

February 27, 2024

Ms. Alyx Karpowicz California Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, CA 94612

Re: East Bay Municipal Utility District Bayside Groundwater Project, 2023 Annual Report, Order

No. R2-2007-0038

Dear Ms. Karpowicz:

In accordance with the Waste Discharge Requirements of Order No. R2-2007-0038 (Order), the East Bay Municipal Utility District (EBMUD) is submitting the enclosed 2023 annual self-monitoring report (SMR) for the Bayside Groundwater Project. There were no exceedances of the permit's water quality limits.

Construction details for the project's groundwater monitoring wells are shown in Table 1. Historical injected and recovered water volumes are summarized in Table 2. No injection of treated drinking water in the Bayside Well occurred in 2023, and no extraction events took place in 2023.

The Self-Monitoring and Reporting Program (SMRP) of the Order requires EBMUD to implement a phased approach for groundwater quality monitoring. Groundwater quality monitoring well groups for phased monitoring are tabulated in Table 3 of the SMRP. There are a total of four groups. Group 3 monitoring, consisting of the Bayside Well, MW-2S, MW-2D¹, MW-4, MW-5D, MW-6, and MW-7, was implemented beginning in 2014.

Groundwater level elevations and depths are summarized in Table 3; the vertical hydraulic gradients at MW-5S, MW-5I, and MW-5D are presented in Table 4; and current and historical groundwater quality results are shown in Tables 5 and 6. A well location map is shown in Figure 1; the groundwater elevation contours on November 1, 2023 and March 1, 2023 are presented in Figures 2 and 3, respectively; and TDS concentration contours are shown in Figure 4. Figures showing the monitoring wells' groundwater elevation trends in 2023 are included in Attachment B. There were no exceedances of the Order's limits for TTHMs and HAAs.

In accordance with Order Section C Provisions, Item 18 Order Termination, this letter will serve as notice to the San Francisco Regional Water Quality Control Board (Regional Board) that EBMUD

¹ EBMUD uses slightly different well names than those used in the Permit. For example, "MW-2I" is used instead of "MW-2D" and "MW-9D" instead of "MW-9." EBMUD's well naming convention is used in this Report.

Ms. Alyx Karpowicz February 28, 2024 Page 2

intends to decommission the current Bayside Groundwater Project. EBMUD staff will provide a more detailed plan and schedule for the project decommissioning to the Regional Board during the first half of 2024.

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact me at (510) 287-0412 or David Behnken, Environmental Health and Safety Specialist II, at (510) 287-0327.

Sincerely,

Chandra Johannesson

Manager of Environmental Compliance



February 27, 2024 SENT VIA: EMAIL

Mr. David Behnken Environmental Health and Safety Specialist II East Bay Municipal Utility District 375 11th Street Oakland, CA 94607

Subject: EBMUD Bayside Groundwater Project, 2023 Annual Report,

Waste Discharge Requirements Order No. R2-2007-0038

Dear Mr. Behnken:

Larry Walker Associates (LWA) has prepared this 2023 Annual Report (Report) on behalf of the East Bay Municipal Utility District (EBMUD) for the Bayside Groundwater Project (Project) located in Alameda County. LWA has prepared this Report in accordance with the Self-Monitoring and Reporting Program (SMRP) of Waste Discharge Requirements Order No. R2-2007-0038 (Permit), which was adopted by the San Francisco Regional Water Quality Control Board (Regional Board) on May 9, 2007 (Regional Board, 2007).

The Project consists of the Bayside Well and a number of additional monitoring wells constructed in the vicinity of the Bayside Well. Depth to groundwater was monitored in the Bayside Well and associated monitoring well network during 2023. Groundwater samples were collected on October 23, 24, 25, and 26, 2023 for analytical testing. The Bayside Well was not sampled in 2023 due to equipment failure. Groundwater elevations and analytical results are provided in this Report, along with results from previous years in accordance with the SMRP, for evaluation of long-term trends.

This Report addresses the following topics:

- Project Overview
- Regulatory Requirements
- Injection and Recovery Activities
- Monitoring and Sampling Activities
- Groundwater Elevations and Flow Directions
- Groundwater Quality Results
- Conclusions

PROJECT OVERVIEW

The Project site is located in a predominantly industrial area within unincorporated portions of the City of San Lorenzo and the City of San Leandro. The Bayside Well is located at 2600 Grant Avenue in San Lorenzo. The Project area is bounded by residential communities to the north and east, and the San Francisco Bay about a half-mile to the west.

The Bayside Well is an Aquifer Storage and Recovery (ASR) well designed, constructed, and operated for injection of treated drinking water from EBMUD's distribution system into the South East Bay Plain Groundwater Basin for aquifer storage during wet years and, later, for recovery as a source of supplemental drinking water supply for EBMUD during dry years. No injection of treated drinking water took place 2023. No extraction of water occurred during 2023.

The Bayside Well was constructed with 18-inch diameter stainless steel casing and is screened from 520 feet below ground surface (bgs) to 650 feet bgs. The monitoring well network consists of 17 monitoring wells constructed to various depths (**Figure 1**). Well construction details are summarized in **Table 1**. Additional background information on the Project is provided in the Permit.

REGULATORY REQUIREMENTS

The SMRP requires groundwater level monitoring in 13 of the 17 Project monitoring wells. The 13 Project wells monitored during this reporting period were MW-1, MW-2S, MW-2I, MW-3, MW-4, MW-5S, MW-5I, MW-5D, MW-6, MW-7, MW-9D, MW-10I, and MW-10D¹. After the first year of monitoring in 2009, groundwater levels are required to be monitoring on an hourly basis in 11 of the 13 wells listed above. The exceptions to this monitoring frequency are MW-4 and MW-6, where groundwater level monitoring is required to be performed quarterly only.

To address the primary groundwater quality concern of introducing disinfection by-products (DBPs) into the groundwater basin, the SMRP requires EBMUD to implement a phased approach for sampling and monitoring groundwater quality in subsets of the Project monitoring wells. Each phase is successive and depends on certain SMRP triggers, generally related to the location of the injected water front (i.e. leading edge of the injected water). The SMRP specifies the following phased approach consisting of four groups of monitoring wells:

- Initial monitoring in Group 1 wells (Bayside Well, MW-2S, MW-2I, MW-4, and MW-10D²) is required to start three months prior to the start of Project operations and to continue on an annual basis until Group 2 monitoring is triggered.
- Monitoring of Group 2 wells (Group 1 wells plus MW-6 but excluding MW-10D) would begin once the injected water front reaches MW-4 and would continue on an annual basis until Group 3 monitoring is triggered.

¹ EBMUD uses slightly different well names than those used in the Permit. For example, "MW-2I" is used instead of "MW-2D" and "MW-9D" instead of "MW-9." EBMUD's well naming convention is used in this Report.

² Group 1 monitoring included limited monitoring at MW-10D. Specifically, the SMRP requires monitoring of MW-10D only once in the beginning of the Group 1 monitoring phase.

- Monitoring of Group 3 wells (Group 2 wells plus MW-5D and MW-7) would begin once the injected water front reaches MW-6 and would continue on an annual basis until Group 4 monitoring is triggered.
- Monitoring of Group 4 wells (Group 3 wells plus MW-10D) would begin with the
 detection of injected water at MW-5D or MW-7, or 15 years after initiating Project
 operations, whichever is earlier.

Water quality parameters are required to be measured annually per the parameters and test methods listed in Table 4 of the SMRP. These parameters include general water quality parameters, standard minerals, and DBPs. The Permit specifies water quality limits for total trihalomethanes (TTHMs) at 80 micrograms per liter (μ g/L), and haloacetic acids (HAAs) at 60 μ g/L. The individual analytes are discussed below in the Groundwater Quality Results section.

The SMRP requires the submission of data from the Project's monitoring well network to the Regional Board in an annual report. Annual reports, due by March 1 of the following year, are required to include the following items, per Part A.4 of the SMRP:

- A table of water injection and recovery data, including the cumulative total volume injected and recovered since Project inception.
- Maps of well locations, groundwater elevation contours, extent of the injected water front, and extent of dissolved water quality parameters (isoconcentration maps).
- A table of location and construction details for the wells.
- A table of current groundwater depths, elevations, and horizontal and vertical gradients.
- A table of current and historical (past five years) water quality results for the wells.
- A discussion of field and laboratory results that includes conclusions, recommendations, and data anomalies.

INJECTION AND RECOVERY ACTIVITIES

No injection of treated drinking water in the Bayside Well took place in 2023 and no extractions from the Bayside Well occurred in 2023. The cumulative volumes of injected and recovered water since the Project inception in 2009 are shown in **Table 2**.

MONITORING AND SAMPLING ACTIVITIES

The SMRP requires groundwater level monitoring on an hourly basis in the applicable monitoring wells with the exception of MW-4 and MW-6, for which quarterly groundwater level monitoring is required. In early 2014, EBMUD installed new dedicated pressure transducers in the wells to collect hourly groundwater level data. Hourly groundwater level data were collected from January through December 2023.

The SMRP also requires groundwater quality monitoring following a phased approach. In 2013, EBMUD initiated monitoring of Group 2 wells, which added MW-6 to the annual monitoring well network. In 2015, EBMUD initiated monitoring of Group 3 wells, which added MW-5D and MW-7 to the annual monitoring well network, in response to the detection of chlorine residual and the HAA, dibromoacetic acid, at MW-6, as detailed in the 2013 Annual Report.

EBMUD collected the 2023 groundwater samples from the monitoring wells. The required annual water quality sampling was performed on October 23, October 24, October 25, and October 26. The Bayside Well head was not sampled due to equipment failure. The Variable Frequency Drive for the bayside well head failed, and the well is currently being evaluated for decommissioning.

Submersible pumps fitted with new tubing were used to purge and sample groundwater monitoring wells MW-2S, MW-2I, MW-4, MW-5D, MW-6 and MW-7. Purge water was disposed of on permeable ground adjacent to monitoring wells.

Groundwater monitoring and sampling were completed using the following procedures:

- 1. Measured static water level within each well and calculated three well casing volumes required for purging in accordance with United States Environmental Protection Agency (USEPA) groundwater sampling protocols.
- 2. Purged the well until three well casing volumes were removed.
- 3. Measured field water quality parameters (pH, specific conductance, and temperature) periodically during purging.
- 4. Collected samples in containers with appropriate preservatives in accordance with USEPA sampling protocols for individual constituents.
- 5. Measured residual chlorine immediately after sample collection.
- 6. Transported samples to EBMUD's state-certified laboratory in a cooler under chain of custody for analytical testing.

Well purge logs, including the static water level, purge volumes, and field parameter measurements are provided in **Attachment A**.

GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

Static depth to groundwater levels measured prior to well purging and sampling in 2023 are summarized in **Table 3**, along with calculated groundwater elevations. The calculated groundwater elevations are based on the reference elevations noted in **Table 1**. The historical static water levels and groundwater elevations are also provided in **Table 3**.

Groundwater elevations derived from the pressure transducers installed in May 2014 and corrected for barometric pressures are plotted by well for January through December 2023 (**Attachment B**). These elevations were calculated by EBMUD staff.

Groundwater elevation contour maps were generated using groundwater elevation data collected at specific times using the pressure transducers. Groundwater elevation contours for November 1, 2023, corresponding to a low tide in San Francisco Bay, are shown on **Figure 2**. Groundwater elevation contours for March 1, 2023, corresponding to a high tide in San Francisco Bay, are shown on **Figure 3**. As shown on **Figures 2** and **Figure 3**, the groundwater flow direction was primarily to the northwest at low tide (**Figure 2**) and northwest at high tide (**Figure 3**). The horizontal hydraulic gradients were variable with lower gradients generally further from the bay to the east and higher gradients closer to the bay to the west.

Groundwater elevations during low tide ranged from -4.73 feet above mean sea level (amsl) to -3.56 feet amsl for the five wells shown on **Figure 2**. Groundwater elevations during high tide ranged from -4.04 feet amsl to -1.92 feet amsl for the same five wells (**Figure 3**).

Vertical hydraulic gradients were calculated based on groundwater elevations and the distance to the center of the screened interval specified in **Table 4** for the nested wells MW-5S, MW-5I, and MW-5D. Specifically, vertical gradients were calculated for a low tide using groundwater elevation data from around 21:00 on November 1, 2023, and for a high tide using groundwater elevation data from around 7:00 on March 1, 2023. The calculated vertical gradients for these dates, including supporting data for the calculations, are presented in **Table 4**. The overall vertical gradient under both conditions was downward at approximately 0.038 to 0.041 feet per foot. These results are consistent with the vertical gradients reported in previous Annual Reports.

GROUNDWATER QUALITY RESULTS

The 2023 analytical results are included in the following tables, along with historical water quality results for the previous nine years (2014 through 2022):

- Table 5 includes data for general water quality parameters (e.g. pH, chlorine residual, total dissolved solids (TDS), ammonia, nitrate, chloride, manganese, and iron) and standard minerals (e.g. calcium, magnesium, potassium, sodium, sulfate, total alkalinity [including alkalinity series], and hardness).
- **Table 6** includes data for DBPs (e.g. TTHMs and HAAs including their individual components).

Copies of the analytical laboratory reports for the 2023 water quality data are provided in **Attachment C**.³

For wells with historical data (Bayside Well, MW-2S, MW-2I, MW-4, MW-5D, MW-6 and MW-7), the 2023 water quality results summarized in **Table 5** are generally consistent over time. A number of parameters detected in MW-2S have significantly higher concentrations than the same parameter detected in the other monitoring wells. Monitoring well MW-2S is a much shallower well and may be affected by seawater intrusion.

For the 2023 groundwater quality results summarized in **Table 5**, TDS has been used as a representative constituent to evaluate overall groundwater quality conditions. The isoconcentration contours shown on **Figure 4** are based on TDS concentrations for deep monitoring wells, including the Bayside Well, MW-4, MW-5D, and MW-6. Historical isoconcentration contours indicate the lowest concentration occurs at the Bayside Well with increasing TDS concentrations in a northerly direction (i.e. further inland). The highest TDS concentration of 460 mg/L was detected at well MW-5D. Therefore, TDS concentrations decrease in a southerly direction (**Figure 4**).

The current DBPs data summarized in **Table 6** are consistent with the historical groundwater monitoring results with all constituents below the method detection limits (MDLs) or estimated

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³ The laboratory reports in Attachment C include results for additional parameters beyond those required by the SMRP. EBMUD collected this information for reasons unrelated to the Permit and SMRP. These data are not discussed in this Report.

in each well. In 2023, EBMUD was bringing a new HAA instrument online and was not able to provide analytical results for Bromochloroacetic Acid, Bromodichloroacetic Acid, Chlorodibromoacetic Acid, and Tribromoacetic Acid. Therefore, a result for HAA(9)⁴ could not be calculated. The combined DBPs as HAA(5)⁵ and TTHMs are within the range of historical results in the monitoring wells. The data indicates there are no exceedances of the Permit's water quality limits for HAA(5) and TTHMs at $60 \mu g/L$ and $80 \mu g/L$, respectively.

CONCLUSIONS

EBMUD conducted the 2023 groundwater monitoring for the Bayside Groundwater Project site in accordance with the Self-Monitoring and Reporting Program of Waste Discharge Requirements Order No. R2-2007-0038.

During this reporting period, EBMUD confirmed that property access to the Bayside Well will be terminated. While EBMUD continues to evaluate the Bayside Groundwater Project's long-term plan, the current location will no longer be available for this ASR project. EBMUD will keep the Regional Board apprised of the Project plan for decommissioning and termination of the existing Order as details become available later this year.

⁴ HAA(9) includes the sum of all nine haloacetic acids.

⁵ HAA(5) includes the sum of dibromoacetic, dichloroacetic, monobromoacetic, monochloroacetic, and trichloroacetic acids.

East Bay Municipal Utility District Bayside Groundwater Project Annual Report 2023

Prepared for

East Bay Municipal Utility District

February 2024

The material and data in this report, including all attachments and supplemental information, were prepared under the supervision and direction of the undersigned. The information submitted is, to the best of my knowledge, true, accurate, and complete.



Katrina Arredondo, Ph.D., P.G.

P.G. No. 10108



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- Table 2. Historical Injected and Recovered Water Volumes
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- Table 5. Current and Historical Groundwater Quality Results for General Water Quality Parameters and Standard Minerals
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- Figure 3. Groundwater Elevation Contours, High Tide (March 1, 2023)
- Figure 4. Groundwater TDS Contours, October 2023

LIST OF ATTACHMENTS

- Attachment A. Groundwater Purging Logs
- Attachment B. Groundwater Elevation Trends for Monitoring Wells
- Attachment C. Analytical Lab Reports for 2023 Water Quality Monitoring

LIST OF REFERENCES

1. San Francisco Regional Water Quality Control Board (Regional Board). Order No. R2-2007-0038. Waste Discharge Requirements for East Bay Municipal Utility District, Bayside Groundwater Project, San Lorenzo, Alameda County. Adopted May 9, 2007.

Table 1. Groundwater Monitoring Well Construction Details

Well ID	Latitude	Longitude	Address	City	Completion Date	Drilled Depth, feet bgs ^(a)	Casing Depth, feet bgs		Depth to Bottom of Perforation, feet bgs	Casing Diameter, inches	Reference Elevation, feet amsl ^{(b)(e)}	Reference Location on Well
MW-1						665	650	520	640	2	8.72	Top of steel casing
MW-2S	37° 40' 4.8"	122° 9' 25.2"	2600 Grant Avenue			210	60	40	60	2	9.91	Top of steel casing
MW-2I ^(c)			2000 Grant Avenue			210	200	160	190	2	9.91	Top of steel casing
MW-3	37° 40' 4.8"	122° 9' 28.8"				665	660	520	650	2	8.00	Top of lid rim
MW-4	37° 40' 11.6"	122° 9' 28.8"	2575 Grant Avenue			705	650	520	650	2	8.93	Top of steel rim
MW-5S	37° 40' 34.4"	122° 9' 06.6"	2006 Via Barrett		Sep. 2008	460	210	200	210	2	13.93	Top of how rim at contarty adda
MW-5I	37° 40' 34.4"	122° 9' 06.6"	2005 Via Barrett	San	Sep. 2008	460	325	315	325	2	13.93	Top of box rim at easterly edge
MW-5D	37° 40' 34.4"	122° 9' 06.6"	2007 Via Barrett	Lorenzo	Feb. 2001	1,025	640	500	630	4	13.73	Top of casing at northerly edge
MW-6	37° 40' 07"	122° 9' 04.5"	15600 Worthley		Nov. 2000	1,000	655	480	650	4	9.47	Top of casing at easterly edge
MW-7	37° 39' 56.5"	122° 8' 44.2"	Western tip of San Lorenzo Park		Dec. 2018	972	680	510	630	4	8.42	Top of steel rim
MW-8D	37° 43' 04"	122° 11' 50.3"	1970 Davis Street			910	490	420	480	2	14.70	Top of steel rim
MW-9S					Jan. 2008	460	120	110	120	2		
MW-9I	37° 41' 11"	122° 6′ 46″	589 E. Lewelling Avenue		Jan. 2008	460	210	200	210	2	54.43	Seal of vault lid at westerly edge
MW-9D ^(d)					Jan. 2008	460	335	325	335	2		
MW-10S				0	Sep. 2008	680	120	100	120	2		
MW-10I	37° 41' 19"	122° 9' 43"	15526 Wick Boulevard	San Leandro	Sep. 2008	680	360	340	360	2	11.77	Seal of vault lid at easterly edge
MW-10D				Leanulo	Sep. 2008	680	610	590	610	2		

⁽a) bgs = below ground surface
(b) amsl = above Mean Sea Level
(c) Well MW-2I is referred to in the Permit as "MW-2D."
(d) Well MW-9D is referred to in the Permit as "MW-9."

⁽e) Reference Point Elevations were resurveyed and updated in October 2022

Table 2. Historical Injected and Recovered Water Volumes										
Year	Injected Volume, gallons	Recovered Volume, gallons								
2009	445,000	4,545,000								
2010	0	113,000,000								
2011	28,432,401	0								
2012	0	0								
2013	0	0								
2014	0	0								
2015	0	0								
2016	0	0								
2017	1,310,000	0								
2018	8,340,000	0								
2019	8,390,000	0								
2020	0	0								
2021	0	0								
2022	0	0								
2023	0	0								
Total	46,917,401	117,545,000								

Measurement																
Date	Bayside	MW-1 ^(a)	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	Bayside	MW-1 ^(f)	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7
12/8/08			0.99		-4.07	(b)					8.78 ^(c)		12.68 ^(c)			
12/9/08		-5.06		1.09						13.74 ^(c)		8.73 ^(c)				
12/14/09					-3.75								12.71			
12/15/09			0.95	1.44							8.95	8.46				
12/8/10	-7.22		1.71	0.25	-7.45				15.6		8.19	9.65	16.41			
12/21/11		-4.16	1.12	3.59	-4.17					12.87	8.78	6.31	13.13			
1/5/12		-3.94	1.04	6.24	-3.97					12.65	8.86	3.66	12.93			
12/13/12		-4.49	2.38	1.72	-4.16	-4.52				13.20	7.52	8.18	13.12	13.98		
12/18/13		-4.06	1.59	0.37	-6.68	-6.46				12.77	8.31	9.53	15.64	15.92		
12/12-12/17/14		-6.54	2.75	0.18	-6.01	-5.99	-5.76	(d)		15.25	7.15	9.72	14.97	15.45	19.52	(d)
11/16-12/15/15		-6.21	2.90	0.32	-4.94	(d)	-5.87	(d)		14.92	7.00	9.58	13.9	(e)	19.63	(d)
12/21-12/27/16		-3.92	2.90	2.88	-1.95	-1.96	-1.96	(d)		12.63	7.00	7.02	10.91	11.42	15.72	(d)
12/19-12/20/17		-2.64	1.86	-1.07	-1.42	-1.80	-1.47	(d)		11.35	8.04	10.97	10.38	11.26	15.23	(d)
12/5-12/19/18		-2.70	1.62	-2.17	-2.36	-2.11	-2.14	-1.24		11.41	8.28	12.07	11.32	11.57	15.90	8.94
10/8-10/24/19		-4.46	1.92	-3.39	-2.06	-3.39	-3.06	-2.92		13.17	7.98	13.29	11.02	12.85	16.82	10.62
8/5-8/26/20		-4.19	3.78	-3.32	-3.57	-2.65	-3.55	-5.87		12.90	6.12	13.22	12.53	12.11	17.31	13.57
10/12-11/2/21		-6.12	1.62	-5.19	-6.28	-6.49	-5.02	-6.24		14.83	8.28	15.09	15.24	15.95	18.78	13.94
11/1-11/9/22		-6.37	1.60	-1.40	3.56	4.16	-5.94	-5.26		15.08	8.30	11.30	5.40	5.30	19.70	12.96
10/23-10/26/23		-3.19	1.51	-3.59	-3.07	-3.03	-2.57	-1.78		11.91	8.40	13.50	12.00	12.50	16.30	10.20

⁽a) Groundwater elevation is averaged over the measurement date period from tranducer data, and used to calculate the depth to groundwater using the surveyed elevation.

