nitrogen as NO2N	1.0	mg/L	1.000	99.3	90-110

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Submitted By: Todd Waklee
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Course

Received: 08/15/2023 10:20
Reported: 08/31/2023 10:10

Quality Control (Continued)

Analyte	Result Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEH0771									
Blank (BEH0771-BLK1)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Iron	ND	0.10	mg/L						
Manganese	ND	0.02	mg/L						
Blank (BEH0771-BLK2)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Manganese	ND	0.02	mg/L						
Iron	ND	0.10	mg/L						
LCS (BEH0771-BS1)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Manganese	6.86	0.02	mg/L	7.143		96.1	90-110		
Iron	6.81	0.10	mg/L	7.143		95.4	90-110		
LCS (BEH0771-BS2)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Iron	6.79	0.10	mg/L	7.143		95.0	90-110		
Manganese	6.85	0.02	mg/L	7.143		95.8	90-110		
Duplicate (BEH0771-DUP1)									
				Source: 23H1313-02		Prepared: 8/15/2023 Analyzed: 8/16/2023			
Iron	0.03	0.10	mg/L		0.03			9.03	15
Manganese	0.02	0.02	mg/L		0.02			2.38	15
Matrix Spike (BEH0771-MS1)									
				Source: 23H1313-02		Prepared: 8/15/2023 Analyzed: 8/16/2023			
Iron	6.16	0.10	mg/L	7.143	0.03	85.9	90-110		
Manganese	6.16	0.02	mg/L	7.143	0.02	85.9	90-110		
Matrix Spike (BEH0771-MS2)									
				Source: 23H1386-05		Prepared: 8/15/2023 Analyzed: 8/16/2023			
Iron	6.73	0.10	mg/L	7.143	ND	94.2	90-110		
Manganese	6.84	0.02	mg/L	7.143	0.07	94.8	90-110		
Reference (BEH0771-SRM1)									
				Prepared: 8/15/2023 Analyzed: 8/16/2023					
Iron	1.88		mg/L	1.910		98.3	90-110		
Manganese	1.37		mg/L	1.400		97.8	90-110		

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LABORATORY INC

SUBCONTRACT



08/15/23 10:20

23H1313

Sending Laboratory:

Dellavalle Laboratory Inc.
1910 McKinley, Ste. 110
Fresno, CA 93728-1298
Phone: (559) 233-6129
Fax: (559) 268-8174
Attn: Kaitlynn Shaw
dataentry@dellavallelab.com

After Hours Contact:
Susan Villagran
559-530-1346
Martin James
559-940-2024
PO# 58812

Subcontracted Laboratory:

BSK & Associates - Stanislaus
687 N. Laverne
Fresno, CA 93727
Phone: (559) 497-2888
Fax: 559 485-6935

Turnaround: Standard ☒ Rush ☐
State Forms: Yes ☐ No ☒ Sys#

Work Order: 23H1313

Project: R5-1993-0240-002

Analysis

Sample ID: 23H1313-01 Monitoring Well

Sampled: 8/14/2023 10:32AM

Client Sample Name: CO MW-1

Sampled By: Antonio Del-Tech

Comments

EPA 524 w/MTBE:SO

As Dissolved:SO

Containers Supplied:

Sample ID: 23H1313-02 Monitoring Well

Sampled: 8/14/2023 10:01AM

Client Sample Name: CO MW-2

Sampled By: Antonio Del-Tech

Comments

EPA 524 w/MTBE:SO

As Dissolved:SO

Containers Supplied:

Sample ID: 23H1313-03 Monitoring Well

Sampled: 8/14/2023 9:22AM

Client Sample Name: CO MW-3

Sampled By: Antonio Del-Tech

Comments

EPA 524 w/MTBE:SO

As Dissolved:SO

Containers Supplied:

~~Done~~

Kg
Released By _____ Date 8-16-23

Received By _____ Date _____

Released By _____ Date _____

Received By _____ Date _____



08/15/23 10:20

23H1313

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728

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Purchase Order No

Bill To:

Acct #

Cons #

Results Need By

Name: City of Ione

Billing Address: 1 East Main Street

City: Ione State: CA Zip: 95640

Telephone: 209-274-2412

Cell:

Email: twaklee@ione-ca.com

COPY TO: agedney@ione-ca.com

jdoersen@ione-ca.com

REQUESTED BY: Todd Waklee

PROJECT: R5-1993-0240-002

Site: Castle Oak Golf Course

☐ Co. Health Dept☐ RWQCB ☒ Copy of Chain☐ State Forms ☒ QA/QC Documents

Sampled By:

Antonio / Del-Tech

No. Samples: 3 No of Bottles: 9 bottles + 3-sets of VOAs

Water Type: ☐ Drinking Water☐ Wastewater☐ Ag Water ☐ Groundwater☒ Monitoring Well

Other:

Analysis and Bottles Required: (Please indicate Analysis)

☒ QuarterlypH, EC, TDS, NO₃-N, NO₂-N, NH₄-N, Dissolved Fe,

Dissolved Manganese, Dissolved Arsenic, VOCs (EPA 524)

(1-1 Liter Plastic, Unpreserved) White per site

(1-250 mL Plastic w/H₂SO₄) NH₄-N Yellow per site

(1-250 mL Plastic, Unpreserved) White BSK per site

(1-set of three VOAs w/HCL) Blue BSK per site

☐ Annually

Dissolved General Mineral (No MBAS), Dissolved: As, B, K,

NO₂-N, NH₄-N, TKN, TN, VOCs

(1-1 Liter Plastic, Unpreserved) per site

(1-250 mL Plastic, Unpreserved) As White BSK per site

(1-250 mL Plastic w/H₂SO₄) TKN Yellow per site

(1-set of three VOAs w/HCL) Blue BSK per site

1/2 SENDOUT

	Description of Samples	Date Sampled	Time Sampled	Rec'd Temp °C	Field EC
1	CO MW-1	8/14/23	1032	3.3	
2	CO MW-2	8/14/23	1007	3.1	
3	CO MW-3	8/14/23	022	3.8	
4					

CHAIN OF CUSTODY

Carrier	Signature	Company	Received Date/Time	Relinquished Date/Time
First	[Signature]	Del-Tech	8/14/23 9:00	8/14/23 1:00
Second	[Signature]	DLI	8/14/23 1:02	8/15/23 10:20
Third				
Fourth				

I guarantee that as the client, or on behalf of client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days, overdue accounts will be charged a liquidated damage fee of 2% per month (annually, 24%) or \$5.00 per month whichever is greater. If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Great Alternative to Litigation, Inc. (cal). If the dispute is not resolved in mediation, then the dispute will be submitted to binding arbitration through cal under its Rules and Procedures. The parties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then debtor will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorneys' fees of Dellavalle Laboratory.

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

Lisa will invoice

Signature

Sample received in cooler with ice (coolant)