⁽b) Gray shaded cells indicate that no monitoring was required for the well at that time period, reflecting the transition between monitoring groups.

⁽c) Applicable well reference elevations are different from those in Table 1.

⁽d) Well MW-7 was damaged in 2012, and accurate data collection was not feasible until 2016. In 2017, a sample wasn't collected because the pump EBMUD owns was found to be incompatible with the well.

⁽e) Well MW-6 was not monitored in late 2015 due to a pump equipment failure.

 $^{^{(}f)}$ Depth to Groundwater for MW-1 was incorrectly reported between 2015 and 2020 due to measurement errors.

Table 4. Calculated Vertical Hydraulic Gradients for Low Tide and High Tide in San Francisco Bay									
Nested Well	Measurement Date and Time	Screened Interval, ft	Center of Screened Intervals, ft bgs	Groundwater Elevation, ft amsl	Shallow to Intermediate Vertical Gradient, ft/ft	Intermediate to Deep Vertical Gradient, ft/ft	Shallow to Deep Vertical Gradient, ft/ft	Vertical Gradient Direction	
Low Tide									
MW-5S	11/1/2023 @ 21:00	200 - 210	205	10.28	0.032				
MW-5I	11/1/2023 @ 21:00	315 - 325	320	6.58	0.032	0.040	0.038	downward	
MW-5D	11/1/2023 @ 21:00	500 - 630	575	-3.63	-	0.040			
High Tide									
MW-5S	3/1/2023 @ 7:00	200 - 210	205	12.70	0.055				
MW-5I	3/1/2023 @ 7:00	315 - 325	320	6.40	0.055	0.034	0.041	downward	
MW-5D	3/1/2023 @ 7:00	500 - 630	575	-2.39		0.034			

Table 5. Current and Historical Groundwater Quality Results for General Water Quality Parameters and Standard Minerals ^(a)																		
			Ge	eneral Water	r Quality Param	neters							Star	ndard Minerals	6			
		Chlorine														Alkalinity ((as CaCO3)	
Sample		Residual,	TDS,	Ammonia,	Nitrate as N,	Chloride,	Manganese,	Iron,	Calcium,	Magnesium,	Potassium,	Sodium,	Sulfate,	Hardness,	Total,	Hydroxide,	Carbonate,	Bicarbonate,
Date	рН	mg/L	mg/L	mg/L	mg/L	mg/L	μg/L	μg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Bayside Well		•	ı	T	1	•	,						1			•	r	
12/17/2014	8.19	ND	130	0.42	<0.009	15	23.0	52.3	14.7	3.88	1.07	28.0	15	70	69	<0.1	0.99	68
11/16/2015	7.68	0.10	75	<0.3	<0.009	15	22.3	215	13.5	3.64	1.01	23.3	16	48	70	<0.1	<0.1	70
12/7/2016	8.09	0.10	140	0.11	<0.009	17	16.2	70.2	16.4	4.15	1.13	27.1	18	55	68	<0.1	<0.1	68
12/5/2017	7.91	ND	150	0.25	<0.040	16	12.9	66.5	16.5	4.17	1.19	25.0	21	62	68	<0.1	<0.1	68
12/5/2018	7.93	<0.02	170	0.280	0.12	13	13.2	946	23.2	7.66	1.34	24.0	32	94	89	<0.10	<0.10	89
10/8/2019	6.85	<0.02	190	<0.25	<0.035	15	17.0	75.6	21.5	6.65	1.30	24.7	34	87	95	<0.10	<0.10	95
8/25/2020	8.10	0.20	160	<0.25	0.20	13	11.7	269	19.9	6.32	1.19	21.5	23	84	88	<0.10	<0.10	88
11/2/2021	8.13	0.09	150	E 0.90	<0.036	15	E 17.8	113	22.1	6.83	1.35	24.2	25	78	92	<5.0	<5.0	92
2022	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
2023	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
MW-2S				1					•				•				,	
12/13/2014	6.57	0.20	83,000	<0.3	23(b)	39,000	36,900	<31.2	1,230	2,680	462	22,000	6,100	17,000	380	<0.1	0.13	380
12/10/2015	6.85	ND	76,000	<0.3	27	41,000	21,900	76.8	1,250	3,040	401	20,500	5,200	16,000	390	<0.1	<0.1	390
12/27/2016	6.73	0.07	77,000	0.34	<0.65	42,000	38,100	<62.4	1,330	3,150	510	20,600	5,700	16,000	390	<0.1	<0.1	390
12/19/2017	6.27	ND	73,000	1.23	<11	41,000	33,200	<62.4	1,210	2,800	501	21,200	5,500	17,000	390	<0.1	<0.1	390
12/11/2018	6.66	1	74,000	0.952	<1	41,000	33,200	<52.0	1,150	3,090	439	23,400	5,500	16,000	400	<0.10	<0.10	400
10/22/2019	6.72	0.4	82,000	0.760	<35	42,000	37,400	<54.1	1,240	2,870	405	20,700	5,500	16,000	400	<0.10	<0.10	400
8/11/2020	6.62	0.3	76,000	<0.25	<18	43,000	33,900	<108	280	2,710	495	20,500	5,600	17,000	410	<0.10	<0.10	410
10/13/2021	6.54	0.2	80,000	E 1.1	<36	42,000	31,800	<56.7	1,090	2,920	457	19,400	5,200	15,000	400	<5.0	<5.0	400
11/1/2022	6.71	0.5	71,000	E 5.0	<12	42,000	36,000	<500 ^(g)	1,300	3,000	460	22,000	5,200	17,000	410	<5.0	<5.0	410
10/23/2023	6.60	0.0	77,000	E 1.1	<12	42,000	37,300	<261	1,280	3,030	461	21,100	4,900	35,000	400	<5.0	<5.0	400
MW-2I																		
12/12/2014	7.90	ND	520	1.1	<0.009	81	98.7	213	14.6	12.6	5.33	153	31	94	310	<0.1	2.3	310
12/15/2015	7.75	ND	490	0.56	0.044	59	105	177	14.4	12.5	6.73	156	34	90	300	<0.1	<0.1	300
12/27/2016	8.10	0.02	540	0.28	0.18	84	111	98.0	15.2	13.2	6.16	148	30	94	320	<0.1	<0.1	320
12/19/2017	7.69	0.05	630	1.0	0.18	150	139	1,220	17.8	15.9	7.61	193	13	130	350	<0.1	<0.1	350
12/11/2018	7.83	<0.02	620	0.280	<0.019	120	124	1,260	15.8	14.2	5.87	184	22	110	330	<0.10	<0.10	330
10/9/2019	7.67	0.20	690	<0.25	<0.07	150	123	458	17.8	15.7	5.82	191	12	120	360	<0.10	<0.10	360
8/26/2020	7.75	0.60	710	<0.25	<0.07	160	138	B 422	19.4	17.3	7.06	B 207	7.3	64	380	<0.10	<0.10	380
10/13/2021	7.93	0.08	670	<0.25	<0.07	150	128	404	18.1	16.1	6.76	188	9.2	72	360	<5.0	<5.0	360
11/1/2022	7.94	0.30	560	E 0.90	E 0.076	120	180	2,700	20.0	17.0	7.60	190	18	120	350	<5.0	<5.0	350
10/23/2023	7.62	0.10	630	E 0.42	<0.023	140	130	223	19.0	17.1	6.77	199	E 15	120	360	<5.0	<5.0	360

Table 5. Current and Historical Groundwater Quality Results for General Water Quality Parameters and Standard Minerals ^(a)																		
General Water Quality Parameters Chlorine Alkalinity (as CaCO3)																		
		Chlorine														Alkalinity (as CaCO3)	
Sample		Residual,	TDS,	Ammonia,	Nitrate as N,	Chloride,	Manganese,	Iron,	Calcium,	Magnesium,	Potassium,	Sodium,	Sulfate,	Hardness,	Total,	Hydroxide,	Carbonate,	Bicarbonate,
Date	рН	mg/L	mg/L	mg/L	mg/L	mg/L	μg/L	μg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MW-4			1		<u> </u>		<u> </u>				1		Т				T	
12/16/2014	8.22	0.10	450	<0.3	0.028	56	239	33.7	32.2	12.8	2.72	113	39	130	270	<0.1	4.2	270
12/8/2015	7.98	ND	420	<0.3	0.039	56	215	32.5	28.8	11.7	3.08	106	41	130	250	<0.1	<0.1	250
12/27/2016	8.14	ND	440	0.34	0.098	59	222	31.6	31.4	12.6	2.76	108	42	120	260	<0.1	<0.1	260
12/20/2017	7.55	ND	410	0.25	0.091	57	196	24.4	27.9	10.7	2.69	107	40	130	240	<0.1	<0.1	240
12/11/2018	7.73	<0.02	380	0.280	<0.019	48	192	39.1	24.6	9.01	2.12	102	37	100	220	<0.10	<0.10	220
10/9/2019	7.63	0.20	420	<0.25	<0.070	53	199	32.2	26.7	9.98	2.18	97.1	40	120	240	<0.10	<0.10	240
8/11/2020	7.89	0.20	390	<0.25	<0.035	49	179	21.5	23.7	8.98	2.25	92.3	38		230	<0.10	<0.10	230
10/13/2021	7.61	0.85	390	<0.25	<0.07	50	189	E 22.2	25.6	9.84	2.30	102	38	100	230	<5.0	<5.0	230
11/2/2022	7.80	0.10	360	E 0.28	<0.023	48	190	<50	27.0	9.50	2.40	100	38	110	220	<5.0	<5.0	220
10/25/2023	7.63	0.0	330	<0.29	<0.023	45	170	E 14.8	22.4	8.42	3.00	92.2	35	100	200	<5.0	<5.0	200
MW-5D				_	T				•	_			T			_		
12/16/2014	7.00	0.40	490	<0.3	<0.009	96	241	180	42.8	10.8	2.59	123	46	150	230	<0.1	0.22	230
11/18/2015	7.53	0.20	450	<0.3	<0.009	82	175	46.4	35.6	9.06	2.30	112	49	140	240	<0.1	<0.1	240
12/21/2016	7.68	0.02	470	<0.3	<0.013	84	195	34.6	39.0	9.74	2.34	130	49	130	230	<0.1	<0.1	230
12/19/2017	7.55	ND	410	<0.25	<0.091	57	196	24.4	27.9	10.70	2.69	107	40	130	240	<0.1	<0.1	240
12/10/2018	7.57	<0.02	460	0.280	0.19	79	197	270	35.6	9.13	1.96	112	46	130	230	<0.10	<0.10	230
10/10/2019	7.10	0.10	460	<0.25	<0.070	81	188	58.0	35.2	8.58	1.79	107	51	140	240	<0.10	<0.10	240
8/10/2020	7.56	0.60	460	<0.25	<0.035	84	179	197.0	32.3	8.25	2.20	100	50	140	230	<0.10	<0.10	230
11/1/2021	7.42	0.01	470	E 0.5	<0.07	85	210	163	35.2	8.93	1.98	113	50	130	230	<5.0	<5.0	230
11/3/2022	7.33	0.20	510	<0.25	<0.023	83	230	E 67	42.0	10.00	2.20	120	50	130	240	<5.0	<5.0	240
10/26/2023	7.41	0.0	460	<0.29	E 0.033	84	188	E 28.1	39.0	10.1	3.12	118	50	150	240	<5.0	<5.0	240
MW-6		1	ı	ı	7		1		1		1		1				I	
12/13/2014	7.92	0.10	430	<0.3	<0.009	58	209	25.4	34.1	8.89	2.39	110	56	120	230	<0.1	1.8	230
12/10/2015	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
12/27/2016	7.72	ND	400	0.34	0.17	68	192	21.0	35.6	8.25	3.00	87.7	40	120	210	<0.1	<0.1	210
12/20/2017	7.37	0.01	450	<0.3	<0.19	83	164	130.0	34.2	8.56	2.39	99	49	150	230	<0.1	<0.1	230
12/12/2018	6.9	0.10	410	0.280	<0.019	54	234	43.4	30.5	7.10	3.56	97.2	46	110	230	<0.10	<0.10	230
10/11/2019	7.17	0.50	400	<0.25	<0.070	54	171	14.9	29.2	7.34	1.91	98.5	47	110	230	<0.10	<0.10	230
8/13/2020	7.40	0.30	420	<0.25	<0.035 ^(d)	54	176	20.5	31.2	7.54	2.06	102.0	48	120	230	<0.10	<0.10	230
10/12/2021	7.36	0.04	420	<0.25	<0.07	56	175	E 16.7	29.0	7.46	2.04	97.3	47	110	230	<5.0	<5.0	230
11/2/2022	7.43	0.10	410	<0.25	<0.023	55	200	<50	34.0	8.50	2.20	110.0	48	120	230	<5.0	<5.0	230
10/24/2023	6.0	0.0	410	<0.29	E 0.079	61	184	E 33.4	32.6	8.11	3.30	109.0	46	120	220	<5.0	<5.0	220

			G	eneral Wateı	r Quality Param	neters							Star	ndard Minerals	S						
		Chlorine													Alkalinity (as CaCO3)						
Sample		Residual,	TDS,	Ammonia,	Nitrate as N,	Chloride,	Manganese,	Iron,	Calcium,	Magnesium,	Potassium,	Sodium,	Sulfate,	Hardness,	Total,	Hydroxide,	Carbonate,	Bicarbonate,			
Date	рН	mg/L	mg/L	mg/L	mg/L	mg/L	μg/L	μg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
MW-7																					
2016	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)			
2017	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)			
12/19/2018	8.32	0.30	470	0.280	<0.095	86	236	164	36.1	8.97	2.46	118	50	130	230	<0.10	<0.10	230			
10/24/2019	7.49	0.10	470	<0.25	0.33	91	207	26.4	32.8	8.44	1.77	108	54	140	230	<0.10	<0.10	230			
8/5/2020	7.06	0.20	500	<0.25	<0.088	93	237	37.2	36.6	9.38	2.15	121	53	140	240	<0.10	<0.10	240			
10/12/2021	7.17	0.28	480	<0.25	<0.18	90	216	E 23.7	35.1	9.09	2.02	119	51	130	230	<5.0	<5.0	230			
10/12/2021	7.17	0.28	480	<0.25	<0.18	90	216	E 23.7	35.1	9.09	2.02	119	51	130	230	<5.0	<5.0	230			
11/9/2022	7.36	0.10	430	<3.40	E 0.058	93	240	<50	40.0	10.00	2.20	120	53	150	230	<5.0	<5.0	230			
10/25/2023	7.70	0.0	460	<0.29	E 0.11	89	226	E 16.2	38	9.99	3.22	126	55	140	230	<5.0	<5.0	230			

⁽a) Symbols and data qualifiers are described as follows:

[&]quot;<" or "ND" indicates non-detect (ND) results, with the Method Detection Limit (MDL) shown as the value following "<".

[&]quot;B" preceding a value indicates that the parameter was detected in the laboratory blank associated with the reported result.

[&]quot;E" preceding a value indicates a detected results with a value reported as "estimated" between the MDL and the Reporting Limit.

[&]quot;--" indicates that no result was reported for the analyte on the corresponding sample date.

⁽b) The analytical laboratory report notes that the analysis for nitrate exceeded the hold time for the MW-2S sample collected 12/13/2014.

⁽c) Well MW-6 was not sampled in 2015 due to pump equipment failure.

⁽d) The analytical laboratory report notes that the analysis for nitrate exceeded the hold time for the MW-6 sample collected 8/13/2020.

⁽e) Well MW-7 was not sampled in 2016 and 2017 because the pump EBMUD owns was found to be incompatible with the well.

⁽f) Well was not sampled in 2022 or 2023 due to equipment failure.

⁽g) R-01-The Reporting Limit for this analyte has been raised to account for matrix interference. U-Analyte included in analysis but not detected at or above MDL.

Table 6. Current and Historical Groundwater Quality Results for Disinfection Byproducts ^(a)																
							Trihalomethan	es								
Sample Date	ΗΑΑ(5), ^(b) μg/L	ΗΑΑ(9), ^(c) μg/L	Bromochloro- acetic Acid, µg/L	Bromodichloro- acetic Acid, µg/L	Chlorodibromo- acetic Acid, µg/L	Dibromo- acetic Acid, µg/L	Dichloro- acetic Acid, µg/L	Monobromo- acetic Acid, μg/L	Monochloro- acetic Acid, μg/L	Tribromo- acetic Acid, μg/L	Trichloro- acetic Acid, µg/L	TTHMs, ^(d) µg/L	Chloroform, µg/L	Bromodichloro- methane, µg/L	Dibromochloro- methane, µg/L	Bromoform, μg/L
Bayside Well																
12/17/2014	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.89	0.45	<0.079	<0.13	<0.23
11/16/2015	1.7	<3.2	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	0.36	<0.98	0.37	<0.145	<0.20	<0.27
12/7/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<4.95	4.4	0.19	<0.13	<0.23
12/5/2017	1.6	<3.1	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	0.26	<15.56	14	1.2	<0.13	<0.23
12/5/2018	<10.4	<12.8	<0.15	1.2	<0.31	1.1	3.4	<0.29	<0.65	<0.72	5.0	<35.22	29.71	3.56	1.65	<0.3
10/8/2019	<1.5	3.3	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	0.99	<0.17	10.51	9.14	0.67	<0.4	<0.3
8/25/2020	1.6	3.6	<0.16	<0.20	1.20	<0.28	<0.25	<0.25	<0.25	< 0.35	0.61	30.82	28.26	1.86	<0.4	<0.3
11/2/2021	ND	ND	<0.34	<0.36	< 0.36	< 0.36	<0.34	<0.29	<0.42	^(h)	< 0.35	0.848	0.848	<0.129	<0.131	<0.166
2022	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)
2023	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)
MW-2S																
12/13/2014	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	< 0.65	<0.72	<0.17	<0.609	<0.17	< 0.079	<0.13	<0.23
12/10/2015	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/27/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/19/2017	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	< 0.079	<0.13	<0.23
12/11/2018	<1.5	<3.5	<0.15	0.75	<0.31	<0.25	<0.18	<0.29	< 0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
10/22/2019	<1.5	3.1	<0.15	E 0.36	<0.31	<0.25	<0.18	<0.29	< 0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
8/11/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25		<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
10/13/2021	ND	ND	<0.34	<0.36	<0.36	< 0.36	<0.34	<0.29	<0.42	^(h)	< 0.35	<0.62	<0.196	<0.129	<0.131	<0.166
11/1/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	< 0.30
10/23/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	E 0.88	<0.80	<0.10	<0.30	<0.20	<0.20
MW-2I																
12/12/2014	ND	3.4	0.50	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	J <0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/15/2015	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/27/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/19/2017	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	< 0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/11/2018	<1.6	<3.5	<0.15	0.73	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	E 0.22	<1.50	<0.4	<0.4	<0.4	<0.3
10/9/2019	<1.5	<3.3	<0.15	<0.57	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
8/26/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25	<0.35	<0.17	1.83	0.73	<0.4	<0.4	<0.3
10/13/2021	ND	ND	<0.34	<0.36	<0.36	<0.36	<0.34	<0.29	<0.42	^(h)	<0.35	<0.62	<0.196	<0.129	<0.131	<0.166
11/1/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	<0.30
10/23/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	<0.30	<0.80	<0.10	<0.30	<0.20	<0.20

Table 6. Current and Historical Groundwater Quality Results for Disinfection Byproducts^(a)

	Haloacetic Acids													Trihalomethar	ies	
Sample Date	HAA(5), ^(b) μg/L	ΗΑΑ(9), ^(c) μg/L	Bromochloro- acetic Acid, µg/L	Bromodichloro- acetic Acid, µg/L	Chlorodibromo- acetic Acid, µg/L	Dibromo- acetic Acid, µg/L	Dichloro- acetic Acid, µg/L	Monobromo- acetic Acid, μg/L	Monochloro- acetic Acid, μg/L	Tribromo- acetic Acid, μg/L	Trichloro- acetic Acid, µg/L	TTHMs, ^(d) µg/L	Chloroform, µg/L	Bromodichloro- methane, µg/L	Dibromochloro- methane, µg/L	Bromoform, μg/L
MW-4																
12/16/2014	<1.6	<3.1	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	0.72	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/8/2015	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/27/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/20/2017	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/11/2018	<1.6	<3.1	<0.15	<0.31	<0.31	E 0.27	<0.18	<0.29	<0.65	<0.72	E 0.21	<1.50	<0.4	<0.4	<0.4	<0.3
10/9/2019	<1.5	<3.0	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
8/11/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25		<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
10/13/2021	ND	ND	<0.34	<0.36	<0.36	<0.36	<0.34	<0.29	<0.42	^(h)	<0.35	<0.62	<0.196	<0.129	<0.131	<0.166
11/2/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	<0.30
10/25/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	<0.30	<0.80	<0.10	<0.30	<0.20	<0.20
MW-5D																
12/16/2014	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
11/18/2015	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.170	<0.17	<0.079	<0.13	<0.23
12/21/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/19/2017	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/10/2018	<1.5	<3.1	E 0.19	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
10/10/2019	<1.5	<3.1	E 0.18	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
8/10/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25		<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
11/1/2021	ND	ND	<0.34	<0.36	^(h)	< 0.36	<0.34	<0.29	<0.42	^(h)	<0.35	<0.62	<0.196	<0.129	<0.131	<0.166
11/3/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	<0.30
10/26/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	<0.30	<0.80	<0.10	<0.30	<0.20	<0.20
MW-6																
12/13/2014	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	(e)	<0.609	<0.17	<0.079	<0.13	<0.23
12/10/2015	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)
12/27/2016	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/19/2017	ND	ND	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<0.609	<0.17	<0.079	<0.13	<0.23
12/12/2018	<1.6	<3.1	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	E 0.21	<1.50	<0.4	<0.4	<0.4	<0.3
10/11/2019	<1.5	<3.0	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
8/13/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25	<0.35	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3
10/12/2021	ND	ND	<0.34	<0.36	<0.36	<0.36	<0.34	<0.29	<0.42	^(h)	<0.35	<0.62	<0.196	<0.129	<0.131	<0.166
11/2/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	<0.30
10/24/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	<0.30	<0.80	<0.10	<0.30	<0.20	<0.20

rable 6. Current and historical Groundwater Quality Results for Disinfection byproducts	Table 6. Current and Historical Groundwater Quality Results for Disinfe	ection Byproducts ^(a)
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					Haloa	cetic Acids						Trihalomethanes						
Sample Date	ΗΑΑ(5), ^(b) μg/L	ΗΑΑ(9), ^(c) μg/L	Bromochloro- acetic Acid, µg/L	Bromodichloro- acetic Acid, µg/L	Chlorodibromo- acetic Acid, µg/L	Dibromo- acetic Acid, µg/L	Dichloro- acetic Acid, µg/L	Monobromo- acetic Acid, μg/L	Monochloro- acetic Acid, μg/L	Tribromo- acetic Acid, µg/L	Trichloro- acetic Acid, µg/L	TTHMs, ^(d) µg/L	Chloroform, µg/L	Bromodichloro- methane, µg/L	Dibromochloro- methane, µg/L	Bromoform, μg/L		
MW-7																		
2016	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)		
2017	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)	(g)		
12/19/2018	<1.5	<3.0	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3		
10/24/2019	<1.5	<3.0	<0.15	<0.31	<0.31	<0.25	<0.18	<0.29	<0.65	<0.72	<0.17	<1.50	<0.4	<0.4	<0.4	<0.3		
8/5/2020	ND	ND	<0.16	<0.20	<0.22	<0.28	<0.25	<0.25	<0.25		<0.17	<1.50	<0.4	<0.4	<0.4	<0.3		
10/12/2021	ND	ND	<0.34	<0.36	<0.36	< 0.36	<0.34	<0.29	<0.42	(h)	< 0.35	<0.62	<0.196	<0.129	<0.131	<0.166		
11/9/2022	ND	ND	<0.17	<0.29	<0.31	<0.15	<0.20	<0.16	<0.45	<0.49	<0.25	<0.40	<0.06	<0.08	<0.10	< 0.30		
10/25/2023	ND	(k)	(k)	(k)	(k)	<0.27	<0.23	<0.16	<0.45	(k)	< 0.30	<0.80	<0.10	< 0.30	<0.20	<0.20		

⁽a) Symbols and data qualifiers are described as follows:

[&]quot;<" or "ND" indicates non-detect (ND) results, with the Method Detection Limit (MDL) shown as the value following "<", except for total haloacetic acids (HAA) and total trihalomethanes (TTHMs) as detailed below.

[&]quot;J" preceding a value indicates that the quantitation of the result does not meet the laboratory's Standard Operating Procedure criteria.

[&]quot;E" indicates that value is estimated, concentration is outside calibration range.

[&]quot;--" indicates that no result was reported for the analyte on the corresponding sample date.

⁽b) HAA5 value is calculated by adding values for dibromoacetic, dichloroacetic, monobromoacetic, monobromoacetic, and trichloroacetic acids, with "<" indicating that the total includes ND data (MDLs used). If all results are ND, then the total is indicated as ND.

c) HAA9 value is calculated by adding results for all individual haloacetic acids shown, with "<" indicating that the total includes ND data (MDLs used). If all results are ND, then the total is indicated as ND.

⁽d) TTHMs value is calculated by adding individual trihalomethane results (including MDLs for ND data). If ND data is included, "<" is indicated with the TTHMs result.

⁽e) Well MW-6 was not monitored for haloacetic acids in 2014.

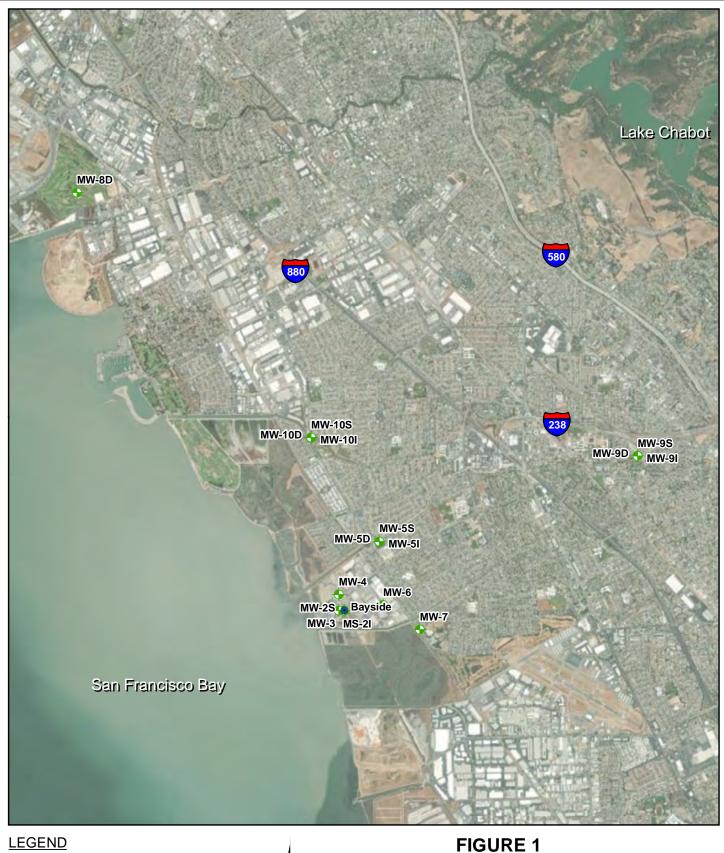
⁽f) Well MW-6 was not monitored in 2015 due to pump equipment failure.

⁽⁹⁾ Well MW-7 was not sampled in 2016 and 2017 because the pump EBMUD owns was found to be incompatible with the well.

⁽h) Data omitted due to laboratory batch quality control failure.

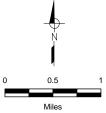
⁽i) Well was not sampled in 2022 or 2023 due to equipment failure.

⁽k) EBMUD was bringing a new HAA instrument online and was not able to provide analytical results for these parameters





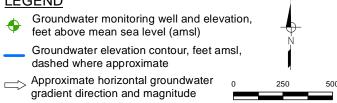
Bayside Aquifer Storage and Recovery Well



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Well Location Map

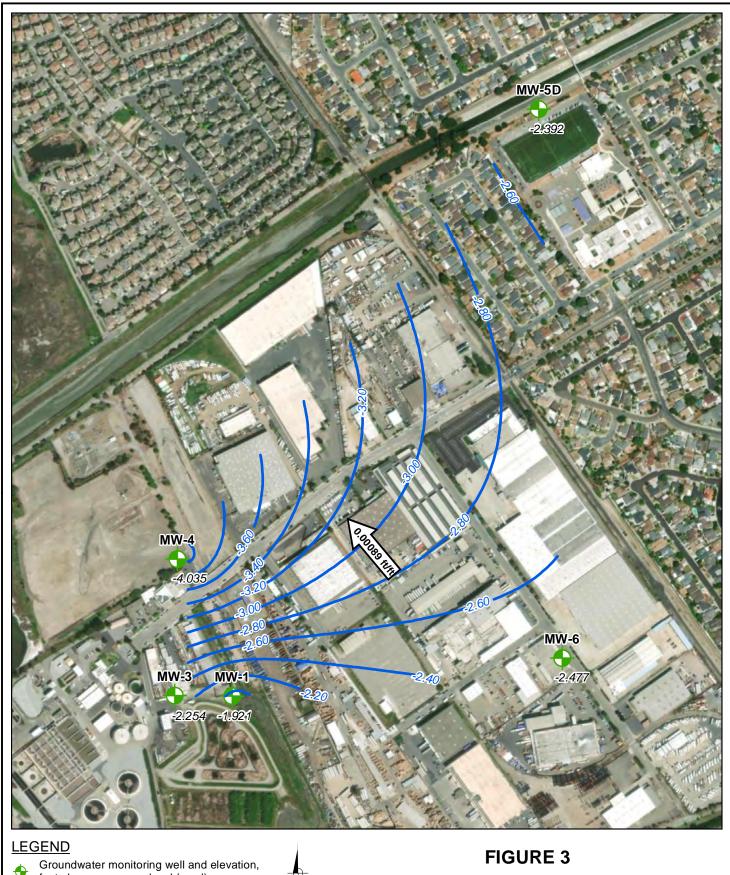


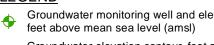


Scale in Feet

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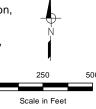
Groundwater Elevation Contours Low Tide (November 1, 2023)





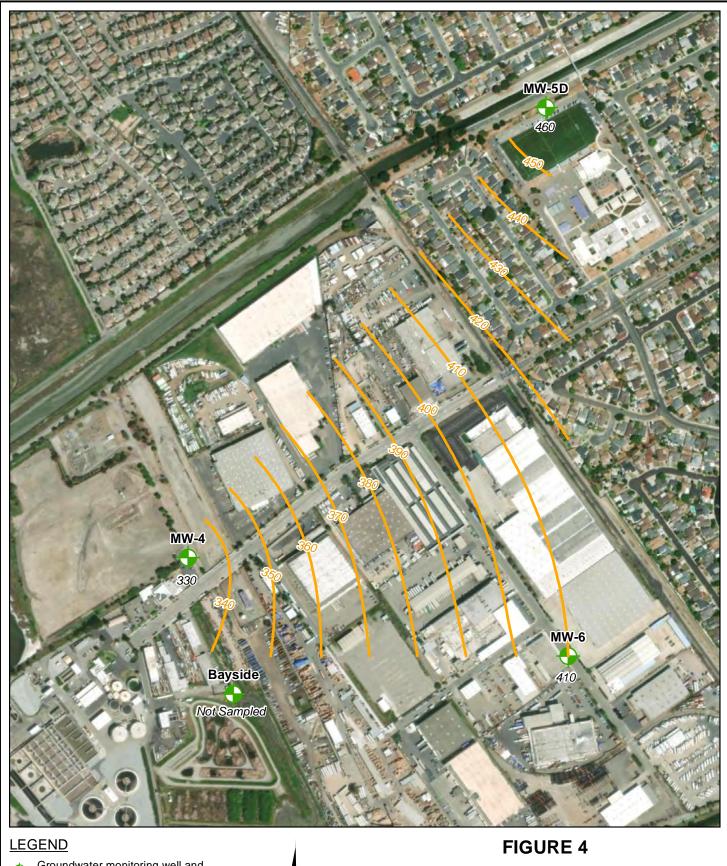
Groundwater elevation contour, feet amsl, dashed where approximate

Approximate horizontal groundwater gradient direction and magnitude



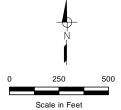
East Bay Municipal Utility District 2023 Bayside Annual Report

Groundwater Elevation Contours (High Tide March 1, 2023)



Groundwater monitoring well and TDS concentration in mg/L.

TDS concentration contour.



East Bay Municipal Utility District 2023 Bayside Annual Report

Groundwater TDS Contours October 2023

Attachment	t A – Gro	undwate	er Purgi	ng Logs	

SITE NAME: Bayside	Wells			7 . 1		, ,		
WELL NO: 2S		INS	PECTOR	DOWKK D	ATE:	123/73		
			Р	URGING DATA	10			
WELL DIAMETER (inches): 2	[1		LL SCRE 0 feet	EN INTERVAL DEPTH: 40 fe		TER (feet):		E PUMP
WELL VOLUME	PURGE: (6	0 ft - \$, 4 f		0120		= 24,77 total purge g	allons	(25
INITIAL PUMP OR TUE DEPTH IN WELL (feet):	BING PUF	RGING HATED AT: 400	2 [PURGING DEL TOTA PURG	L VOLUME ED (gallons):	FINAL STATIC D TO WATER (feet		8.71
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)		pH (standard units)	TEMP. (°C)	COND. (circle units) mS/cm <u>or</u> μS/cm		
1410	10	10		6,58	18.9	77045		
1418	10	20		6,62	19,5	774us		
1425	5	25		6.60	19,1	769		

SITE NAME: Bayside	Wells					1-1-	
WELL NO: 2I		INS	SPECTOR	= DOW, 13/3	DATE:	123123	
				UKGING DAT	4		
WELL DIAMETER (inches): 2	DIA		ELL SCRE	EN INTERVAL DEPTH		C DEPTH TER (ft): 13.5	PURGE PUMP TYPE: ESP
WELL VOLUME						= $99,5$ total purge	,
INITIAL PUMP OR TUB DEPTH IN WELL (feet):	ING 20 PURG INITIA	ING TED AT: 145 TOTAL	P	PURGING 13/5	TOTAL VOLUME PURGED (gallons):	FINAL STATIC D TO WATER (feet): 15,4
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)		pH (standard units	TEMP.	COND. (circle units) mS/cm or(µS/cm	
1215	30	30		7.43	19.8	101545	
1245	30	60		7,65	20,7	990 us	
1315	30	90		7.62	19,1	92345	
· · · · · · · · · · · · · · · · · · ·			1				

@ 5gal. 5min 18 1gal/1min.

SITE NAME: Bayside V	TT CIIS		INSPEC	TOR	MT/DW	0	ATE: 10/2	C123				
WELL NO: 4			mor Ec		URGING DAT			710				
WELL DIAMETER (inches): 2		TUBING DIAMETER (inches): 1/2	to 650	SCRE feet	EN INTERVAL DEPT	H: 520	TO V	TIC DEPTH VATER (fee	0: 12	TY	PE: I	PUMF ESP
WELL VOLUME	PURGE:	(650 ft - 17	L ft)	X	0.16 gal/ft = {	15/23	gallons X	3 = 306	14 total purge	gallo	ns	
INITIAL PUMP OR TUB DEPTH IN WELL (feet):	ING P	NITIATED AT: 15	00		URGING NDED AT: 1607	PURG	AL VOLUME GED (gallons):	300	TO WATER (fee		2.5	_
TIME	VOLUME PURGED (gallons)	PURGE	E D		pH (standard un	its)	TEMP. (°C)	m	COND. (circle units) 6/cm or (S/cm			
1520 1528 15	100	100 1	AT								1	
15:56	100	2001	NT			i,	10.00					
16:24	100	- 300 N	ЛТ		Mark.							
	1				7.7				17 -			
15:20	100	100			7.53		19.1	5	35	9		
15:40	100	200			7.50		19-7	4	99			
16:00	100	300			7.63		19.6	4	.39	A T		
										1882		
							7-13-1-					
					pt stope 93	5.7%						
												-

BS seconds 15 gal

i min I gal

W	ELL NO: 5D			INSPEC	PU	MT/DW/KK		10/26/23						
D	/ELL IAMETER (inches); 4		TUBING DIAMETER (inches): 1/2	to 630	CREE feet	N INTERVAL DEPTH	500 fee	TOWATER	(feet): 16.3	PURGI TYPE:	ŀ			
V	VELL-VOLUME P	URGE:	(640 ft - 1b	3 ft)	ft) $X 0.65$ gal/ft = 405.40 gallons $X 3 = 1216$ total purge gallons									
I	INITIAL PUMP OR TUBIN DEPTH IN WELL (feet):	NG P	URGING IITIATED AT: 12	40	PU	RGING 1509	TOTAL V	OLUME (gallons): \2\5		6.6				
	TIME	VOLUME PURGED (gallons)	VOLUM	E D		pH (standard units	5)	TEMP. (°C)	COND. (circle unite) mS/cm o(μS/cm)					
)	13:48-M	405	405			6.91		22.5	702					
	14:56 MT	405	810			7.31		22.2	198					
	13:48-MT 14:56 MT	405	121	5		7.41		22.9	705					
						pt slope:9	6.8%.							
-														
						T.								
											A 10 A 10			
-														
		174							V 10					
-	- 4													
-	100 per										7			
	19													
-														
	N. N		10											

50 sec train 5 gal

al Igat/tisec

35 sec | S gal 7 Sec | gal

148 min

SITE NAME: Bayside	Wells											
WELL NO: 6			INSPECT	OR:	MT/6E	DATE:	10/2	14/23				
				Pι	JRGING DATA							
WELL DIAMETER (inches): 4		TUBING DIAMETER (inches): 1/2	to 650 fe		EN INTERVAL DEPTH: 480	0 feet	STATIC TO WAT	DEPTH ER (feet):	12.5		RGE F PE: IE	SP
WELL VOLUME	PURGE:	(655 ft - 12.	5 ft)		0.65 gal/ft = 418				5 total purge	gallo	ns	
INITIAL PUMP OR TUB DEPTH IN WELL (feet):	SING F	PURGING NITIATED AT: \ C		Pl EN	URGING 2:01 PM PUR	AL VOL	UME allons): 12	50	FINAL STATIC D TO WATER (fee			
TIME	VOLUME PURGEE (gallons)	PURGE	E D		pH (standard units)	1	ГЕМР. (°C)	(cir mS/ci	COND. cle units) m <u>or</u> uS/cm			
1125	320	320			6.0	1	9.7	{	302			
1228	320	640			6.0	2	0.7	(595			
131	320	960			6.0	21	D.Q		591			
201	290	1250)		6.0	2	0.6	•	590			
											\top	

ELL NO: 7			INSPECTOR: DOW	MT DAT	E: 0/25/2	3	
			PURGINO		11,7		
VELL NAMETER (inches): 4		TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERV to 630 feet	AL DEPTH: 510 fe	et STATIC I TO WATI	DEPTH ER (feet): 10.2	PURGE PU TYPE: ESI
VELL VOLUME				,		= 1306 total purge	
INITIAL PUMP OR TUE DEPTH IN WELL (feet)	BING PUI	RGING TIATED AT: 11	PURGING ENDED AT:	1430 TOTAL V	VOLUME 30 D (gallons):	FINAL STATIC DEPT TO WATER (feet):	497
TIME	VOLUME PURGED (gallons)	TOTAL VOLUM PURGE (gallons	E (sta	pH indard units)	TEMP. (°C)	COND. (circle units) mS/cm or (uS/cm)	
12:15	326	326		7.38	21.6	739	
13.00	326	652	7	1.54	22.1	725	
13:45	326	97	8 -	1.65	21.5	728	
14:30	326	1306	, 1	.70	21.9	717	
			PH 5107	e. 95.7%			
				ţ			

+

174 min

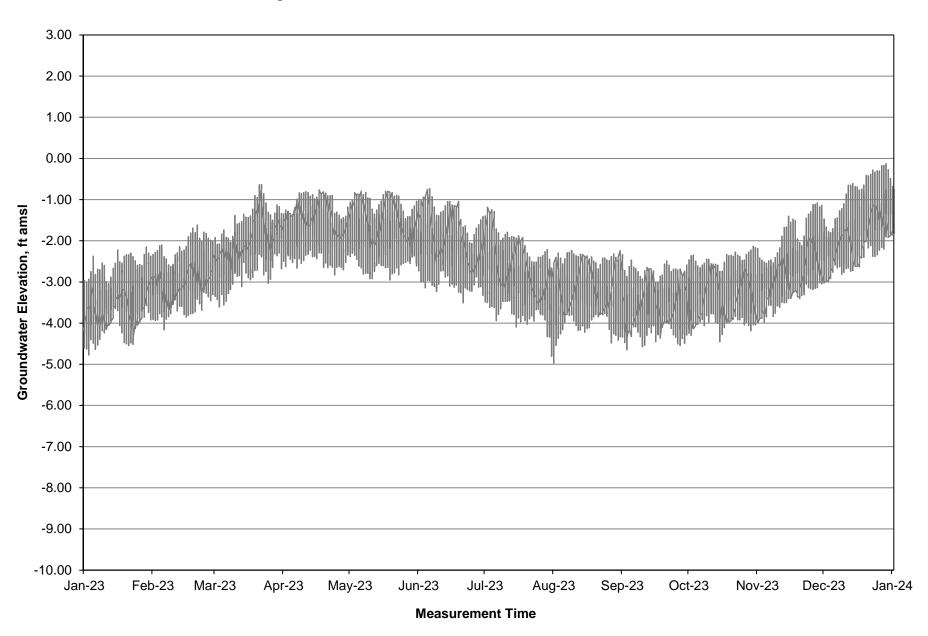
1300

2.9 hvs.