☒ Yes ☐ No



08/15/23 10:20

23H1313

Shipping Information: Shipped In ☐ Picked-Up ☒ Walk In ☐ DLI Sampler ☐ Other ☐														
☐ Samples refridgerated before pick up					☒ Picked up samples placed in Ice chest									
Container: Ice Chest ☒ Box ☐ None ☐					Refrigerant: Wet Ice ☐ Blue Ice ☐ None ☐									
Samples Preserved with HNO₃ or H₂SO₄ were:					☒ Received Preserved ☐ Preserved Upon Receipt at Laboratory									
Type of Container(s) Received					Sample Number									
					1	2	3	4	5	6	7	8	9	10
Sample Containers for Internal (DLI) Use (Containers that go into the Lab)														
Plastics	100 mL sterile plastic Na ₂ S ₂ O ₃ (Green)													
	250 mL unpreserved (White) Plastic													
	250 mL HNO ₃ (Red) Plastic													
	* pH Value													
	250 mL H ₂ SO ₄ (Yellow) Plastic													
	* pH Value	22	22	22										
	500 mL unpreserved (White) Plastic													
	1 L unpreserved (White) Plastic	1	1	1										
Special	1 L unpreserved (BOD) (Purple) Plastic													
	500mL unpreserved (White) Glass													
	PO ₄ -P Kit													
Other:														
Sample Containers for Subcontracted ("Send Out") Analyses (Containers that go in the Subcontract ("Send Out") Refrigerator)														
Plastics	100 mL sterile plastic Na ₂ S ₂ O ₃ (Green)													
	250 mL unpreserved (White) Plastic	1	1	1										
	250 mL HNO ₃ (Red) Plastic													
	250 mL H ₂ SO ₄ (Yellow) Plastic													
	500 mL HNO ₃ (Red)													
	1 L unpreserved (White) Plastic													
	1 L unpreserved (BOD) (Purple) Plastic													
	1 L HNO ₃ (Red)													
VOA Vials	40 mL VOA, Na ₂ S ₂ O ₃ + MCAA (EPA531)													
	40 mL VOA, Na ₂ S ₂ O ₃ (EPA547)													
	40mL AG VOA unpreserved (White) (Set of 3)													
	40 mL AG VOA, Na ₂ S ₂ O ₃ (Green) (Set of 3)													
	40mL VOA, H ₃ PO ₄ (Set of 3)													
	40 mL VOA, HCl (Blue) (Set of 3)	1	1	1										
	40 mL VOA, Na ₂ S ₂ O ₃ (Green) (Set of 3)													
Glass	250 mL AG unpreserved (White)													
	250 mL AG H ₂ SO ₄ (Yellow)													
	250 mL AG Na ₂ S ₂ O ₃ (Green)													
	250 mL AG Na ₂ S ₂ O ₃ + MCAA													
	500 mL glass unpreserved (White)													
	500 mL AG HCl (Blue)													
	1 L AG unpreserved (White)													
	1 L AG H ₂ SO ₄ (Yellow)													
	1 L AG Na ₂ S ₂ O ₃ (Green)													
	1 L AG HCl (Blue)													
Special	Cr ⁶⁺ - 50mL Plastic w/Borate/HCO ₃ /CO ₃													
	Cyanide - 500 mL NaOH													
	Asbestos - 1L P wrapped in foil (Set of 2)													
	Sulfide - 1 L AG or P NaOH + ZnAc													
	Chlorite/Bromate - 250 mL AG with EDA													
	HAA5 - 250mL AG Ammonium Chlorite													
	DO KIT													
	Other:													
Other:														



AGH2460

General Non-EDT

23H1313 R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54
Project: R5-1993-0240-002

Sample ID: AGH2460-01

Sampled By: Antonio - Del Tech

Sample Description: 23H1313-01 // CO MW-1

Sample Date - Time: 08/14/2023 - 10:32

Matrix: Water

Sample Type: Grab

BSK Associates Laboratory Fresno

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Arsenic - Dissolved (1)	EPA 200.8	ND	2.0	ug/L	1	AGH1727	08/24/23	08/25/23	

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (SDWA Regulated) by GC-MS									
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Benzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Styrene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Toluene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	AGH1481	08/21/23	08/21/23	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total 1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	82 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	85 %	Acceptable range: 70-130 %						

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AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

23H1313 R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54

Project: R5-1993-0240-002

Sample ID: AGH2460-02

Sampled By: Antonio - Del Tech

Sample Description: 23H1313-02 // CO MW-2

Sample Date - Time: 08/14/2023 - 10:01

Matrix: Water

Sample Type: Grab

BSK Associates Laboratory Fresno

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Arsenic - Dissolved (1)	EPA 200.8	ND	2.0	ug/L	1	AGH1727	08/24/23	08/25/23	

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (SDWA Regulated) by GC-MS									
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Benzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Styrene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Toluene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	AGH1481	08/21/23	08/21/23	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total 1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	80 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	84 %	Acceptable range: 70-130 %						

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AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

23H1313 R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54
Project: R5-1993-0240-002

Sample ID: AGH2460-03

Sampled By: Antonio - Del Tech

Sample Description: 23H1313-03 // CO MW-3

Sample Date - Time: 08/14/2023 - 09:22

Matrix: Water

Sample Type: Grab

BSK Associates Laboratory Fresno

Metals

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Arsenic - Dissolved (1)	EPA 200.8	ND	2.0	ug/L	1	AGH1727	08/24/23	08/25/23	