Deline

Attachment B - Groundwater Elevation Trends for Monitoring Wells

Figure B-1. 2023 MW-1 Groundwater Elevation Trend



East Bay Municipal Utility District Bayside Groundwater Project 2023 Annual Report

Figure B-2. 2023 MW-2S Groundwater Elevation Trend

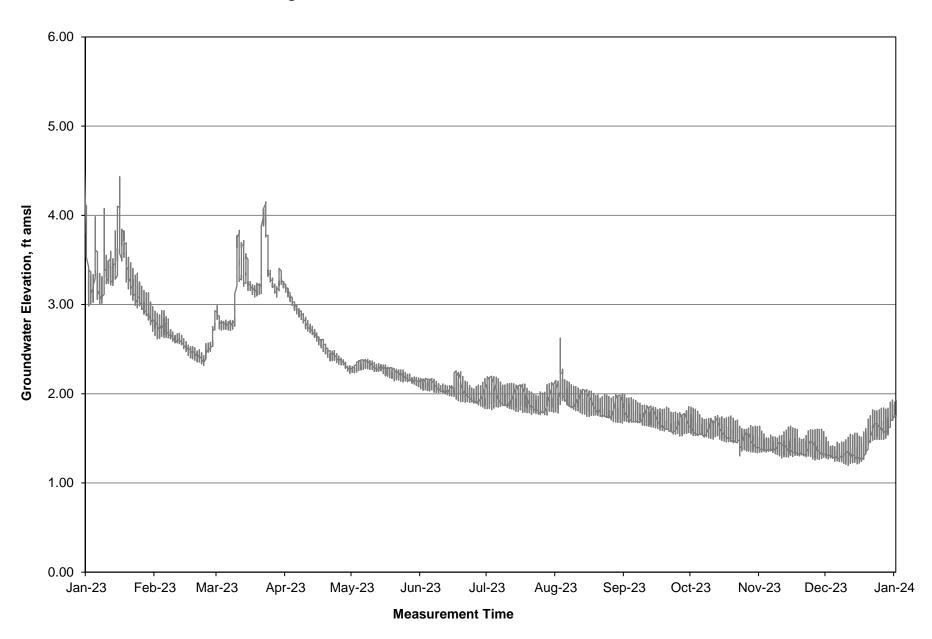
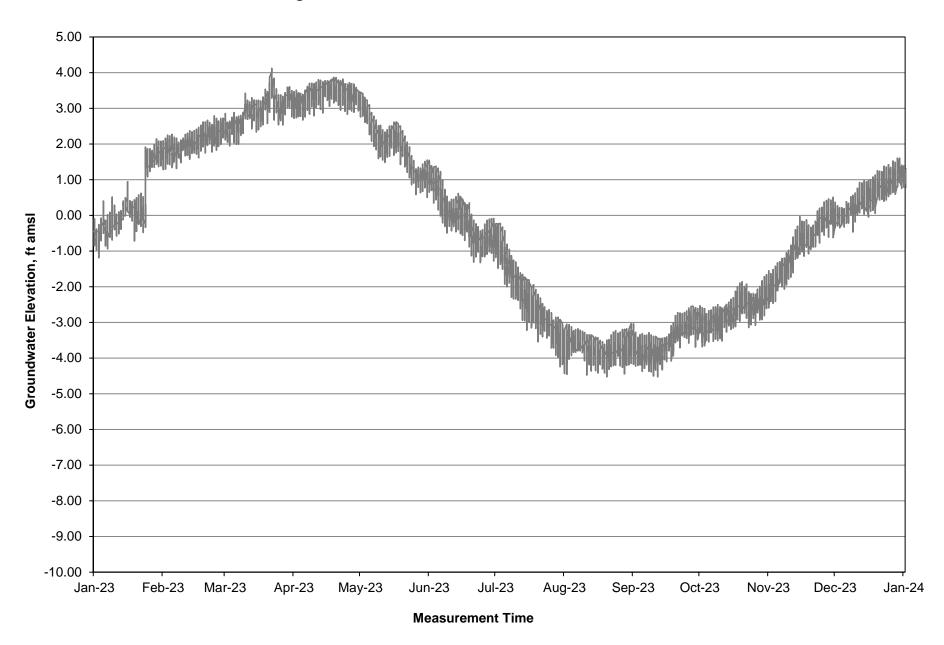


Figure B-3. 2023 MW-2I Groundwater Elevation Trend



East Bay Municipal Utility District Bayside Groundwater Project 2023 Annual Report