Organics

Analyte	Method	Result	RL	Units	RL Mult	Batch	Prepared	Analyzed	Qual
Volatile Organics (SDWA Regulated) by GC-MS									
1,1,1-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	EPA 524.2	ND	10	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1,2-Trichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,1-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2,4-Trichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloroethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,2-Dichloropropane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
1,4-Dichlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Benzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Carbon Tetrachloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Chlorobenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
cis-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Dichloromethane	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Ethylbenzene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
m,p-Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Methyl-t-butyl ether	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
o-Xylene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Styrene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Tetrachloroethene (PCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Toluene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,2-Dichloroethene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
trans-1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichloroethene (TCE)	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Trichlorofluoromethane	EPA 524.2	ND	5.0	ug/L	1	AGH1481	08/21/23	08/21/23	
Vinyl Chloride	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total 1,3-Dichloropropene	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Total Xylenes	EPA 524.2	ND	0.50	ug/L	1	AGH1481	08/21/23	08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	EPA 524.2	81 %	Acceptable range: 70-130 %						
Surrogate: Bromofluorobenzene	EPA 524.2	84 %	Acceptable range: 70-130 %						

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AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

City of Ione #25573/54
Project: R5-1993-0240-002

BSK Associates Laboratory Fresno

Metals Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 200.8 - Quality Control

Batch: AGH1727

Prepared: 8/24/2023

Prep Method: Filtration - Metals

Analyst: AHS

Blank (AGH1727-BLK1)

Arsenic - Dissolved (1)	ND	2.0	ug/L							08/25/23	
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Blank Spike (AGH1727-BS1)

Arsenic - Dissolved (1)	230	2.0	ug/L	240	ND	97	85-115			08/25/23	
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Blank Spike Dup (AGH1727-BSD1)

Arsenic - Dissolved (1)	230	2.0	ug/L	240	ND	96	85-115	1	20	08/25/23	
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Matrix Spike (AGH1727-MS1), Source: AGH3171-01

Arsenic - Dissolved (1)	230	2.0	ug/L	240	ND	94	70-130			08/25/23	
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Matrix Spike (AGH1727-MS2), Source: AGH3257-01

Arsenic - Dissolved (1)	250	2.0	ug/L	240	15	99	70-130			08/25/23	
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Matrix Spike Dup (AGH1727-MSD1), Source: AGH3171-01

Arsenic - Dissolved (1)	230	2.0	ug/L	240	ND	96	70-130	2	20	08/25/23	
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Matrix Spike Dup (AGH1727-MSD2), Source: AGH3257-01

Arsenic - Dissolved (1)	250	2.0	ug/L	240	15	100	70-130	1	20	08/25/23	
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AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

BSK Associates Laboratory Fresno

City of Ione #25573/54
Project: R5-1993-0240-002

Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: AGH1481

Prepared: 8/21/2023

Prep Method: EPA 524.2

Analyst: CMF

Blank (AGH1481-BLK1)

1,1,1-Trichloroethane	ND	0.50	ug/L							08/21/23	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L							08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10	ug/L							08/21/23	
1,1,2-Trichloroethane	ND	0.50	ug/L							08/21/23	
1,1-Dichloroethane	ND	0.50	ug/L							08/21/23	
1,1-Dichloroethene	ND	0.50	ug/L							08/21/23	
1,2,4-Trichlorobenzene	ND	0.50	ug/L							08/21/23	
1,2-Dichlorobenzene	ND	0.50	ug/L							08/21/23	
1,2-Dichloroethane	ND	0.50	ug/L							08/21/23	
1,2-Dichloropropane	ND	0.50	ug/L							08/21/23	
1,4-Dichlorobenzene	ND	0.50	ug/L							08/21/23	
Benzene	ND	0.50	ug/L							08/21/23	
Carbon Tetrachloride	ND	0.50	ug/L							08/21/23	
Chlorobenzene	ND	0.50	ug/L							08/21/23	
cis-1,2-Dichloroethene	ND	0.50	ug/L							08/21/23	
cis-1,3-Dichloropropene	ND	0.50	ug/L							08/21/23	
Dichloromethane	ND	0.50	ug/L							08/21/23	
Ethylbenzene	ND	0.50	ug/L							08/21/23	
m,p-Xylenes	ND	0.50	ug/L							08/21/23	
Methyl-t-butyl ether	ND	0.50	ug/L							08/21/23	
o-Xylene	ND	0.50	ug/L							08/21/23	
Styrene	ND	0.50	ug/L							08/21/23	
Tetrachloroethene (PCE)	ND	0.50	ug/L							08/21/23	
Toluene	ND	0.50	ug/L							08/21/23	
trans-1,2-Dichloroethene	ND	0.50	ug/L							08/21/23	
trans-1,3-Dichloropropene	ND	0.50	ug/L							08/21/23	
Trichloroethene (TCE)	ND	0.50	ug/L							08/21/23	
Trichlorofluoromethane	ND	5.0	ug/L							08/21/23	
Vinyl Chloride	ND	0.50	ug/L							08/21/23	
Total 1,3-Dichloropropene	ND	0.50	ug/L							08/21/23	
Total Xylenes	ND	0.50	ug/L							08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	40			50		79	70-130			08/21/23	
Surrogate: Bromofluorobenzene	42			50		84	70-130			08/21/23	