Figure B-4. 2023 MW-3 Groundwater Elevation Trend

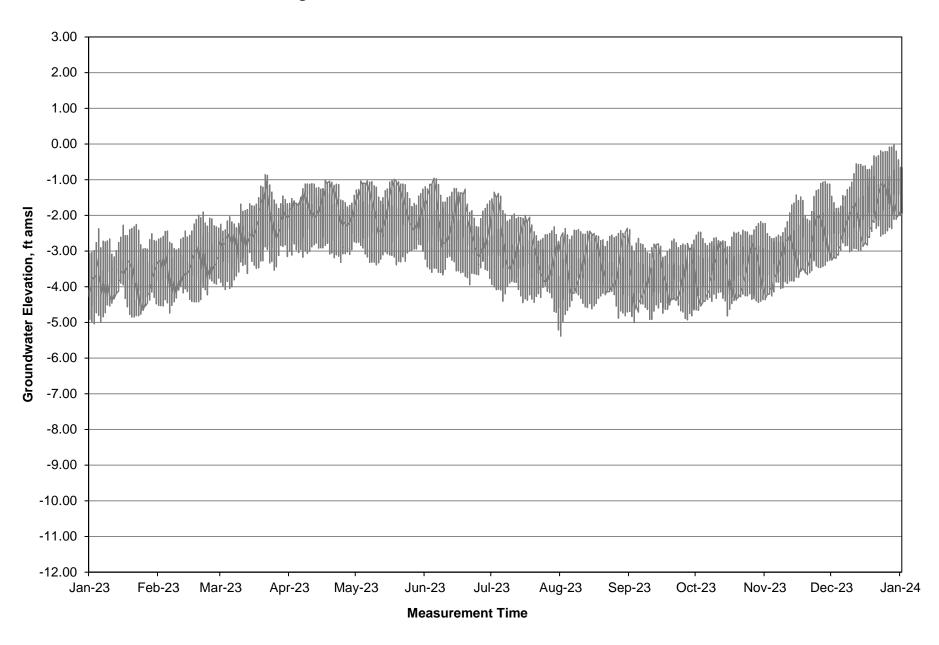


Figure B-5. 2023 MW-4 Groundwater Elevation Trend

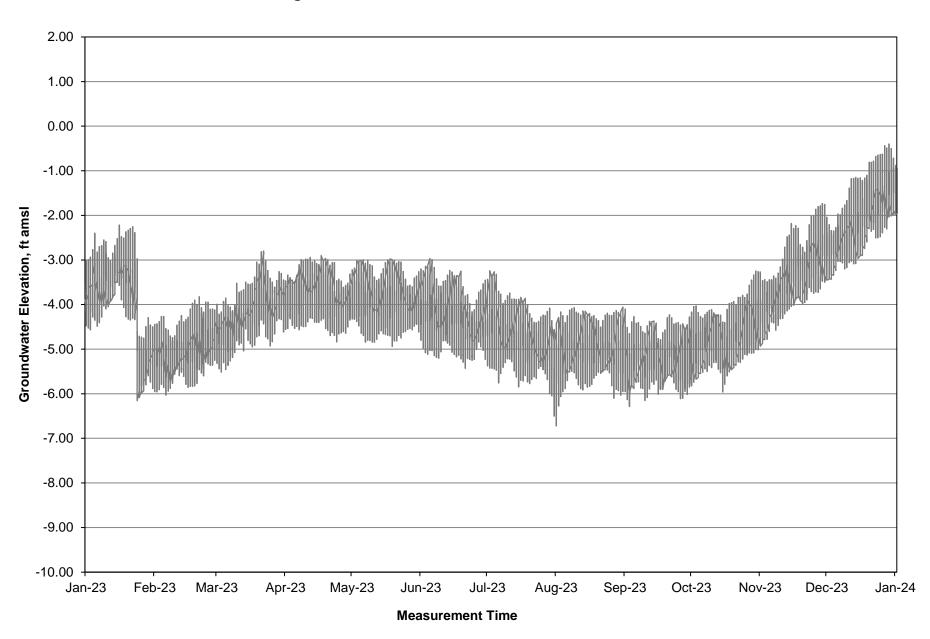


Figure B-6. 2023 MW-5S Groundwater Elevation Trend

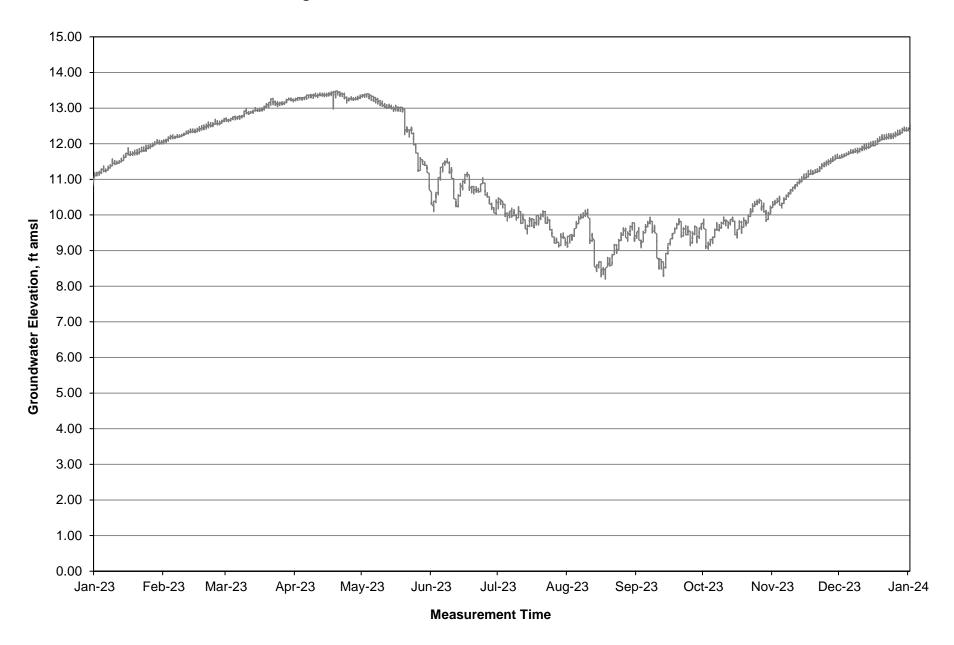


Figure B-7. 2023 MW-5I Groundwater Elevation Trend

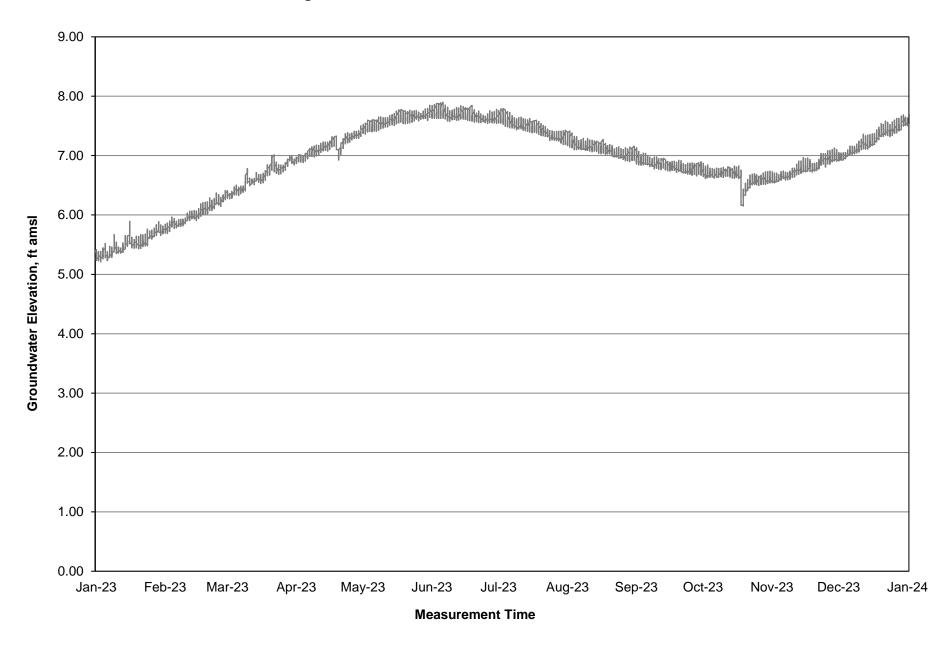


Figure B-8. 2023 MW-5D Groundwater Elevation Trend

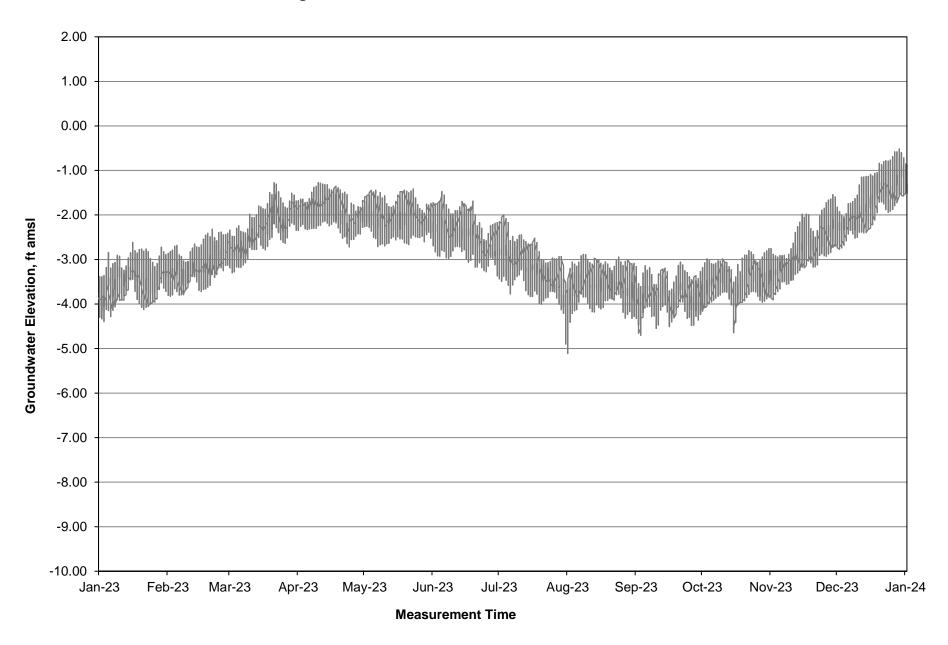


Figure B-9. 2023 MW-6 Groundwater Elevation Trend

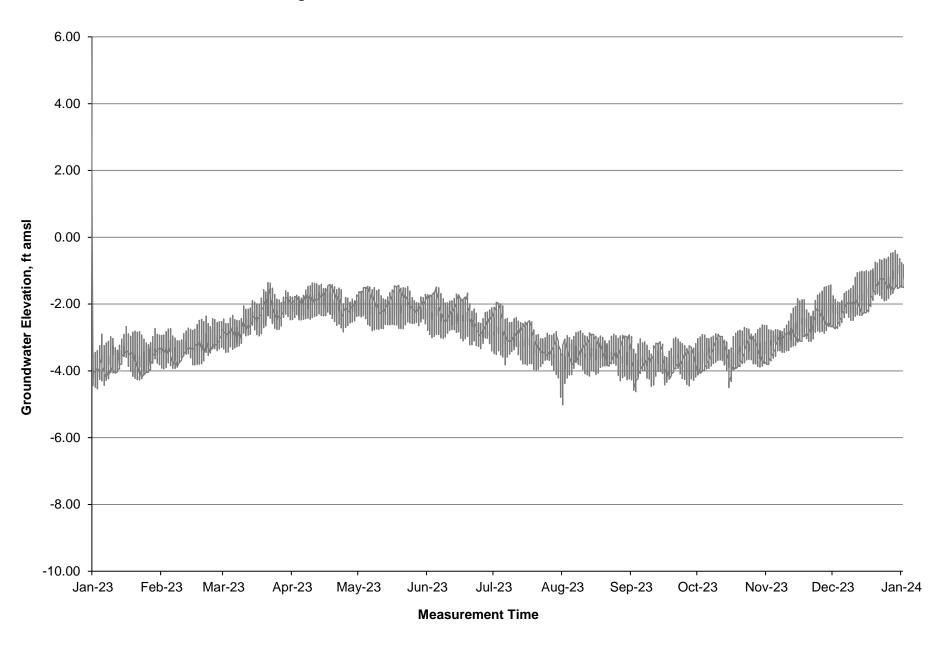


Figure B-10. 2023 MW-7 Groundwater Elevation Trend

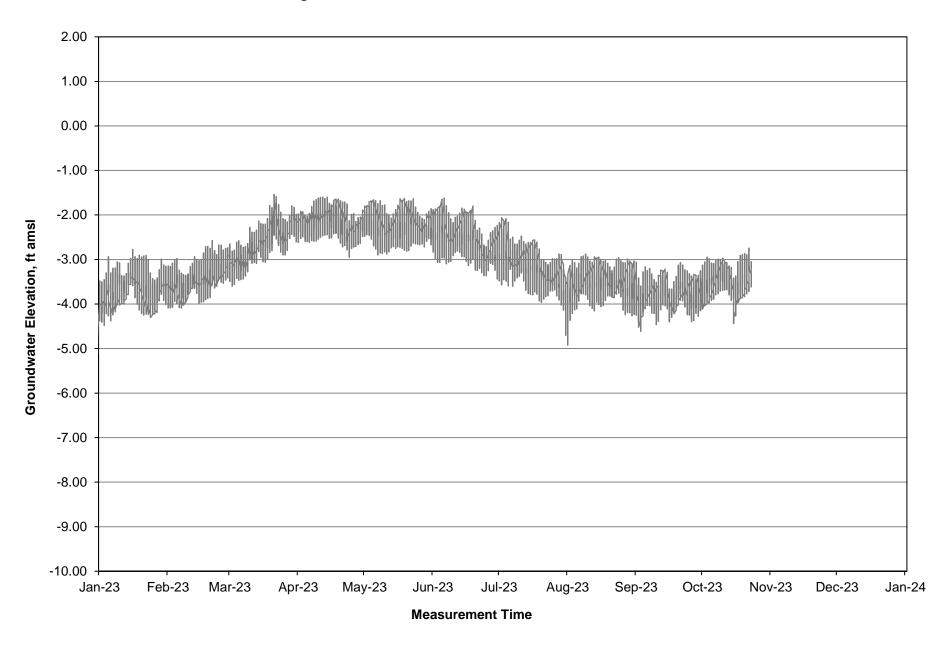


Figure B-11. 2023 MW-9D Groundwater Elevation Trend

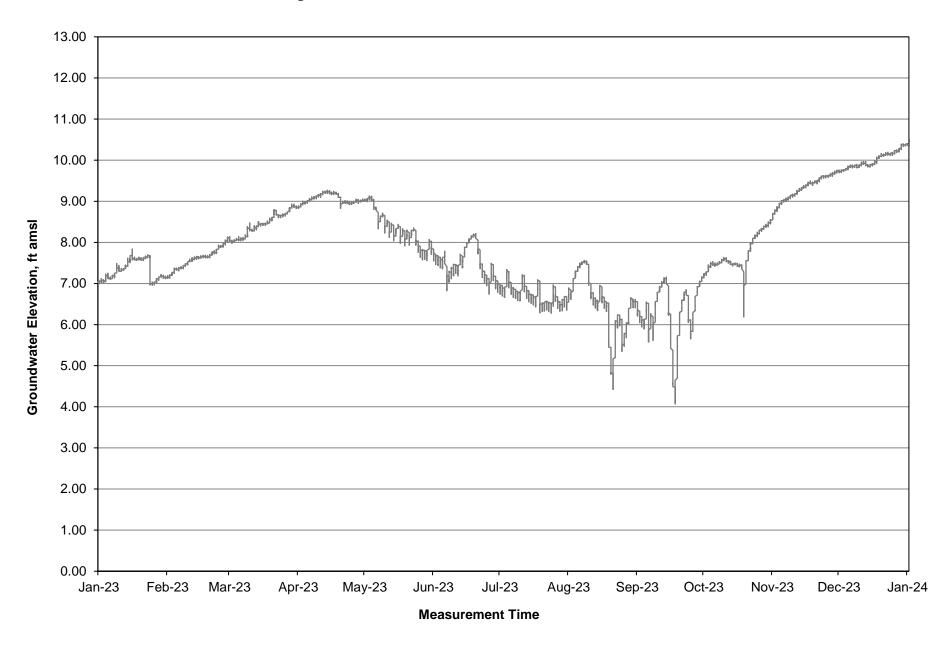


Figure B-12. 2023 MW-10I Groundwater Elevation Trend

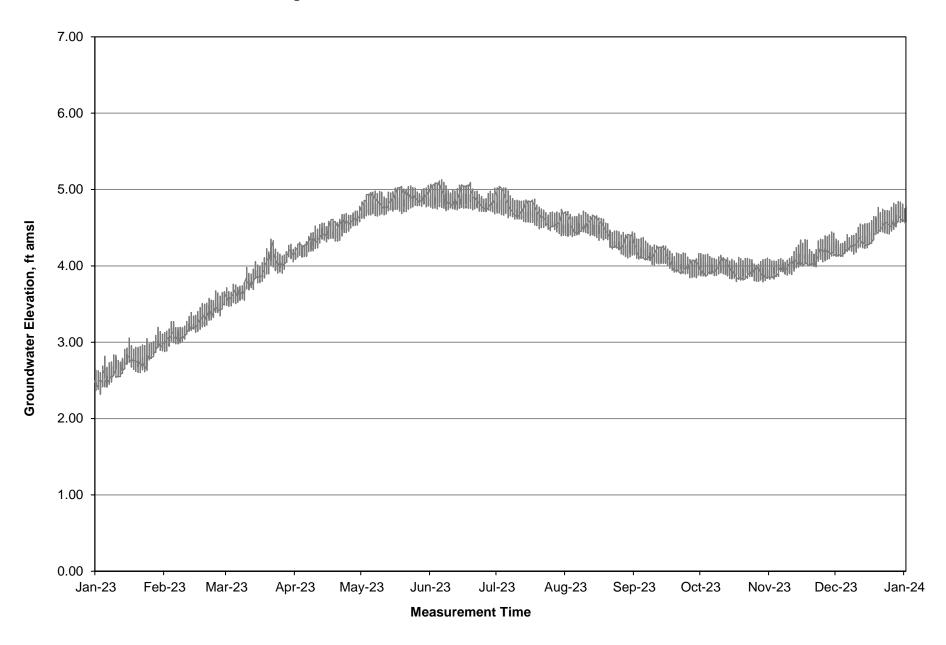
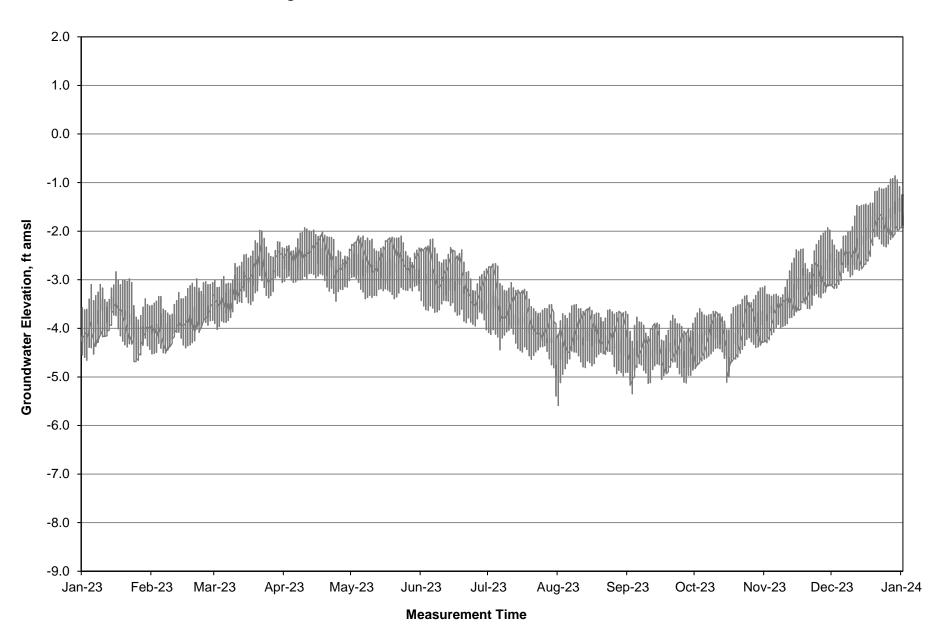


Figure B-13. 2023 MW-10D Groundwater Elevation Trend



Attachment C - Analytical Lab Reports for 2023 Water Quality Monitoring

Analytical Results Report

19 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022071

Report Generated: 01/18/2024 17:30

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Huit of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager



Laboratory Services Division ELAP#1060

Samples for C022071

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022071-01 GRAB Oct 23 2023 14:24 GW BAYSIDE - BAY1-MW2S



Laboratory Services Division ELAP#1060

Samples Results for C022071

Sample ID: C022071-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW2S OW-1 the same parcel as the Bayside Well on Oro Loma Property; formerly BAY1-MW2-

60

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 23 2023 14:24Sample Collector:KKinnonDate Received:Oct 23 2023 07:25Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LI	MS								
TARGET ANALYTES									
CL2R		0.0	0.02		mg/L				10/23/2023 14:24
Field data entry into LI	MS								
TARGET ANALYTES									
Depth		8.7			Feet				10/23/2023 14:24
Field data entry into LII	MS								
TARGET ANALYTES									
рН		6.60			pH Units				10/23/2023 14:24
Field data entry into LI	MS								
TARGET ANALYTES	.,_,								
Temperature		19.1			С				10/23/2023 14:24
-					C				10/23/2023 14.24
Total Dissolved Solids by	y SM 2540 C	C-2011							
TARGET ANALYTES									
Total Dissolved Solids		77000	330	1800	mg/L	33	B231024-007		10/24/2023 09:40
Alkalinity by SM 2320 B	3-2011								
TARGET ANALYTES									
Alkalinity: Total as CaCO3		400	5	30	mg/L	1.0	B231025-009		10/25/2023 09:57
Alkalinity: Carbonate	U	5	5	30	mg/L	1.0	B231025-009		10/25/2023 09:57
Alkalinity: Bicarbonate		400	5	30	mg/L	1.0	B231025-009		10/25/2023 09:57
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231025-009		10/25/2023 09:57
Ammonia as N by SM 45	500-NH3 C-2	2011							
TARGET ANALYTES									
Ammonia as N	E 1	1.1	0.29	1.5	mg/L	1.0	B231026-007		10/26/2023 12:14
Hardness as CaCO3 by	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		35000	400	700	mg/L	100	B231106-008		11/06/2023 09:00
Anions by EPA 300.1									
TARGET ANALYTES									
Chloride		42000	190	1000	mg/L	5000	B231024-008		10/24/2023 16:16
Nitrate as N	U	12	12	150	mg/L	5000	B231024-008		10/24/2023 16:16
Sulfate		4900	340	1000	mg/L	5000			10/24/2023 16:16
SURROGATES									
Dichloroacetate (%)		100			%	5000	B231024-008		10/24/2023 16:16



Laboratory Services Division ELAP#1060

Samples Results for C022071

Sample ID: C022071-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW2S OW-1 the same parcel as the Bayside Well on Oro Loma Property; formerly BAY1-MW2-

60

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 23 2023 14:24Sample Collector:KKinnonDate Received:Oct 23 2023 07:25Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7				,					
TARGET ANALYTES									
Calcium	M1	1280000	188	1660	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Iron	U	261	261	1660	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Potassium	M1	461000	2940	8320	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Magnesium	M1	3030000	40.6	1660	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Manganese	M1	37300	4.78	666	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Sodium	M1	21100000	64.5	1660	ug/L	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
INTERNAL STANDARD									
Yttrium (%)		94			%	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Yttrium Radial (%)		106			%	42	B231114-002	11/01/2023 10:29	11/15/2023 13:20
Haloacetic Acids, GC/EC	D by EPA	552.2							
TARGET ANALYTES									
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
Trichloroacetic Acid	E1	0.88	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
	Comments:	HAA (5) calcu	ılation uses	a zero for an	y individual HAA	result less	than the Californ	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		112			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05
SURROGATES									
2,3-Dibromopropionic Acid (%)		103			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:05

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

Bromodichloromethane	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:08
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or al	ove MDL		
Bromoform	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:08
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or al	ove MDL		
Chloroform	U	0.10	0.10	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:08
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or al	ove MDL		
Dibromochloromethane	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:08
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or al	ove MDL		
Total Trihalomethanes, calculated	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:08
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or al	ove MDL		

A 1.	0 116	D **			UI 101 C02207			0/ 550	0/ 852	DD~	DDC
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Total Dissolved Solids DU	JP by SM 2	540 C-20	11, B231	024-007		'					
B231024-007 analyzed on	10/24/2023	3 09:40; S	ource =	C022070-0)1						
Total Dissolved Solids		640	20	110	mg/L		630			1.6	10
Total Dissolved Solids LC	CS by SM 2	540 C-20	11, B231	024-007							
B231024-007 analyzed on	10/24/2023	3 09:40									
Total Dissolved Solids		320	20	110	mg/L	340		96	85 - 115		
Total Dissolved Solids MI	B by SM 25	40 C-201	1, B2310	24-007							
B231024-007 analyzed on	10/24/2023	3 09:40									
Total Dissolved Solids	U	10	10	55	mg/L						
Alkalinity DUP by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 10:08; S	ource =	C022073-0)1						
Alkalinity: Total as CaCO3		220	5	30	mg/L		220			0.7	20
Alkalinity DUP by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 10:59; S	ource =	C021078-1	10						
Alkalinity: Total as CaCO3		6600	62	380	mg/L		6600			0.1	20
Alkalinity LCS by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 09:30									
Alkalinity: Total as CaCO3		300	5	30	mg/L	300		99	85 - 115		
Alkalinity MB by SM 232	0 B-2011, I	B231025-	009								
B231025-009 analyzed on	10/25/2023	3 09:18									
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalinity MS by SM 232	0 B-2011, E	3231025-0	009								
B231025-009 analyzed on	10/25/2023	3 10:13; S	ource =	C022073-0)1						
Alkalinity: Total as CaCO3		520	5	30	mg/L	300	220	99	80 - 120		
Alkalinity MS by SM 232	0 B-2011, E	3231025-0	009								
B231025-009 analyzed on	10/25/2023	3 11:04; S	ource =	C021078-1	10						
Alkalinity: Total as CaCO3		11000	62	380	mg/L	5000	6600	98	80 - 120		
Alkalinity QCS by SM 23	20 B-2011,	B231025	-009								
D221025 000ll	10/25/2023	3 09:37									
B231025-009 analyzed on	10/20/2020										

Laboratory Services Division ELAP#1060

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Ammonia as N DUP by S	M 4500-NI	13 C-2011	, B23102	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C 021337-0 9)						
Ammonia as N		39	1.4	7.5	mg/L		38			1.2	10
Ammonia as N LCS by S	M 4500-NH	I3 C-2011	, B23102	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N		12	0.29	1.5	mg/L	12		97	85 - 115		
Ammonia as N LOQ by S	SM 4500-NI	H3 C-2011	1, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	E1	1.5	0.29	1.5	mg/L	1.5		99	50 - 150		
Ammonia as N MB by SN	И 4500-NH	3 C-2011,	B231026	5-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SM	1 4500-NH	3 C-2011,	B231026	-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C 021337-0 8	3						
Ammonia as N		110	1.4	7.5	mg/L	60	50	99	80 - 120		
Ammonia as N MSD by S	SM 4500-NI	H3 C-2011	1, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C 021337-0 8	3						
Ammonia as N		110	1.4	7.5	mg/L	60	50	98	80 - 120	0.0	15
Hardness as CaCO3 DUF	by SM 234	40 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource = (C020700-01	l						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUF	by SM 234	40 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource = (C 020854-0 3	3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10
Hardness as CaCO3 LCS	by SM 234	40 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LOC) by SM 23	40 C-201	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Hardness as CaCO3 MB	by SM 234	0 C-2011	, B23110	6-008		1					
B231106-008 analyzed or	n 11/06/2023	3 09:00									
Hardness as CaCO3	U	4	4	7	mg/L						
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed or	n 11/06/2023	3 09:00; \$	Source =	C020700-	01						
Hardness as CaCO3		120	4	7	mg/L	100	16	102	85 - 115		
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed or	n 11/06/2023	3 09:00; S	Source =	C020854-0	03						
Hardness as CaCO3		120	4	7	mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QC	S by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed or	•		, -								
Hardness as CaCO3		160	4	7	mg/L	150		104	91 - 107		
Anions LCS by EPA 300	.1, B231024	-008									
B231024-008 analyzed or	n 10/24/2023	3 13:07									
Chloride		0.99	0.061	0.2	mg/L	1.0		99	85 - 115		
Nitrate as N Sulfate		0.046 0.89	0.0035 0.079	0.03 0.2	mg/L	0.05 1.0		92 89	85 - 115 85 - 115		
Dichloroacetate (%)		101	0.079	0.2	mg/L %	1.0		89	63 - 113		
Anions LOQ by EPA 300	0.1, B231024	4-008									
B231024-008 analyzed or	n 10/24/2023	3 12:29									
Chloride		0.21	0.061	0.2	mg/L	0.20		107	50 - 150		
Nitrate as N	E1	0.029	0.0035	0.03	mg/L	0.03		96	50 - 150		
Sulfate Dichloroacetate (%)	E1	0.20 103	0.079	0.2	mg/L %	0.20		99	50 - 150		
Anions MB by EPA 300.	1. B231024-	008									
B231024-008 analyzed of	•										
Chloride	U	0.061	0.061	0.2	mg/L						
Nitrate as N	U	0.0035	0.0035	0.03	mg/L						
Sulfate	U	0.079	0.079	0.2	mg/L						
Dichloroacetate (%)		104			%						
Anions DUP by EPA 300			_	~~~							
B231024-008 analyzed or	n 10/24/2023										
Nitrate as N Dichloroacetate (%)	E1	0.017 103	0.0035	0.030	mg/L %		0.017 102			0.9	10
Anions DUP by EPA 300	0.1, B231024	l-008									
B231024-008 analyzed or	n 10/24/2023	3 21:19; 8	Source =	C021055-0	03						
Nitrate as N		0.14	0.0035	0.030	mg/L		0.14			0.0	10

			Qu	ality Contr	ol for C0220'	/1					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetate (%)		104			%		103				
Anions MS by EPA 300.	1, B231024-	008									
B231024-008 analyzed or	n 10/24/2023	3 15:01; \$	Source =	C021030-0)5						
Nitrate as N Dichloroacetate (%)		0.062 103	0.0035	0.030	mg/L %	0.05	0.017 102	90	75 - 125		
Anions MS by EPA 300.	1, B231024-	008									
B231024-008 analyzed or	n 10/24/2023	3 21:57; \$	Source =	C021055-0)3						
Nitrate as N		0.19	0.0035	0.030	mg/L	0.05	0.14	114	75 - 125		
Dichloroacetate (%)		105			%		103				
Metals LCS by EPA 200	.7, B231114	-002									
B231114-002 analyzed or	n 11/15/2023	3 12:18; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8120	4.90	43.4	ug/L	8300		97	85 - 115		
Iron		1110	6.80	43.4	ug/L	1100		100	85 - 115		
Potassium		9290	76.6	217	ug/L	8300		112	85 - 115		
Magnesium		8200	1.06	43.4	ug/L	8300		98	85 - 115		
Manganese		220	0.12	17.4	ug/L	220		99	85 - 115		
Sodium Yttrium (%)		8760 100	1.68	43.4	ug/L %	8300		105	85 - 115		
Yttrium Radial (%)		100			%						
Metals LCSD by EPA 20	00.7, B23111	14-002									
B231114-002 analyzed or	n 11/15/202	3 12:22; 1	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8040	4.90	43.4	ug/L	8300		96	85 - 115	1.0	10
Iron		1100	6.80	43.4	ug/L	1100		99	85 - 115	0.9	10
Potassium		9200	76.6	217	ug/L	8300		110	85 - 115	1.0	10
Magnesium		8120	1.06	43.4	ug/L	8300		97	85 - 115	1.0	10
Manganese		218	0.12	17.4	ug/L	220		98	85 - 115	1.0	10
Sodium		8660	1.68	43.4	ug/L	8300		104	85 - 115	1.1	10
Yttrium (%)		101			%						
Yttrium Radial (%)		100			%						
Metals LOQ by EPA 200	0.7, B231114	4-002									
B231114-002 analyzed or	n 11/15/2023	3 12:05; 1	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium	E1	38.9	4.75	42.0	ug/L	40		97	50 - 150		
Iron	E1	39.5	6.58	42.0	ug/L	40		99	50 - 150		
Potassium		230	74.2	210	ug/L	200		115	50 - 150		
Magnesium	E1	38.8	1.02	42.0	ug/L	40		97	50 - 150		
Manganese	E1	16.0	0.12	16.8	ug/L	16		100	50 - 150		
Sodium Vttrium (0/)	E1	35.6	1.63	42.0	ug/L	40		89	50 - 150		
Yttrium (%) Yttrium Radial (%)		102 103			% %						
Metals MB by EPA 200.	7 R231114_	.002									
B231114-002 analyzed of			3231101.	.014 nrens	red on 11/01	/2023 10:2	9				
•						, =V=J 1V•2	_				
Calcium Iron	U U	4.70 6.52	4.70 6.52	41.6 41.6	ug/L						
non	U	0.34	0.32	41.0	ug/L						



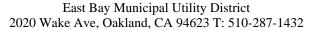
Quality Control for C022071

			Qu	ality Cont	rol for C0220	71					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Potassium	U	73.5	73.5	208	ug/L	,	1				
Magnesium	U	1.01	1.01	41.6	ug/L						
Manganese	U	0.12	0.12	16.6	ug/L						
Sodium	U	1.61	1.61	41.6	ug/L						
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MS by EPA 200.7	7, B231114-	002									
B231114-002 analyzed or	n 11/15/202	3 13:23; B	231101-	014 prepa	ared on 11/01	/2023 10:2	29; Sourc	e = C022	071-01		
Calcium		1290000	196	1740	ug/L	8300	1280000	102	70 - 130		
Iron	E1	1150	272	1740	ug/L	1100	261	103	70 - 130		
Potassium	M1	473000	3060	8680	ug/L	8300	461000	140	70 - 130		
Magnesium	M1	3060000	42.3	1740	ug/L	8300	3030000	258	70 - 130		
Manganese		37600	4.99	694	ug/L	220	37300	123	70 - 130		
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	254	70 - 130		
Yttrium (%)		94	07.2	17.10	%	0500	94	20.	70 100		
Yttrium Radial (%)		106			%		106				
Metals MSD by EPA 200).7, B23111	4-002									
B231114-002 analyzed or	n 11/15/202	3 13:26; B	3231101-	014 prepa	ared on 11/01	/2023 10:2	29; Sourc	e = C022	071-01		
Calcium	M1	1280000	196	1740	ug/L	8300	1280000	23	70 - 130	0.5	20
Iron	E1	1140	272	1740	ug/L	1100	261	103	70 - 130	0.3	20
Potassium	M1	473000	3060	8680	ug/L	8300	461000	142	70 - 130	0.0	20
Magnesium		3040000	42.3	1740	ug/L	8300	3030000	81	70 - 130	0.5	20
Manganese	M1	37400	4.99	694	ug/L	220	37300	20	70 - 130	0.6	20
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	169	70 - 130	0.0	20
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				
Haloacetic Acids, GC/EC	CD LCS by	EPA 552.	2, B2311	01-021							
B231101-021 analyzed or	n 11/01/202	3 21:05; B	231101-	011 prepa	ared on 11/01	/2023 09:3	39				
Dibromoacetic Acid		16	0.27	1	ug/L	15		106	70 - 130		
Dichloroacetic Acid		16	0.23	1	ug/L	15		104	70 - 130		
Monobromoacetic Acid		16	0.16	1	ug/L	15		104	70 - 130		
Monochloroacetic Acid		15	0.45	1	ug/L	15		102	70 - 130		
Trichloroacetic Acid		16	0.3	1	ug/L	15		107	70 - 130		
1,2,3-Trichloropropane (%)		97			%						
2,3-Dibromopropionic Acid (%)		109			%						
Haloacetic Acids, GC/EC	CD LOQ by	EPA 552	.2, B231	101-021							
B231101-021 analyzed or	n 11/01/202	3 20:40; B	231101-	011 prepa	ared on 11/01	/2023 09:3	39				
Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0		107	50 - 150		
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0		99	50 - 150		
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0		105	50 - 150		
Monochloroacetic Acid		1.1	0.45	1	ug/L ug/L	1.0		108	50 - 150		
Trichloroacetic Acid	E1	0.98	0.43	1	ug/L ug/L	1.0		98	50 - 150		
1 2 2 Tri-hlanana (0/)	ьı	104	0.5	1	ug/L	1.0		70	50 - 150		

104

107

1,2,3-Trichloropropane (%) 2,3-Dibromopropionic Acid (%)