Blank Spike (AGH1481-BS1)

1,1,1-Trichloroethane	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
1,1,2,2-Tetrachloroethane	9.2	0.50	ug/L	10	ND	92	70-130			08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.7	10	ug/L	10	ND	97	70-130			08/21/23	
1,1,2-Trichloroethane	9.3	0.50	ug/L	10	ND	93	70-130			08/21/23	
1,1-Dichloroethane	9.6	0.50	ug/L	10	ND	96	70-130			08/21/23	
1,1-Dichloroethene	9.9	0.50	ug/L	10	ND	99	70-130			08/21/23	
1,2,4-Trichlorobenzene	9.4	0.50	ug/L	10	ND	94	70-130			08/21/23	
1,2-Dichlorobenzene	9.1	0.50	ug/L	10	ND	91	70-130			08/21/23	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

City of Lone #25573/54
Project: R5-1993-0240-002

BSK Associates Laboratory Fresno

Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: AGH1481

Prepared: 8/21/2023

Prep Method: EPA 524.2

Analyst: CMF

Blank Spike (AGH1481-BS1)

1,2-Dichloroethane	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
1,2-Dichloropropane	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
1,4-Dichlorobenzene	9.2	0.50	ug/L	10	ND	92	70-130			08/21/23	
Benzene	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
Carbon Tetrachloride	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
Chlorobenzene	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
cis-1,2-Dichloroethene	9.2	0.50	ug/L	10	ND	92	70-130			08/21/23	
cis-1,3-Dichloropropene	9.4	0.50	ug/L	10	ND	94	70-130			08/21/23	
Dichloromethane	10	0.50	ug/L	10	ND	103	70-130			08/21/23	
Ethylbenzene	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
m,p-Xylenes	20	0.50	ug/L	20	ND	98	70-130			08/21/23	
Methyl-t-butyl ether	18	0.50	ug/L	20	ND	92	70-130			08/21/23	
o-Xylene	9.6	0.50	ug/L	10	ND	96	70-130			08/21/23	
Styrene	9.6	0.50	ug/L	10	ND	96	70-130			08/21/23	
Tetrachloroethene (PCE)	9.5	0.50	ug/L	10	ND	95	70-130			08/21/23	
Toluene	9.4	0.50	ug/L	10	ND	94	70-130			08/21/23	
trans-1,2-Dichloroethene	9.9	0.50	ug/L	10	ND	99	70-130			08/21/23	
trans-1,3-Dichloropropene	9.3	0.50	ug/L	10	ND	93	70-130			08/21/23	
Trichloroethene (TCE)	9.4	0.50	ug/L	10	ND	94	70-130			08/21/23	
Trichlorofluoromethane	9.4	5.0	ug/L	10	ND	94	70-130			08/21/23	
Vinyl Chloride	9.8	0.50	ug/L	10	ND	98	70-130			08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	41			50		82	70-130			08/21/23	
Surrogate: Bromofluorobenzene	43			50		87	70-130			08/21/23	

Blank Spike Dup (AGH1481-BSD1)

1,1,1-Trichloroethane	9.2	0.50	ug/L	10	ND	92	70-130	3	30	08/21/23	
1,1,2,2-Tetrachloroethane	9.2	0.50	ug/L	10	ND	92	70-130	0	30	08/21/23	
1,1,2-Trichloro-1,2,2-trifluoroethane	9.5	10	ug/L	10	ND	95	70-130	2	30	08/21/23	
1,1,2-Trichloroethane	9.0	0.50	ug/L	10	ND	90	70-130	3	30	08/21/23	
1,1-Dichloroethane	9.3	0.50	ug/L	10	ND	93	70-130	3	30	08/21/23	
1,1-Dichloroethene	9.6	0.50	ug/L	10	ND	96	70-130	3	30	08/21/23	
1,2,4-Trichlorobenzene	9.1	0.50	ug/L	10	ND	91	70-130	4	30	08/21/23	
1,2-Dichlorobenzene	8.9	0.50	ug/L	10	ND	89	70-130	2	30	08/21/23	
1,2-Dichloroethane	9.1	0.50	ug/L	10	ND	91	70-130	4	30	08/21/23	
1,2-Dichloropropane	9.2	0.50	ug/L	10	ND	92	70-130	4	30	08/21/23	
1,4-Dichlorobenzene	9.0	0.50	ug/L	10	ND	90	70-130	3	30	08/21/23	
Benzene	9.2	0.50	ug/L	10	ND	92	70-130	3	30	08/21/23	
Carbon Tetrachloride	9.1	0.50	ug/L	10	ND	91	70-130	3	30	08/21/23	
Chlorobenzene	9.2	0.50	ug/L	10	ND	92	70-130	3	30	08/21/23	
cis-1,2-Dichloroethene	8.9	0.50	ug/L	10	ND	89	70-130	4	30	08/21/23	
cis-1,3-Dichloropropene	9.1	0.50	ug/L	10	ND	91	70-130	3	30	08/21/23	
Dichloromethane	9.8	0.50	ug/L	10	ND	98	70-130	5	30	08/21/23	
Ethylbenzene	9.2	0.50	ug/L	10	ND	92	70-130	3	30	08/21/23	

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AGH2460 FINAL 08292023 1404



AGH2460

General Non-EDT

BSK Associates Laboratory Fresno

City of Ione #25573/54
Project: R5-1993-0240-002

Organics Quality Control Report

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Date Analyzed	Qual
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EPA 524.2 - Quality Control

Batch: AGH1481

Prepared: 8/21/2023

Prep Method: EPA 524.2

Analyst: CMF

Blank Spike Dup (AGH1481-BSD1)

m,p-Xylenes	19	0.50	ug/L	20	ND	95	70-130	3	30	08/21/23	
Methyl-t-butyl ether	18	0.50	ug/L	20	ND	90	70-130	2	30	08/21/23	
o-Xylene	9.3	0.50	ug/L	10	ND	93	70-130	3	30	08/21/23	
Styrene	9.4	0.50	ug/L	10	ND	94	70-130	3	30	08/21/23	
Tetrachloroethene (PCE)	9.2	0.50	ug/L	10	ND	92	70-130	2	30	08/21/23	
Toluene	9.1	0.50	ug/L	10	ND	91	70-130	3	30	08/21/23	
trans-1,2-Dichloroethene	9.5	0.50	ug/L	10	ND	95	70-130	4	30	08/21/23	
trans-1,3-Dichloropropene	9.1	0.50	ug/L	10	ND	91	70-130	3	30	08/21/23	
Trichloroethene (TCE)	9.1	0.50	ug/L	10	ND	91	70-130	3	30	08/21/23	
Trichlorofluoromethane	9.2	5.0	ug/L	10	ND	92	70-130	3	30	08/21/23	
Vinyl Chloride	9.5	0.50	ug/L	10	ND	95	70-130	4	30	08/21/23	
Surrogate: 1,2-Dichlorobenzene-d4	41			50		82	70-130			08/21/23	
Surrogate: Bromofluorobenzene	43			50		86	70-130			08/21/23	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AGH2460 FINAL 08292023 1404

DELLAVALLETM

LABORATORY INC

City of Ione
1 East Main Street
Ione, CA 95640

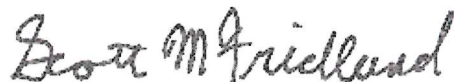
Account# 00-0025573
Account Manager: Lisa Rubin
Submitted By:
Ranch: R5-1993-0240-002

Received: 08/15/2023 10:20
Reported: 08/29/2023 11:09

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23H1310-01	CO MW-1	Monitoring Well	Antonio Del-Tech		8/14/2023 10:32
23H1310-02	CO MW-2	Monitoring Well	Antonio Del-Tech		8/14/2023 10:01
23H1310-03	CO MW-3	Monitoring Well	antonio Del-Tech		8/14/2023 9:22

Default Cooler Temperature on Receipt °C: 8.8
Containers Intact
COC/Labels Agree
Received On Ice



Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

The results in this report apply to the samples as received and were analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. Dellavalle Laboratory, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

1910 W. McKinley Ave Suite 110 Fresno, CA 93728 559-233-6129 www.dellavallelab.com



AGH2022

Bacti Testing

23H1310 - R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54
Project: R5-1993-0240-002

Sample Date - Time: 08/14/2023 - 10:32

Matrix: Water

Sample Type: Routine

Sample ID: AGH2022-01

Sampled By: Antonio - Del Tech

Sample Description: 23H1310-01 // CO MW-1

BSK Associates Laboratory Fresno

Microbiology

Analyte	Method	Result	RL	Units	Batch	Prepared	Analyzed	Qual
Coliform by 3x5 MTF								
Total Coliform	SM 9221B	<1.8	1.8	MPN/100 mL	AGH1063	08/15/23 14:37	08/15/23 14:37	HT1.0

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AGH2022 FINAL 08282023 1657



AGH2022

Bacti Testing

23H1310 - R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54

Project: R5-1993-0240-002

Sample ID: AGH2022-02

Sampled By: Antonio - Del Tech

Sample Description: 23H1310-02 // CO MW-2

Sample Date - Time: 08/14/2023 - 10:01

Matrix: Water

Sample Type: Routine

BSK Associates Laboratory Fresno

Microbiology

Analyte	Method	Result	RL	Units	Batch	Prepared	Analyzed	Qual
Coliform by 3x5 MTF								
Total Coliform	SM 9221B	<1.8	1.8	MPN/100 mL	AGH1063	08/15/23 14:37	08/15/23 14:37	HT1.0

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AGH2022 FINAL 08282023 1657



AGH2022

Bacti Testing

23H1310 - R5-1993-0240-002

Certificate of Analysis

City of Ione #25573/54
Project: R5-1993-0240-002

Sample Date - Time: 08/14/2023 - 09:22

Matrix: Water

Sample Type: Routine

Sample ID: AGH2022-03

Sampled By: Antonio - Del Tech

Sample Description: 23H1310-03 // CO MW-3

BSK Associates Laboratory Fresno

Microbiology

Analyte	Method	Result	RL	Units	Batch	Prepared	Analyzed	Qual
Coliform by 3x5 MTE								
Total Coliform	SM 9221B	2	1.8	MPN/100 mL	AGH1063	08/15/23 14:37	08/15/23 14:37	HT1.0

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AGH2022 FINAL 08282023 1657



08/14/23 14:08

23H1310

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728

www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

Purchase Order No: _____ Bill To: _____ Acct #: 25573 Cons #: 54

Results Need By

Name: _____ City of Ione

Billing Address: 1 East Main Street

City: Ione State: CA Zip: 95640

Telephone: 209-274-2412

Cell: _____

Email: twaklee@ione-ca.com

COPY TO: agedney@ione-ca.com

jdoersen@ione-ca.com

REQUESTED BY: Todd Waklee

PROJECT: R5-1993-0240-002

Site: Castle Oak Golf Course

No. Samples: 3 No of Bottles: 3

Water Type: ☐ Drinking Water ☐ Wastewater
☐ Ag Water ☐ Groundwater ☒ Monitoring Well

Other: _____

Analysis and Bottles Required: (Please indicate Analysis)

Total Coliform, MPN (3x5 MTF; SM 9221B)

No E. coli

(1-100 mL Sterile Plastic w/Na₂S₂O₃) Green bsk per site

Quarterly

☐ Co. Health Dept
☐ RWQCB ☒ Copy of Chain
☐ State Forms ☒ QA/QC Documents

Sampled By: Antonio Dell-Tech

	Description of Samples	Date Sampled	Time Sampled	Rec'd Temp °C	Field EC
1	CO MW-1	8/14/23	1032	6.8	
2	CO MW-2	8/14/23	1001	6.4	
3	CO MW-3	8/14/23	922	6.4	
4					

CHAIN OF CUSTODY

Carrier	Signature	Company	Received Date/Time	Relinquished Date/Time
First	<i>[Signature]</i>	DLT-TECH	8/14/23 3:00	8/14/23 1:00
Second	<i>[Signature]</i>	DLT	8/14/23 7:00	8/15/23 10:20
Third				
Fourth				

I guarantee that as the client, or on behalf of client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days, overdue accounts will be charged a liquidated damage fee of 2% per month (annually 24%) or \$5.00 per month whichever is greater. If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternative to Litigation, Inc. (cal). If the dispute is not resolved in mediation, then the dispute will be submitted to binding arbitration through cal under its Rules and Procedures. The parties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then debtor will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorneys' fees of Dellavalle Laboratory.