			Qu	anty Con	101101 C0220	, <u>.</u>					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Haloacetic Acids, GC/EC	D MB by I	EPA 552.2	2, B2311	01-021							
B231101-021 analyzed on	11/01/2023	3 20:15; I	3231101-	011 prep	ared on 11/01	/2023 09:3	9				
Dibromoacetic Acid	U	0.27	0.27	1	ug/L						
Dichloroacetic Acid	U	0.23	0.23	1	ug/L						
Monobromoacetic Acid	U	0.16	0.16	1	ug/L						
Monochloroacetic Acid	U	0.45	0.45	1	ug/L						
Trichloroacetic Acid	U	0.3	0.3	1	ug/L						
1,2,3-Trichloropropane (%)		100			%						
2,3-Dibromopropionic Acid (%)		107			%						
Haloacetic Acids, GC/EC	D MS by E	PA 552.2	2, B23110	01-021							
B231101-021 analyzed on	11/01/2023	3 21:55; I	3231101-	011 prep	ared on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130		
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96	0.50	1.0	%	10	99	100	70 100		
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	D MS by F	PA 552.2	2. B23110)1-021							
B231101-021 analyzed on	•				ared on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
•							•				
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16 0.45	1.0 1.0	ug/L	15 15	0.16	104	70 - 130 70 - 130		
Monochloroacetic Acid		16	0.43	1.0	ug/L	15	0.45	110 110	70 - 130 70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	13	0.30 100	110	70 - 130		
1,2,3-Trichloropropane (%) 2,3-Dibromopropionic Acid (%)		100 112			% %		100				
H 1 4 4 1 CO/EC	D MCD I	ED 4 550	A DA21	101 021							
Haloacetic Acids, GC/EC	•				1 11/01	/2022 00 2	0.0	C020	COO 01		
B231101-021 analyzed on	11/01/202	3 22:20; I	3231101-	UII prep	ared on 11/01/	/2023 09:3	9; Sourc	ee = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	D MSD by	EPA 552	.2, B231	101-021							
B231101-021 analyzed on	11/02/2023	3 03:20; I	3231101-	011 prep	ared on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	104	70 - 130	5.3	20
1,2,3-Trichloropropane (%)		99		0	%		100				
2,3-Dibromopropionic Acid (%)		109			%		108				

Laboratory Services Division ELAP#1060

Qualifiers and Definitions

- E1 Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated Concentration.
- M1 The MS recovery was outside acceptance limits due to possible matrix interference. The analytical batch meets accuracy criteria for reporting.
- U Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate

QCS Quality Control Sample

	Time 424	Site/Locator GW BAYSIDE - BAY1-MW2S	Sample ID C022071-01	Job #: Type GRAB	Matrix Aqueous	ID	Туре	Samples transported	Tests Required	
				-	1		Туре	+SAMP KIT	Tests Required	
10/23/23/14	424	GW BAYSIDE - BAY1-MW2S	C022071-01	GRAB	Aqueous			+SAMP KIT		
						-01A	PLSTL	EPA 200.7-W (Ca,Fe,K	,Mg,Mn,Na)	
						-01B	PLSTL	TDS		
						-01C	PLSTM	Hardness		
						-01D	PLSTS	EPA 300.1 (CI,NO3,SO	4)	
						-01F	PSQLT	Ammonia: Titr-AQ		
						-01G	A125N	EPA 552.2		
						-01H	A125N	EPA 552.2		
						-011	PLSTM	Oxygen 18		
						-01J	VOC4T	EPA 8260B THM		
						-01K	VOC4T	EPA 8260B		
						-01L	VOC4T	EPA 8260B		
						-01M	C500Z	Alkalinity: Species Field Test Parameters:		
								ALDER ESTON STREET	1	Torra.
								CL2R =	0.0	mg/L
								Depth =	827	Feet
								pH =	6,60	pH Units
								Temperature =	19,1	C
							-		¥ 111	
ield Comments:										
Field Instructions: -	_									

EBMUD	COC #: C022071	Project Title: Bayside Gro TAT: Standard	und Water Project	Client PM	: David Behni Kristi Schwab	ken		Expect Date: 10/23/2023 Sampled By: K K N N NOW Samples transported on ice
Date	Time	Site/Locator	Sample ID	Туре	Matrix	ID	Туре	Tests Required
10/23/2	3/1429	*						
			Total	Containers	for: C022071	12		
		Signature	Print Name		Time	D	ate	Container Legend:
Relinquished I	by: 90	il glima	KILAK	Thnon	1540	10%	23/28	A125N = Glass, NM, septa top, 12.5 mg NH4Cl, Amber, 125 mL
Received by:		V		See See		****		C500Z = Glass, NM, septa top, Clear, 500 mL
Relinquished t	by:			_		1		PLSTL = Plastic, WM, 1000 mL
Received by:							-	PLSTM = Plastic, WM, 500 ml.
Relinquished t	by:				_			PLSTS = Plastic, NM, 125 mL
Received by:	Os.		States		Tros	10/141	Wis .	PSQLT = Plastic, square, large, 50 mg Na2S2O3, 1000 mL VOC4T = Glass, clear, septa top, 3.5 mg Na2S2O3, Clear, 40 mL

EBMUD	COC#: C022071	Project Title: Bayside Ground TAT: Standard	Water Project		: David Behn (risti Schwab			Received Date/Time: 1 Received By: Cynthia 5 Sampled By: KKinnon Due Date: 11/21/2023		
Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type		Tests Requ	red
10/23/2023	14:24	GW BAYSIDE - BAY1-MW2S	C022071-01	GRAB	Aqueous			+SAMP KIT		
						-01A	PLSTL	EPA 200.7-W (Ca,Fe,	K,Mg,Mn,Na)	
						-01B	PLSTL.	TDS		
						-01C	PLSTM	Hardness		
						-01D	PLSTS	EPA 300.1 (CI,NO3,SC	04)	
						-01F	PSQLT	Ammonia: Titr-AQ		
		1				-01G	A125N	EPA 552.2		
						-01H	A125N	EPA 552.2		
						-011	PLSTM	Oxygen 18		
		1				-01.1	VOC4T	EPA 8260B THM		
		li (-01K	VOC4T	EPA 8260B		
						-01L	VOC4T	EPA 8260B		
						-01M	C500Z	Alkalinity: Species		
								Field Test Parameters	ž.	
						1		CL2R =	0.0	mg/L
- 4								Depth =	8.7	Feet
								pH =	6.60	pH Units
								Temperature =	19.1	С
leld Commen	ts:									
ield Instructio	nso									
ample Extern	al Comments									

Page 1 of 4 for C022071



C022071 Sample Acceptance Report Received: 10/23/2023 07:25 Received By: Cynthia Soohoo

Chain-of-Custody		Comments
Chilled During Transport?	Yes	
Missing or incorrect information	No	
Mode of receipt	Drop-off Room	
Shipping Slip?	No	
Containers		Comments
BACT (120 mL) lot number	Add lot no	
BACTL (290 mL) lot number	Add lot no	
Container and label are legible and match COC?	Yes	
Correct container used with field preservation?	Yes	
Received within holding times?	Yes	
Sufficient volume, undamaged, or uncontaminated?	Yes	
Sample: C022071-01		Comments
Bubbles in ZHS/VOA containers	No	
Intent to chill		
Cooler: 1		Comments
Corrected Temp (° C)	4,8	
IR Thermometer Number	IR#13	
Representative temperature taken from	-01	
Uncorrected Temp (° C)	4.4	
Visible ice formed inside sample container?	No	
Acceptance		Comments
PM notified?	N/A	

Page 2 of 4 for C022071



C022071 Sample Acceptance Report Received: 10/23/2023 07:25 Received By: Cynthia Soohoo

Samples meet acceptance requirements? Yes

Page 3 of 4 for C022071



Sample Acceptance Preservation Report

COC: C022071 Report Generated: 10/24/2023 07:43

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Ethylenediamine 12.5 mg/mL (EDA-42)	ST230927-005	N/A	09/27/2023	10/27/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1:1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028

Container Number	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022071-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time	pur	Calylos
C022071-01C	PLSTM	Hardness	HNO3 to pH <2	1	1 1
C022071-01F	PSQLT	Ammonia: Titr-AQ	Check Cl2R = 0 [PSQLT], then H2SO4 to pH <2		
C022071-01G	A125N	EPA 552.2	Check Container		
C022071-01H	A125N	EPA 552.2-FR	Check Container		
C022071-01K	VOC4T	EPA 8260B-FR	Check Container	111	1 - 1
C022071-01L	VOC4T	EPA 8260B-FR	Check Container	V	1/
			A STATE OF S		

Page 4 of 4 for C022071





27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4196

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 22:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Reported:

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim

PO Box 24055 Project: Bayside Ground Water Project WDR

 Oakland CA, 94607
 Project Number:
 C022071
 11/27/23 16:26

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 |
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922 |
North Bay: 737 Southpoint Blwd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2932 |
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 |
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022071-01	23J4196-01	Water	10/23/23 14:24	10/26/23 22:15

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project M PO Box 24055 Oakland CA, 94607 Project I

Project Manager: Jack Lim

Project: Bayside Ground Water Project WDR
Project Number: C022071

Reported: 11/27/23 16:26

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# Note	ıs
C022071-01 (23J4196-01) Water	Sampled: 10/2	3/23 14:24	Received	1: 10/26	23 22:15							
Chloroform	ND	0.10	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	U
Bromodichloromethane	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	U
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	U
Bromoform	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	U
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	U
Surrogate: Dibromofluoromethane		89.4	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	
Surrogate: Toluene-d8		94.7	06 7	0-130		4.135161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MVA	2303	
Surrogate: Bromofluorobenzene		92.9	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:08	EPA 8260B	MYA	2303	

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Lalpha

Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022071
 11/27/23 16:26

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source	A	%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (AJ35161-BLK1)					Prepared &	Analyzed	10/30/23				
1,1-Dichloroethene	ND	0.50	1.0	ug/L							L
Benzene	ND	0.50	1.0	ug/L							τ
Trichloroethene	ND	0.50	1.0	ug/L							τ
Toluene	ND	0,50	1.0	ug/L							I
Chlorobenzene	ND	0.50	1.0	ug/L							t
Surrogate: Dibromofluoromethane	21.4			ug/L	20.0		107	70-130			
Surrogate: Toluene-d8	20.3			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	18.9			ug/L	20.0		94.5	70-130			
Matrix Spike (AJ35161-MS1)		Source: 23	J4044-03		Prepared &	Analyzed	10/30/23				
1,1-Dichloroethene	23.4	0.50	1.0	ug/L	25.0	ND	93.7	70-130			
Benzene	23.9	0.50	1.0	ug/L	25.0	ND	95.7	70-130			
Trichloroethene	22.3	0.50	1.0	ug/L	25.0	ND	89.1	70-130			
Toluene	24.7	0.50	1.0	ug/L	25.0	ND	98.8	70-130			
Chlorobenzene	24.8	0.50	1.0	ug/L	25.0	ND	99.0	70-130			
Surrogate: Dibromofluoromethane	19.8			ug/L	20.0		99.1	70-130			
Surrogate: Toluene-d8	20.8			ug/L	20.0		104	70-130			
Surrogate: Bromofluorobenzene	18.7			ug/L	20.0		93.3	70-130			
Matrix Spike Dup (AJ35161-MSD1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,J-Dichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.2	70-130	13:0	25	
Benzene	21,3	0.50	1.0	ug/L	25.0	ND	85.2	70-130	11.5	25	
Trichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.4	70-130	7.84	25	
Toluene	21.5	0.50	1.0	ug/L	25.0	ND-	85.8	70-130	14.0	25	
Chlorobenzene	22.3	0.50	1.0	ug/L	25.0	ND	89.0	70-130	10.6	25	
Surrogate: Dibromofluoromethane	22.4			ug/L	20.0		112	70-130			
Surrogate: Toluene-d8	20.4			ug/L	20.0		102	70-130			
Surrogate: Bromofluorohenzene	19.6			ug/L	20.0		97.8	70-130			

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 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022071
 11/27/23 16:26

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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.

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^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



Sample Name:	896188 Job 23J4196-01 Alpha Analytical La		IS-69368	Co. Job#: Co. Lab#:	
Container: Field/Site Name: Location:	500ml Plastic Bott 23J4196	le			
	C022071-01 10/23/2023 14:24	Date Received:	11/06/2023	Date Reported:	11/20/2023
δD of water		-24.3 % relative t	to VSMOW		
δ^{18} O of water		-2.72 % relative	to VSMOW		
Tritium content of v	vater	na			
δ ¹³ C of DIC		na			
¹⁴ C content of DIC	,	na			
δ ¹⁵ N of nitrate	***********	na			
δ^{18} O of nitrate	(na			
δ ³⁴ S of sulfate		na			
δ ¹⁸ O of sulfate	~~~~	na			
Vacuum Distilled?		No			
Remarks:					



2334146

East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: KKinnon Submitted Date: Project Title: Bayside Ground Water Project Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier PO#: BRD-13921-AX Expiration: 12/31/2023 TAT: Standard C022071 COC #:

Date	ime Sa.	Sample ID	Location/PS Code	Matrix	Container	Type	Tests Required	Method Reference
0/23/2023 14	1:24 C02	22071-01	C022071-01 GW BAYSIDE - BAY1- MW2S	Aqueous	-01)	PLSTM	Oxygen 18	D180
					-013	VOC4T	EPA 8260B THM	EPA 8260B
					-01K	VOC4T	EPA 8260B	Bottle for QC (2)
					-01L	VOC4T	EPA 8260B	Bottle for QC (2)
omments: Alpha: Isotope analy	ope analysis fo	or Oxygen-18	ysis for Oxygen-18 and Hydrogen-2 (subcontracted). THMs by EPA 8260 (report individual THM results and total sum).	racted). THMs b	y EPA 8260 (re	port individual TH	IM results and total sum).	
		-	Total containers received:	4				

Relinquished by:	Signature	Print Name	Time	Date
Received by:	J. J.	Michael Lopez	55:11 11:55	10/2/133
Received by:)	John willis	1900	1026.23
Received by:	30	John Willis	2215	5.4.C

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded. Alpha Analytical Laboratory 208 Mason St

Kristi Schwab (kristi.lorenson@ebmud.com)

PO Box 24055 MS #59 **EBMUD Laboratory**

Send results and invoice to:

Ukiah, CA 95482

707-468-0401



ko_UKtoNB_COC.r	pi			VORK O	CONTRACT TO THE PROPERTY OF TH	7	-1	Printed: 10	/30/2023	10:57:35AN
		Alnha Analytic	al Laborate	23J41	196 ah to North Bay	Chain of C	ustody			
Client: EBMUD		apau manya				Chain or v		Master	Duine Ch.	oot
Project: Bayside G	round Water	Project WDR	Project N	umber: C	RP_EBMUD C022071		PO #:	_waster	rrice Sil	eet
		00 (10 day TAT								
	John Willis Aaron J. Koo	yers		Date Recei Date Logge	ived: 10/30/23 2 ed 10/30/23 1					
amples Received at:		deg C	All	containers	received and inta	et: YES	NO			
analysis		Department		Expires	Comment	5				
J4196-01 C022071 JB 8260 THMs	-01 [Water]	Sampled 10/2: NB GCMS		1/06/23 23:	:59					
Containers Supplie										
VOA Vial - Na2S2O3 (VOA Vial - Na2S2O3 (
VOA Vial - Na2S2O3 (D)									
Relingtished Ry	3	/0/30/23	ate.	Time	Received By		2	Dat	10/3/	/23 Time
Relinquished By		Da		Time	Received By	5	2	Dat		723 Time
Relinquished By	72	Da	123	Time	Received By Received By	5	2		3/11	
~	72	10/3	123			5	2	10/	/3//1	3

Analytical Results Report

19 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022070

Report Generated: 01/18/2024 17:13

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Huit of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager



Laboratory Services Division ELAP#1060

Samples for C022070

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022070-01 GRAB Oct 23 2023 13:18 GW BAYSIDE - BAY1-MW2I -



Laboratory Services Division ELAP#1060

Samples Results for C022070

Sample ID: C022070-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW2I OW-1 the same parcel as the Bayside Well on Oro Loma Property; aka BAY1-MW2D until

11-2009; formerly BAY1-MW2-190

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 23 2023 13:18Sample Collector:KKinnonDate Received:Oct 24 2023 07:25Sample Receiver:C Soohoo

Sample Comments:

Sample Comments:									
Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LIN	MS								
TARGET ANALYTES									
CL2R		0.1	0.02		mg/L				10/23/2023 13:18
					C				
Field data entry into LIN	MS								
TARGET ANALYTES									
Depth		15.4			Feet				10/23/2023 13:18
Field data entry into LIN	ΛS								
TARGET ANALYTES	110								
		7.0							10/22/2022 12:10
pH		7.62			pH Units				10/23/2023 13:18
Field data entry into LIN	MS								
TARGET ANALYTES									
Temperature		19.1			С				10/23/2023 13:18
-					-				
Total Dissolved Solids by	y SM 2540 C	C-2011							
TARGET ANALYTES									
Total Dissolved Solids		630	20	110	mg/L	2.0	B231024-007		10/24/2023 09:40
Alkalinity by SM 2320 B	-2011								
TARGET ANALYTES	-2011								
Alkalinity: Total as CaCO3		360	5	30	ma/I	1.0	B231025-009		10/25/2023 09:50
Alkalinity: Carbonate	U	500	5	30	mg/L mg/L	1.0	B231025-009		10/25/2023 09:50
Alkalinity: Bicarbonate	C	360	5	30	mg/L	1.0	B231025-009		10/25/2023 09:50
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231025-009		10/25/2023 09:50
A CD// 45	NITT2 (C) (0011							
Ammonia as N by SM 45	500-NH3 C-2	2011							
TARGET ANALYTES					_				
Ammonia as N	E1	0.42	0.29	1.5	mg/L	1.0	B231026-007		10/26/2023 12:14
Hardness as CaCO3 by S	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		120	4	7	mg/L	1.0	B231106-008		11/06/2023 09:00
TIM GIROS US OUCOS		120	7	,	mg/L	1.0	2231100 000		11,00,2023 07.00
Anions by EPA 300.1									
TARGET ANALYTES									
Chloride		140	3.8	20	mg/L	100	B231024-008		10/24/2023 15:38
Nitrate as N	U	0.23	0.23	3.0	mg/L	100	B231024-008		10/24/2023 15:38
Sulfate	E 1	15	6.9	20	mg/L	100	B231024-008		10/24/2023 15:38
SURROGATES									
Dichloroacetate (%)		100			%	100	B231024-008		10/24/2023 15:38



Laboratory Services Division ELAP#1060

Samples Results for C022070

Sample ID: C022070-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW2I OW-1 the same parcel as the Bayside Well on Oro Loma Property; aka BAY1-MW2D until

11-2009; formerly BAY1-MW2-190

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 23 2023 13:18Sample Collector:KKinnonDate Received:Oct 24 2023 07:25Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7								'	
TARGET ANALYTES									
Calcium		19000	4.52	40.0	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Iron		223	6.27	40.0	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Potassium		6770	70.6	200	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Magnesium		17100	0.98	40.0	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Manganese		130	0.12	16.0	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Sodium		199000	1.55	40.0	ug/L	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
INTERNAL STANDARD									
Yttrium (%)		98			%	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Yttrium Radial (%)		93			%	1.0	B231110-001	10/31/2023 15:33	11/10/2023 10:20
Haloacetic Acids, GC/EC	D by EPA 5	552.2							
TARGET ANALYTES									
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
Trichloroacetic Acid	U	0.30	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
	Comments: I	HAA (5) calc	ulation uses	a zero for an	y individual HAA	result less	than the Californ	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		101			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40
SURROGATES									
2,3-Dibromopropionic Acid (%)		106			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 01:40

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:19
Comments: SU	JB: Analyte i	ncluded in	analysis but not	detected at or abov	re MDL		
U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:19
Comments: SU	JB: Analyte i	ncluded in	analysis but not	detected at or abov	e MDL		
U	0.10	0.10	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:19
Comments: SU	JB: Analyte i	ncluded in	analysis but not	detected at or abov	e MDL		
U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:19
Comments: SU	JB: Analyte i	ncluded in a	analysis but not	detected at or abov	e MDL		
U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:19
Comments: SU	JB: Analyte i	ncluded in	analysis but not	detected at or abov	re MDL		
	Comments: SU U Comments: SU U Comments: SU U Comments: SU U	Comments: SUB: Analyte is U 0.20 Comments: SUB: Analyte is U 0.10 Comments: SUB: Analyte is U 0.20 Comments: SUB: Analyte is U 0.30	Comments: SUB: Analyte included in a U 0.20 0.20 Comments: SUB: Analyte included in a U 0.10 0.10 Comments: SUB: Analyte included in a U 0.20 0.20 Comments: SUB: Analyte included in a U 0.30 0.30	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Comments: SUB: Analyte included in analysis but not detected at or above U 0.20 0.20 1.0 ug/L Comments: SUB: Analyte included in analysis but not detected at or above U 0.10 0.10 1.0 ug/L Comments: SUB: Analyte included in analysis but not detected at or above U 0.20 0.20 1.0 ug/L Comments: SUB: Analyte included in analysis but not detected at or above U 0.30 0.30 1.0 ug/L	Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.20 0.20 1.0 ug/L 1 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.10 0.10 1.0 ug/L 1 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.20 0.20 1.0 ug/L 1 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.20 0.20 1.0 ug/L 1 Comments: SUB: Analyte included in analysis but not detected at or above MDL	Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.20 0.20 1.0 ug/L 1 10/31/2023 07:00 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.10 0.10 1.0 ug/L 1 10/31/2023 07:00 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.20 0.20 1.0 ug/L 1 10/31/2023 07:00 Comments: SUB: Analyte included in analysis but not detected at or above MDL U 0.30 0.30 1.0 ug/L 1 10/31/2023 07:00

A 7.	0 1''	D 1			UI 101 C02207		<u> </u>	0/ BEC	A/ DEG	DPD	DDD
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Total Dissolved Solids DU	P by SM 2	540 C-20	11, B231	024-007		,		,			
B231024-007 analyzed on	10/24/2023	09:40; S	ource =	C022070-0)1						
Total Dissolved Solids		640	20	110	mg/L		630			1.6	10
Total Dissolved Solids LC	S by SM 2	540 C-20	11, B231	024-007							
B231024-007 analyzed on	10/24/2023	09:40									
Total Dissolved Solids		320	20	110	mg/L	340		96	85 - 115		
Total Dissolved Solids MI	3 by SM 25	40 C-201	1, B2310	24-007							
B231024-007 analyzed on	10/24/2023	09:40									
Total Dissolved Solids	U	10	10	55	mg/L						
Alkalinity DUP by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	10:08; S	ource =	C022073-0)1						
Alkalinity: Total as CaCO3		220	5	30	mg/L		220			0.7	20
Alkalinity DUP by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	10:59; S	ource =	C021078-1	10						
Alkalinity: Total as CaCO3		6600	62	380	mg/L		6600			0.1	20
Alkalinity LCS by SM 232	20 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	09:30									
Alkalinity: Total as CaCO3		300	5	30	mg/L	300		99	85 - 115		
Alkalinity MB by SM 232	0 B-2011, I	3231025-0	009								
B231025-009 analyzed on	10/25/2023	09:18									
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalinity MS by SM 232	0 B-2011, E	3231025-(009								
B231025-009 analyzed on	10/25/2023	10:13; S	ource =	C022073-0)1						
Alkalinity: Total as CaCO3		520	5	30	mg/L	300	220	99	80 - 120		
Alkalinity MS by SM 232	0 B-2011, E	3231025-0	009								
B231025-009 analyzed on	10/25/2023	11:04; S	ource =	C021078-1	10						
Alkalinity: Total as CaCO3		11000	62	380	mg/L	5000	6600	98	80 - 120		
Alkalinity QCS by SM 23	20 B-2011,	B231025	-009								
B231025-009 analyzed on	•										
Alkalinity: Total as CaCO3		68	5	30	mg/L	66		103	91 - 111		

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Ammonia as N DUP by S	M 4500-NI	H3 C-2011	1, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = 0	C021337-0	9						
Ammonia as N		39	1.4	7.5	mg/L		38			1.2	10
Ammonia as N LCS by S	M 4500-NH	I3 C-2011	, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N		12	0.29	1.5	mg/L	12		97	85 - 115		
Ammonia as N LOQ by S	SM 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	E1	1.5	0.29	1.5	mg/L	1.5		99	50 - 150		
Ammonia as N MB by SM	И 4500-NH	3 C-2011,	B23102	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SM	Л 4500-NH 3	3 C-2011,	B231026	5-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = 0	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	99	80 - 120		
Ammonia as N MSD by S	SM 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = 0	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	98	80 - 120	0.0	15
Hardness as CaCO3 DUI	P by SM 234	40 C-2011	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource = 0	C020700-0	1						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUI	P by SM 234	40 C-2011	l, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource = 0	C020854-0	3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10
Hardness as CaCO3 LCS	S by SM 234	40 C-2011	, B2311 0	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LOC	Q by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Hardness as CaCO3 MB	by SM 234	0 C-2011	, B23110	6-008		1					
B231106-008 analyzed or	n 11/06/2023	3 09:00									
Hardness as CaCO3	U	4	4	7	mg/L						
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed or	n 11/06/2023	3 09:00; \$	Source =	C020700-	01						
Hardness as CaCO3		120	4	7	mg/L	100	16	102	85 - 115		
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed or	n 11/06/2023	3 09:00; S	Source =	C020854-	03						
Hardness as CaCO3		120	4	7	mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QC	S by SM 234	40 C-201	1, B2311	06-008							
B231106-008 analyzed or	•		•								
Hardness as CaCO3		160	4	7	mg/L	150		104	91 - 107		
Anions LCS by EPA 300	.1, B231024	-008									
B231024-008 analyzed or	n 10/24/2023	3 13:07									
Chloride		0.99	0.061	0.2	mg/L	1.0		99	85 - 115		
Nitrate as N Sulfate		0.046 0.89	0.0035 0.079	0.03 0.2	mg/L mg/L	0.05 1.0		92 89	85 - 115 85 - 115		
Dichloroacetate (%)		101	0.079	0.2	%	1.0		69	65 - 115		
Anions LOQ by EPA 300	0.1, B231024	4-008									
B231024-008 analyzed or	n 10/24/2023	3 12:29									
Chloride		0.21	0.061	0.2	mg/L	0.20		107	50 - 150		
Nitrate as N	E1	0.029	0.0035	0.03	mg/L	0.03		96	50 - 150		
Sulfate Dichloroacetate (%)	E1	0.20 103	0.079	0.2	mg/L %	0.20		99	50 - 150		
Anions MB by EPA 300.	1, B231024-	008									
B231024-008 analyzed or	·										
Chloride	U	0.061	0.061	0.2	mg/L						
Nitrate as N	U	0.0035	0.0035	0.03	mg/L						
Sulfate Dichloroacetate (%)	U	0.079 104	0.079	0.2	mg/L %						
Anions DUP by EPA 300	1 R231024	L_008									
B231024-008 analyzed or			Source =	C021030-	05						
Nitrate as N	E1	0.017	0.0035	0.030	mg/L		0.017			0.9	10
Dichloroacetate (%)		103	0.0033	0.000	%		102			0.7	10
Anions DUP by EPA 300).1, B231024	l-008									
B231024-008 analyzed or	n 10/24/2023	3 21:19; 8	Source =	C021055-	03						
Nitrate as N		0.14	0.0035	0.030	mg/L		0.14			0.0	10

			Qu	anty Conti	rol for CU22U	/U					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetate (%)		104			%		103				
Anions MS by EPA 300.	1, B231024-	-008									
B231024-008 analyzed or	n 10/24/202	3 15:01; 8	Source =	C021030-	05						
Nitrate as N Dichloroacetate (%)		0.062 103	0.0035	0.030	mg/L %	0.05	0.017 102	90	75 - 125		
Anions MS by EPA 300.	1, B231024-	-008									
B231024-008 analyzed or	n 10/24/202	3 21:57; \$	Source =	C021055-	03						
Nitrate as N		0.19	0.0035	0.030	mg/L	0.05	0.14	114	75 - 125		
Dichloroacetate (%)		105			%		103				
Metals LCS by EPA 200	.7, B231110	-001									
B231110-001 analyzed or	n 11/10/202	3 09:41; 1	B231031-	031 prepa	red on 10/31	/2023 15:3	3				
Calcium		7400	4.52	40.0	ug/L	7500		99	85 - 115		
Iron		1010	6.27	40.0	ug/L	1000		101	85 - 115		
Potassium		8340	70.6	200	ug/L	7500		111	85 - 115		
Magnesium		7430	0.98	40.0	ug/L	7500		99	85 - 115		
Manganese		199	0.12	16.0	ug/L	200		99	85 - 115		
Sodium		7900	1.55	40.0	ug/L	7500		105	85 - 115		
Yttrium (%)		102			%						
Yttrium Radial (%)		96			%						
Metals LCSD by EPA 20	00.7, B23111	10-001									
B231110-001 analyzed or	n 11/10/2023	3 09:44; 1	B231031-	031 prepa	red on 10/31	/2023 15:3	3				
Calcium		7380	4.52	40.0	ug/L	7500		98	85 - 115	0.2	10
Iron		1000	6.27	40.0	ug/L	1000		100	85 - 115	0.3	10
Potassium		8340	70.6	200	ug/L	7500		111	85 - 115	0.1	10
Magnesium		7420	0.98	40.0	ug/L	7500		99	85 - 115	0.2	10
Manganese		198	0.12	16.0	ug/L	200		99	85 - 115	0.2	10
Sodium		7880	1.55	40.0	ug/L	7500		105	85 - 115	0.2	10
Yttrium (%)		101			%						
Yttrium Radial (%)		93			%						
Metals LOQ by EPA 200).7, B231110	0-001									
B231110-001 analyzed or	n 11/10/2023	3 09:31; 1	B231031-	031 prepa	red on 10/31	/2023 15:3	3				
Calcium	E1	37.8	4.52	40.0	ug/L	40		94	50 - 150		
Iron		40.6	6.27	40.0	ug/L	40		102	50 - 150		
Potassium		215	70.6	200	ug/L	200		107	50 - 150		
Magnesium	E1	39.2	0.98	40.0	ug/L	40		98	50 - 150		
Manganese	E1	16.0	0.12	16.0	ug/L	16		100	50 - 150		
Sodium	E1	36.8	1.55	40.0	ug/L	40		92	50 - 150		
Yttrium (%)		103			%						
Yttrium Radial (%)		95			%						
Metals MB by EPA 200.	7, B231110-	001									
B231110-001 analyzed or	•		B231031-	031 prepa	red on 10/31	/2023 15:3	3				
Calcium	U	4.52	4.52	40.0	ug/L						
Iron	U	6.27	6.27	40.0	ug/L ug/L						
11.011	J	0.27	0.27	-0.0	ug/ L						

			Qu	ality Cont	rol for C0220	70					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Potassium	U	70.6	70.6	200	ug/L		1				
Magnesium	U	0.98	0.98	40.0	ug/L						
Manganese	U	0.12	0.12	16.0	ug/L						
Sodium	U	1.55	1.55	40.0	ug/L						
Yttrium (%)		103			%						
Yttrium Radial (%)		101			%						
B231110-001 analyze	d on 11/10/2023	3 09:51; I	3231031-	031 prepa	red on 10/31	/2023 15:3	3; Sourc	e = C020	443-01		
Manganese		245	0.12	16.0	ug/L	200	47.3	99	70 - 130		
Yttrium (%)		101			%		101				
Yttrium Radial (%)		94			%		93				
Metals MSD by EPA	200.7, B231110)-001									
B231110-001 analyze	d on 11/10/2023	3 09:54; I	3231031-	031 prepa	red on 10/31	/2023 15:3	3; Sourc	e = C020	443-01		
Manganese		246	0.12	16.0	ug/L	200	47.3	100	70 - 130	0.4	20
Yttrium (%)		100			%		101				

Manganese	246	0.12	16.0	ug/L	200	47.3	100	70 - 130	0.4	20
Yttrium (%)	100			%		101				
Yttrium Radial (%)	92			%		93				

Haloacetic Acids, GC/ECD LCS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:05; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	16	0.27	1	ug/L	15	106	70 - 130
Dichloroacetic Acid	16	0.23	1	ug/L	15	104	70 - 130
Monobromoacetic Acid	16	0.16	1	ug/L	15	104	70 - 130
Monochloroacetic Acid	15	0.45	1	ug/L	15	102	70 - 130
Trichloroacetic Acid	16	0.3	1	ug/L	15	107	70 - 130
1,2,3-Trichloropropane (%)	97			%			
2,3-Dibromopropionic Acid (%)	109			%			

Haloacetic Acids, GC/ECD LOQ by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:40; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0	107	50 - 150
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0	99	50 - 150
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0	105	50 - 150
Monochloroacetic Acid		1.1	0.45	1	ug/L	1.0	108	50 - 150
Trichloroacetic Acid	E1	0.98	0.3	1	ug/L	1.0	98	50 - 150
1,2,3-Trichloropropane (%)		104			%			
2.3-Dibromopropionic Acid (%)		107			%			

Haloacetic Acids, GC/ECD MB by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:15; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	U	0.27	0.27	1	ug/L
Dichloroacetic Acid	U	0.23	0.23	1	ug/L
Monobromoacetic Acid	U	0.16	0.16	1	ug/L
Monochloroacetic Acid	U	0.45	0.45	1	ug/L
Trichloroacetic Acid	U	0.3	0.3	1	ug/L
1,2,3-Trichloropropane (%)		100			%
2,3-Dibromopropionic Acid (%)	107			%



			Qu		101101 C0220						
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Haloacetic Acids, GC/EC	CD MS by E	EPA 552.2	2, B23110	01-021				,			
B231101-021 analyzed or	n 11/01/2023	3 21:55; 1	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	ee = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130		
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96			%		99				
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	CD MS by E	EPA 552.2	2, B23110	01-021							
B231101-021 analyzed or	n 11/02/2023	3 02:55; 1	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	ee = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		16	0.45	1.0	ug/L	15	0.45	110	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	110	70 - 130		
1,2,3-Trichloropropane (%)		100			%		100				
2,3-Dibromopropionic Acid (%)		112			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/01/202	3 22:20; 1	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	ee = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	•				ared on 11/01	/2023 09:3	9; Sourc	ce = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L ug/L	15	0.30	104	70 - 130	5.3	20
1,2,3-Trichloropropane (%)		99	0.50	1.0	%	15	100	101	, 0 150	2.3	-0
2,3-Dibromopropionic Acid (%)		109			%		108				
2,3-Dioromoproprome Acid (%)		109			70		100				

Laboratory Services Division ELAP#1060

Qualifiers and Definitions

E1 Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated Concentration.

U Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

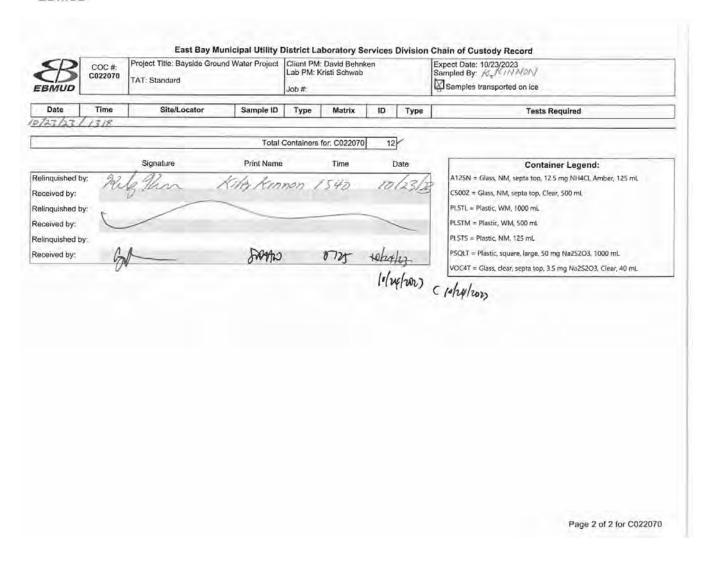
LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate

QCS Quality Control Sample

Date Ti	Fime	Site/Locator GW BAYSIDE - BAY1-MW2I	Sample ID C022070-01	Type GRAB	Matrix Aqueous	-01A	Type	+SAMP KIT EPA 200.7-W (Ca,Fe,K,	Tests Required	i
0 123/134 3	18	GW BAYSIDE - BAY1-MW2I	C022070-01	GRAB	Aqueous	-01A	PLSTI		Ma Ma Nia	
						-01A	PLSTI	EDA 200 7-W/Ca En K	Mar Nam Niet	
							1	LIN ZUU. I-W (Ca, ra, N.)	wg,wn,wa)	
						-01B	PLSTL	TDS		
						-01C	PLSTM	Hardness		
						-01D	PLSTS	EPA 300.1 (CI,NO3,SO4	1)	
						-01F	PSQLT	Ammonia: Titr-AQ		
						-01G	A125N	EPA 552.2		
						-01H	A125N	EPA 552,2		
	- 1					-011	PLSTM	Oxygen 18		
	- 1					-01J	VOC4T	EPA 8260B THM		
						-01K	VOC4T	EPA 8260B		
	1					-01L	VOC4T	EPA 8260B		
						-01M	C500Z	Alkalinity: Species		
			1					Field Test Parameters:		
								CL2R =	0.1	mg/L
								Depth =	75.4	Feet
								pH =	762	pH Units
								Temperature =	19.1	C
									1.7.11	
eld Comments: -										_
ield Instructions: -	_					_				



EBMUD	COC#: C022070	Project Title: Bayside Ground TAT: Standard	Water Project		; David Behn (risti Schwab			Received Date/Time; 1 Received By: Cynthia S Sampled By: KKinnon Due Date: 11/22/2023	0/24/2023 07;25 Soohoo	
Date	Time	Site/Locator	Sample ID	Type	Matrix	1D	Type		Tests Requi	red
10/23/2023	13:18	GW BAYSIDE - BAY1-MW2I	C022070-01	GRAB	Aqueous			+SAMP KIT		
						-01A	PLSTL	EPA 200.7-W (Ca,Fe,F	K,Mg,Mn,Na)	
						-01B	PLSTL	TDS		
						-01C	PLSTM	Hardness		
				1		-01D	PLSTS	EPA 300.1 (CI,NO3,SC	04)	
						-01F	PSQLT	Ammonia: Titr-AQ		
						-01G	A125N	EPA 552.2		
			1		1	-01H	A125N	EPA 552.2		
						-011	PLSTM	Oxygen 18		
						-01J	VOC4T	EPA 8260B THM		
						-01K	VOC4T	EPA 8260B		
						-01L	VOC4T	EPA 8260B		
- 1						-01M	C500Z	Alkalinity: Species		
								Field Test Parameters	1	
1								CL2R =	0.1	mg/L
								Depth =	15.4	Feet
								pH =	7.62	pH Units
								Temperature =	19.1	C
Field Commen	ts:						_			
ield Instruction	nsc									
Sample Extern	al Comments	a):			_					

Page 1 of 4 for C022070



C022070 Sample Acceptance Report Received: 10/24/2023 07:25 Received By: Cynthia Soohoo

Chain-of-Custody		Comments
Chilled During Transport?	Yes	
Missing or Incorrect Information	No	
Mode of receipt	Drop-off Room	
Shipping Slip?	No	
Containers		Comments
BACT (120 mL) lot number	Add lot no	
BACTL (290 mL) lot number	Add lot no	
Container and label are legible and match COC?	Yes	
Correct container used with field preservation?	Yes	
Received within holding times?	Yes	
Sufficient volume, undamaged, or uncontaminated?	Yes	
Sample: C022070-01		Comments
Bubbles in ZHS/VOA containers	No	
Intent to chill		
Cooler: 1		Comments
Corrected Temp (° C)	5.3	
IR Thermometer Number	IR #13	
Representative temperature taken from	-01	
Uncorrected Temp (° C)	4.9	
Visible ice formed inside sample container?	No	
Acceptance		Comments
PM notified?	N/A	

Page 2 of 4 for C022070



Laboratory Services Division ELAP#1060



C022070 Sample Acceptance Report Received: 10/24/2023 07:25 Received By: Cynthia Soohoo

Samples meet acceptance requirements? Yes

Page 3 of 4 for C022070



Sample Acceptance Preservation Report COC: C022070 Report Generated: 10/24/2023 07:41

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Ethylenediamine 12.5 mg/mL (EDA-42)	ST230927-005	N/A	09/27/2023	10/27/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1:1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028

Container Number	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022070-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time	pum	Cupy for
C022070-01C	PLSTM	Hardness	HNO3 to pH <2	100	1
C022070-01F	PSQLT	Ammonia: Titr-AQ	Check Cl2R = 0 [PSQLT], then H2SO4 to pH <2		
C022070-01G	A125N	EPA 552.2	Check Container		
C022070-01H	A125N	EPA 552.2-FR	Check Container	/11/	
C022070-01K	VOC4T	EPA 8260B-FR	Check Container	-	
C022070-01L	VOC4T	EPA 8280B-FR	Check Container	W	1

Page 4 of 4 for C022070





27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4152

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 22:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Reported:

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim
PO Box 24055 Project: Bayside G

Project: Bayside Ground Water Project WDR

Oakland CA, 94607 Project Number: C022070 11/27/23 16:23

Bay Årea: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 |
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922 |
North Bay: 737 Southpoint Blvd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2303 |
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 |
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022070-01	23J4152-01	Water	10/23/23 13:18	10/26/23 22:15

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4



Oakland CA, 94607



Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Reported:

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim
PO Box 24055 Project: Bayside G

Project: Bayside Ground Water Project WDR

Project Number: C022070 11/27/23 16:23

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# N	otes
C022070-01 (23J4152-01) Water	Sampled: 10/2	3/23 13:18	Received	: 10/26	23 22:15							
Chloroform	ND	0.10	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	U
Bromodichloromethane	ND	0.30	1,0	ug/L	Ĭ-	AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	U
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	U
Bromoform	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	U
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	U
Surrogate: Dibromofluoromethane		104	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	
Surrogate: Toluene-d8		102	% 7	0-130		4.135161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MVA	2303	
Surrogate: Bromofluorobenzene		92.6	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 14:19	EPA 8260B	MYA	2303	

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Lalpha

Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

 EBMUD
 Project Manager:
 Jack Llm

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR:
 Reported:

 Oakland CA, 94607
 Project Number:
 C022070
 11/27/23 16:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD-	Limit	Notes

Blank (AJ35161-BLK1)					Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	ND	0.50	1.0	ug/L							· ·
Benzene	ND	0.50	1.0	ug/L							τ
Trichloroethene	ND	0.50	1.0	ug/L							1
Toluene	ND	0.50	1.0	ug/L							I
Chlorobenzene	ND	0.50	1.0	ug/L							1
Surrogate: Dibromofluoromethane	21.4			ug/L	20.0		107	70-130			
Surrogate: Toluene-d8	20.3			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	18.9			ug/L	20.0		94.5	70-130			
Matrix Spike (AJ35161-MS1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	23.4	0.50	1.0	ug/L	25.0	ND	93.7	70-130			
Benzene	23.9	0.50	1.0	ug/L	25.0	ND	95.7	70-130			
Trichloroethene	22.3	0.50	1.0	ug/L	25.0	ND	89.1	70-130			
Toluene	24.7	0.50	1.0	ug/L	25.0	ND	98.8	70-130			
Chlorobenzene	24.8	0.50	1.0	ug/L	25.0	ND	99.0	70-130			
Surrogate: Dibromofluoromethane	19.8			ug/L	20.0		99.1	70-130			
Surrogate: Toluene-d8	20.8			ug/L	20.0		104	70-130			
Surrogate: Bromofluorobenzene	18.7			ug/L	20.0		93.3	70-130			
Matrix Spike Dup (AJ35161-MSD1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.2	70-130	13:0	25	
Benzene	21,3	0.50	1.0	ug/L	25.0	ND-	85.2	70-130	11.5	25	
Trichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.4	70-130	7.84	25	
Toluene	21.5	0.50	1.0	ug/L	25.0	ND-	85.8	70-130	14.0	25	
Chlorobenzene	22.3	0.50	1.0	ug/L	25.0	ND	89.0	70-130	10.6	25	
Surrogate: Dibromofluoromethane	22.4			ug/L	20.0		112	70-130			
Surrogate: Toluene-d8	20.4			ug/L	20.0		102	70-130			
Surrogate: Bromofluorohenzene	19.6			ug/L	20.0		97.8	70-130			

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Page 3 of 4





 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022070
 11/27/23 16:23

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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.