Lisa will invoice

Signature

Sample received in cooler with ice (coolant)

☒ Yes ☐ No



08/15/23 10:20

23H1310

Shipping Information: Shipped In ☐ Picked-Up ☒ Walk In ☐ DLI Sampler ☐ Other ☐											
Container: Ice Chest ☒ Box ☐ None ☐					Refrigerant: Wet Ice ☒ Blue Ice ☐ None ☐						
Samples Preserved with HNO₃ or H₂SO₄ were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory											
Type of Container(s) Received		Sample Number									
		1	2	3	4	5	6	7	8	9	10
Sample Containers for Internal (DLI) Use (Containers that go into the Lab)											
Plastics	100 mL sterile plastic Na ₂ S ₂ O ₃ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO ₃ (Red) Plastic										
	* pH Value										
	250 mL H ₂ SO ₄ (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
Other:											
Sample Containers for Subcontracted ("Send Out") Analyses (Containers that go in the Subcontract ("Send Out") Refrigerator)											
Plastics	100 mL sterile plastic Na ₂ S ₂ O ₃ (Green)	1	1	1	1	1	1	1	1	1	1
	250 mL unpreserved (White) Plastic										
	250 mL HNO ₃ (Red) Plastic										
	250 mL H ₂ SO ₄ (Yellow) Plastic										
	500 mL HNO ₃ (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO ₃ (Red)										
VOA Vials	40 mL VOA, Na ₂ S ₂ O ₃ + MCAA (EPA531)										
	40 mL VOA, Na ₂ S ₂ O ₃ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, Na ₂ S ₂ O ₃ (Green) (Set of 3)										
	40mL VOA, H ₃ PO ₄ (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, Na ₂ S ₂ O ₃ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H ₂ SO ₄ (Yellow)										
	250 mL AG Na ₂ S ₂ O ₃ (Green)										
	250 mL AG Na ₂ S ₂ O ₃ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H ₂ SO ₄ (Yellow)										
	1 L AG Na ₂ S ₂ O ₃ (Green)										
1 L AG HCl (Blue)											
Special	Cr ⁶⁺ - 50mL Plastic w/Borate/HCO ₃ /CO ₃										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L AG or P NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										
Other:											



08/15/23 10:20

23H1310

Sending Laboratory:

Dellavalle Laboratory Inc.
1910 McKinley, Ste. 110
Fresno, CA 93728-1298
Phone: (559) 233-6129
Fax: (559) 268-8174

Attn: Kaitlynn Shaw
dataentry@dellavallelab.com

After Hours Contact:

Susan Villagran
559-530-1346
Martin James
559-940-2024

PO# 58803

Subcontracted Laboratory:

BSK & Associates - Stanislaus
687 N. Laverne
Fresno, CA 93727
Phone: (559) 497-2888
Fax: 559 485-6935

Turnaround: Standard ☒ Rush ☐
State Forms: Yes ☐ No ☒ Sys#

Work Order: 23H1310

Project: R5-1993-0240-002

Analysis

Sample ID: 23H1310-01 Monitoring Well

Client Sample Name: CO MW-1

Sampled: 8/14/2023 10:32AM

Sampled By: Antonio Del-Tech

Comments

Coli 3x5 Total Coli:SO

Containers Supplied:

Sample ID: 23H1310-02 Monitoring Well

Client Sample Name: CO MW-2

Sampled: 8/14/2023 10:01AM

Sampled By: Antonio Del-Tech

Comments

Coli 3x5 Total Coli:SO

Containers Supplied:

Sample ID: 23H1310-03 Monitoring Well

Client Sample Name: CO MW-3

Sampled: 8/14/2023 9:22AM

Sampled By: antonio Del-Tech

Comments

Coli 3x5 Total Coli:SO

Containers Supplied:

OK to run out of hold time

Released By

Date

Received By

Date

Released By

Date

Received By

Date

End of Report