Page 4 of 4

^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



Lab #:	896187	Job #:	56573	IS-69368	Co. Job#:	
Sample Name: Company: API/Well:	23J4152-01 Alpha Analyl	tical Labor	atories, Inc.		Co. Lab#:	
Container: Field/Site Name: Location: Formation/Depth:	500ml Plasti 23J4152	c Bottle				
Sampling Point: Date Sampled:	C022070-01 10/23/2023		ate Received:	11/06/2023	Date Reported:	11/20/2023
δD of water	(T	42	2.7 ‰ relative t	to VSMOW		
δ^{18} O of water			39 ‰ relative t	to VSMOW		
Tritium content of	water	na				
δ ¹³ C of DIC		na				
¹⁴ C content of DIC		na				
δ ¹⁵ N of nitrate		na				
δ ¹⁸ O of nitrate		na				
δ ³⁴ S of sulfate		na				
δ ¹⁸ O of sulfate		na				
Vacuum Distilled?	•	No				
Remarks:						



East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: KKinnon Submitted Date: Project Title: Bayside Ground Water Project Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier PO#: BRD-13921-AX Expiration: 12/31/2023 TAT: Standard COC#:

	121	WW	WW	MW
-	1	C10-	L10-	WWZ
7 7	L10-			MW2I

	Signature	Print Name	Time	Date
Relinquished by:	Man /	Svotho	113	Ju/01
Received by:	3	Michael Lore	1:52	10/24/23
Relinquished by:	3			
Received by:	3	JOHN WILLS	1100	10.26.23
Relinquished by:	3		2215	10.26.1
Received by:	-do	John willes	2215	10.26.23

Kristi Schwab (kristi.lorenson@ebmud.com) Send results and invoice to: PO Box 24055 MS #59 Oakland, CA 94623 **EBMUD Laboratory**

(510) 287-1696

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded. Alpha Analytical Laboratory

208 Mason St

Ukiah, CA 95482 707-468-0401

vko_UKtoNB_COC.rpt	[23J41	152		Printed: 10/30/2023 9:39:49AN
	Alpha Analytica	l Laboratories Ukia	h to North Bay Cha	ain of Custody	
Client: EBMUD Project: Bayside Ground V	Vater Project WDR	Client Code: F Project Number: C	THE PROPERTY AND ADDRESS OF THE PARTY AND ADDR	Bid: PO #:	1_Master Price Sheet
teceived By: John W	3 15:00 (10 day TAT) illis . Kooyers		ved: 10/26/23 22:15 ed 10/27/23 16:34		
amples Received at:	deg C	All containers	received and intact:	YES N	o
Analysis	Department	Expires	Comments		
J4152-01 C022070-01 [Wa NB 8260 THMs	NB GCMS	23 13:18 11/06/23 23:	:59		
Containers Supplied: VOA Vial - HCH(B) TWO VOA Vial - HCH(C) VOA Vial - HCH(D)					
			~	2	10/3/23
1-115	10/30/23				
Relinquished By	Date		Received By		Date Time
Relinquished By Relinquished By		0/3/23	Received By Received By		Date Time

Analytical Results Report

19 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022072

Report Generated: 01/18/2024 17:04

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Kint of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager

Laboratory Services Division ELAP#1060

Samples for C022072

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022072-01 GRAB Oct 25 2023 16:00 GW BAYSIDE - BAY1-MW4 -



Laboratory Services Division ELAP#1060

Samples Results for C022072

Sample ID: C022072-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW4 OW-1 the same parcel as the Bayside Well on Oro Loma Property; formerly BAY1-MW5

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 25 2023 16:00Sample Collector:DWilliamsDate Received:Oct 26 2023 09:00Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LIN	MS								
TARGET ANALYTES									
CL2R		0.0	0.02		mg/L				10/25/2023 16:00
					J				
Field data entry into LIN	AS								
TARGET ANALYTES									
Depth		30			Feet				10/25/2023 16:00
Field data entry into LIN	AS								
TARGET ANALYTES									
pH		7.63			pH Units				10/25/2023 16:00
pm		7.03			pri Onits				10/25/2025 10:00
Field data entry into LIN	AS								
TARGET ANALYTES									
Temperature		19.6			С				10/25/2023 16:00
	GD F 0 F 40 G	. 2011							
Total Dissolved Solids by	7 SM 2540 C	-2011							
TARGET ANALYTES									
Total Dissolved Solids		330	10	55	mg/L	1.0	B231025-012		10/26/2023 09:25
Alkalinity by SM 2320 B	-2011								
TARGET ANALYTES									
Alkalinity: Total as CaCO3		200	5	30	mg/L	1.0	B231027-007		10/27/2023 10:24
Alkalinity: Carbonate	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:24
Alkalinity: Bicarbonate		200	5	30	mg/L	1.0	B231027-007		10/27/2023 10:24
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:24
Ammonia as N by SM 45	500-NH3 C-2	2011							
TARGET ANALYTES	700 11115 € 2								
Ammonia as N	U	0.29	0.29	1.5	mg/L	1.0	B231026-007		10/26/2023 12:14
Ammonia as iv	C	0.2)	0.2)	1.5	mg/L	1.0	B231020 007		10/20/2023 12.14
Hardness as CaCO3 by S	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		100	4	7	mg/L	1.0	B231106-008		11/06/2023 09:00
Anions by EPA 300.1									
•									
TARGET ANALYTES		45	0.20	2.0	/T	10	D221026 012		10/26/2022 17 00
Chloride Nitrate as N	U	45 0.023	0.38 0.023	2.0 0.30	mg/L	10 10	B231026-013 B231026-013		10/26/2023 17:09 10/26/2023 17:09
Sulfate	U	0.023 35	0.023	2.0	mg/L mg/L	10	B231026-013 B231026-013		10/26/2023 17:09
SURROGATES		55	0.07	2.0	mg/L	10	2231020 013		10/20/2023 17.07
Dichloroacetate (%)		101			%	10	B231026-013		10/26/2023 17:09
Diemoroacetate (70)		101			/0	10	D231020-013		10/20/2023 17.07



Laboratory Services Division ELAP#1060

Samples Results for C022072

Sample ID: C022072-01

Site: **GW BAYSIDE** East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW4 OW-1 the same parcel as the Bayside Well on Oro Loma Property; formerly BAY1-MW5

Client: Bayside Ground Water Project

Sample Type: **GRAB**

Date Collected: DWilliams Oct 25 2023 16:00 **Sample Collector: Date Received:** Oct 26 2023 09:00 Sample Receiver: C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7	,								
TARGET ANALYTES									
Calcium		22400	4.70	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Iron	E1	14.8	6.52	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Potassium		3000	73.5	208	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Magnesium		8420	1.01	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Manganese		170	0.12	16.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Sodium		92200	1.61	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
INTERNAL STANDARD									
Yttrium (%)		99			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Yttrium Radial (%)		106			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:38
Haloacetic Acids, GC/EC	D by EPA 5	552.2							
TARGET ANALYTES									
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
Trichloroacetic Acid	U	0.30	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
	Comments: I	IAA (5) calc	ulation uses	a zero for an	ny individual HAA	result less	than the Californi	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		100			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30
SURROGATES									
2,3-Dibromopropionic Acid (%)		108			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 02:30

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES								
Bromodichloromethane	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:44
	Comments: S	SUB: Analyte	included in	analysis b	at not detected at or a	bove MDL		
Bromoform	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:44
	Comments: S	SUB: Analyte	included in	analysis b	at not detected at or a	bove MDL		
Chloroform	U	0.10	0.10	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:44
	Comments: S	SUB: Analyte	included in	analysis b	at not detected at or a	bove MDL		
Dibromochloromethane	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:44
	Comments: S	SUB: Analyte	included in	analysis b	at not detected at or a	bove MDL		
Total Trihalomethanes, calculated	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 14:44
	Comments: S	SUB: Analyte	included in	analysis b	at not detected at or a	bove MDL		

	0 ""	.			JI 101 C02207			0/ ===	0/ ====		
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Total Dissolved Solids DU	JP by SM 2	540 C-20	11, B231	025-012							
B231025-012 analyzed on	10/26/2023	3 09:25; S	ource =	C022073-0	1						
Total Dissolved Solids		400	10	55	mg/L		410			0.7	10
Total Dissolved Solids LC	CS by SM 2	540 C-20	11, B231	025-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids		370	20	110	mg/L	370		99	85 - 115		
Total Dissolved Solids MI	B by SM 25	40 C-201	1, B2310	25-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids	U	10	10	55	mg/L						
Ammonia as N DUP by S	M 4500-NE	I3 C-2011	l, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource =	C021337-0	9						
Ammonia as N		39	1.4	7.5	mg/L		38			1.2	10
Ammonia as N LCS by Si	M 4500-NH	I3 C-2011	, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N		12	0.29	1.5	mg/L	12		97	85 - 115		
Ammonia as N LOQ by S	M 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	E1	1.5	0.29	1.5	mg/L	1.5		99	50 - 150		
Ammonia as N MB by SM	4500-NH	3 C-2011,	B23102	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SM	I 4500-NH3	3 C-2011,	B231020	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource =	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	99	80 - 120		
Ammonia as N MSD by S	M 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource =	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	98	80 - 120	0.0	15
Alkalinity DUP by SM 23	20 B-2011,	B231027	-007								
B231027-007 analyzed on	10/27/2023	3 10:31; S	ource =	C022072-0	1						
Alkalinity: Total as CaCO3		200	5	30	mg/L		200			0.3	20

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Alkalinity DUP by SM 23	20 B-2011,	B231027	-007								
B231027-007 analyzed on	10/27/2023	3 11:28; S	ource =	C021104-0)6						
Alkalinity: Total as CaCO3		6700	62	380	mg/L		6700			0.3	20
Alkalinity LCS by SM 23	20 B-2011,	B231027	-007								
B231027-007 analyzed on	10/27/2023	3 09:25									
Alkalinity: Total as CaCO3		400	5	30	mg/L	400		99	85 - 115		
Alkalinity MB by SM 232	0 B-2011, I	B231027-	007								
B231027-007 analyzed on	10/27/2023	3 09:14									
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalinity MS by SM 232	0 B-2011, I	3231027-0	007								
B231027-007 analyzed on	10/27/2023	3 10:36; S	ource =	C022072-0)1						
Alkalinity: Total as CaCO3		600	5	30	mg/L	400	200	99	80 - 120		
Alkalinity MS by SM 232	0 B-2011, I	3231027-0	007								
B231027-007 analyzed on	10/27/2023	3 11:33; S	ource =	C021104-0)6						
Alkalinity: Total as CaCO3		12000	62	380	mg/L	5000	6700	96	80 - 120		
Alkalinity QCS by SM 23	20 B-2011,	B231027	-007								
B231027-007 analyzed on	10/27/2023	3 10:12									
Alkalinity: Total as CaCO3		68	5	30	mg/L	66		104	91 - 111		
Hardness as CaCO3 DUP	by SM 234	40 C-2011	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource =	C020700-0)1						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUP	by SM 234	40 C-201	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource =	C020854-0)3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10
Hardness as CaCO3 LCS	by SM 234	10 C-2011	l, B2311 0	06-008							
B231106-008 analyzed on	11/06/2023	8 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LOQ) by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		

					rol for C02207						
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Hardness as CaCO3 MB	by SM 234	0 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3	U	4	4	7	mg/L						
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	Source =	C020700-	01						
Hardness as CaCO3		120	4	7	mg/L	100	16	102	85 - 115		
Hardness as CaCO3 MS	by SM 2340	0 C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	Source =	C020854-0	03						
Hardness as CaCO3		120	4	7	mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QCS	S by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		160	4	7	mg/L	150		104	91 - 107		
Anions LCS by EPA 300.	1, B231026	-013									
B231026-013 analyzed on	10/26/2023	3 16:31									
Chloride		0.97	0.061	0.2	mg/L	1.0		97	85 - 115		
Nitrate as N Sulfate		0.044 0.87	0.0035 0.079	0.03 0.2	mg/L	0.05 1.0		89 87	85 - 115 85 - 115		
Dichloroacetate (%)		99	0.079	0.2	mg/L %	1.0		07	03 - 113		
Anions LOQ by EPA 300	.1, B231020	6-013									
B231026-013 analyzed on	10/26/2023	3 15:53									
Chloride		0.22	0.061	0.2	mg/L	0.20		109	50 - 150		
Nitrate as N	E1	0.028	0.0035	0.03	mg/L	0.03		95	50 - 150		
Sulfate Dichloroacetate (%)	E1	0.20 103	0.079	0.2	mg/L %	0.20		99	50 - 150		
Anions MB by EPA 300.1	l, B231026-	013									
B231026-013 analyzed on	10/26/2023	3 14:38									
Chloride	U	0.061	0.061	0.2	mg/L						
Nitrate as N	U	0.0035	0.0035	0.03	mg/L						
Sulfate Dichloroacetate (%)	U	0.079 99	0.079	0.2	mg/L %						
Anions DUP by EPA 300.	.1, B231026	5-013									
B231026-013 analyzed on	•		Source =	C021096-1	13						
Nitrate as N	E1	0.018	0.0035	0.030	mg/L		0.018			1.0	10
Dichloroacetate (%)		103			%		103				
Anions MS by EPA 300.1	, B231026-	013									
B231026-013 analyzed on	10/26/2023	3 20:18; \$	Source =	C021096-	13						
Nitrate as N		0.061	0.0035	0.030	mg/L	0.05	0.018	86	75 - 125		



Calcium

Iron

Quality Control for C022072

			Qu	ality Cont	rol for C0220'	72					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetate (%)		102		,	%	,	103				
Metals LCS by EPA 200.	7, B231114	-002									
B231114-002 analyzed on	11/15/2023	3 12:18; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8120	4.90	43.4	ug/L	8300		97	85 - 115		
Iron		1110	6.80	43.4	ug/L	1100		100	85 - 115		
Potassium		9290	76.6	217	ug/L	8300		112	85 - 115		
Magnesium		8200	1.06	43.4	ug/L	8300		98	85 - 115		
Manganese		220	0.12	17.4	ug/L	220		99	85 - 115		
Sodium		8760	1.68	43.4	ug/L	8300		105	85 - 115		
Yttrium (%)		100	1.00	.5	%	0500		100	00 110		
Yttrium Radial (%)		100			%						
Metals LCSD by EPA 200	0.7 R23111	14-002									
B231114-002 analyzed on	,		R231101.	014 nreng	red on 11/01	/2023 10:2	9				
Calcium		8040	4.90	43.4	ug/L	8300	-	96	85 - 115	1.0	10
Iron		1100	6.80	43.4	ug/L ug/L	1100		99	85 - 115	0.9	10
Potassium		9200	76.6	217	ug/L ug/L	8300		110	85 - 115	1.0	10
Magnesium		8120	1.06	43.4	ug/L ug/L	8300		97	85 - 115	1.0	10
_		218	0.12	43.4 17.4		220		98	85 - 115	1.0	10
Manganese					ug/L						
Sodium		8660	1.68	43.4	ug/L	8300		104	85 - 115	1.1	10
Yttrium (%) Yttrium Radial (%)		101 100			% %						
	7 D22111				, , 						
Metals LOQ by EPA 200.			0021101	014 nuona	and on 11/01	/2022 10.2	n				
B231114-002 analyzed on							9	0.7			
Calcium	E1	38.9	4.75	42.0	ug/L	40		97	50 - 150		
Iron	E1	39.5	6.58	42.0	ug/L	40		99	50 - 150		
Potassium		230	74.2	210	ug/L	200		115	50 - 150		
Magnesium	E1	38.8	1.02	42.0	ug/L	40		97	50 - 150		
Manganese	E1	16.0	0.12	16.8	ug/L	16		100	50 - 150		
Sodium	E1	35.6	1.63	42.0	ug/L	40		89	50 - 150		
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MB by EPA 200.7	, B231114-	002									
B231114-002 analyzed on	11/15/2023	3 11:59; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium	U	4.70	4.70	41.6	ug/L						
Iron	U	6.52	6.52	41.6	ug/L						
Potassium	U	73.5	73.5	208	ug/L						
Magnesium	U	1.01	1.01	41.6	ug/L						
Manganese	U	0.12	0.12	16.6	ug/L						
Sodium	U	1.61	1.61	41.6	ug/L						
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MS by EPA 200.7	, B231114-	002									
B231114-002 analyzed on			3231101-	014 prepa	red on 11/01	/2023 10:2	9; Sourc	e = C022	071-01		
·		- , -		F - F			,				

196

272

1740

1740

ug/L

ug/L

8300

1100

1280000

261

102

103

1290000

1150

E1

70 - 130

70 - 130

Analyte	Qualifier	Result	MDL	RL	Units	Spike	Source	% REC	% REC	RPD	RPD
						Level	Result		Limits		Limits
Potassium	M1	473000	3060	8680	ug/L	8300	461000	140	70 - 130		
Magnesium	M1	3060000	42.3	1740	ug/L	8300	3030000	258	70 - 130		
Manganese		37600	4.99	694	ug/L	220	37300	123	70 - 130		
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	254	70 - 130		
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				
Yttrium Radial (%)		106			%		106				

Metals MSD by EPA 200.7, B231114-002

B231114-002 analyzed on 11/15/2023 13:26; B231101-014 prepared on 11/01/2023 10:29; Source = C022071-01

Calcium	M1	1280000	196	1740	ug/L	8300	1280000	23	70 - 130	0.5	20
Calcium	IVI 1	1200000	190	1740	ug/L	6500	1200000	23	70 - 130	0.5	20
Iron	E1	1140	272	1740	ug/L	1100	261	103	70 - 130	0.3	20
Potassium	M1	473000	3060	8680	ug/L	8300	461000	142	70 - 130	0.0	20
Magnesium		3040000	42.3	1740	ug/L	8300	3030000	81	70 - 130	0.5	20
Manganese	M1	37400	4.99	694	ug/L	220	37300	20	70 - 130	0.6	20
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	169	70 - 130	0.0	20
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				

Haloacetic Acids, GC/ECD LCS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:05; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	16	0.27	1	ug/L	15	106	70 - 130
Dichloroacetic Acid	16	0.23	1	ug/L	15	104	70 - 130
Monobromoacetic Acid	16	0.16	1	ug/L	15	104	70 - 130
Monochloroacetic Acid	15	0.45	1	ug/L	15	102	70 - 130
Trichloroacetic Acid	16	0.3	1	ug/L	15	107	70 - 130
1,2,3-Trichloropropane (%)	97			%			
2,3-Dibromopropionic Acid (%)	109			%			

Haloacetic Acids, GC/ECD LOQ by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:40; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0	107	50 - 150
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0	99	50 - 150
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0	105	50 - 150
Monochloroacetic Acid		1.1	0.45	1	ug/L	1.0	108	50 - 150
Trichloroacetic Acid	E1	0.98	0.3	1	ug/L	1.0	98	50 - 150
1,2,3-Trichloropropane (%)		104			%			
2,3-Dibromopropionic Acid (%)		107			%			

Haloacetic Acids, GC/ECD MB by EPA 552.2, B231101-021

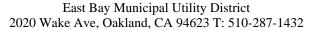
B231101-021 analyzed on 11/01/2023 20:15; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	U	0.27	0.27	1	ug/L
Dichloroacetic Acid	U	0.23	0.23	1	ug/L
Monobromoacetic Acid	U	0.16	0.16	1	ug/L
Monochloroacetic Acid	U	0.45	0.45	1	ug/L
Trichloroacetic Acid	U	0.3	0.3	1	ug/L
1,2,3-Trichloropropane (%)		100			%
2,3-Dibromopropionic Acid (%)	107			%	

Haloacetic Acids, GC/ECD MS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:55; B231101-011 prepared on 11/01/2023 09:39; Source = C020680-01

Dibromoacetic Acid	16	0.27	1.0	ug/L	15	0.27	104	70 - 13
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1,2,3-Trichloropropane (%)

2,3-Dibromopropionic Acid (%)

Quality Control for C022072

Quanty Control for C022072											
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96			%		99				
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	CD MS by E	PA 552.2	2, B23110	01-021							
B231101-021 analyzed or	n 11/02/2023	3 02:55; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		16	0.45	1.0	ug/L	15	0.45	110	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	110	70 - 130		
1,2,3-Trichloropropane (%)		100			%		100				
2,3-Dibromopropionic Acid (%)		112			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	.2, B231	101-021							
B231101-021 analyzed or	n 11/01/2023	3 22:20; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/02/2023	3 03:20; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	104	70 - 130	5.3	20

%

100

108

99

109

U

East Bay Municipal Utility District 2020 Wake Ave, Oakland, CA 94623 T: 510-287-1432

Laboratory Services Division ELAP#1060

Qualifiers and Definitions

E1	Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated
	Concentration.

- M1 The MS recovery was outside acceptance limits due to possible matrix interference. The analytical batch meets accuracy criteria for reporting.
 - Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

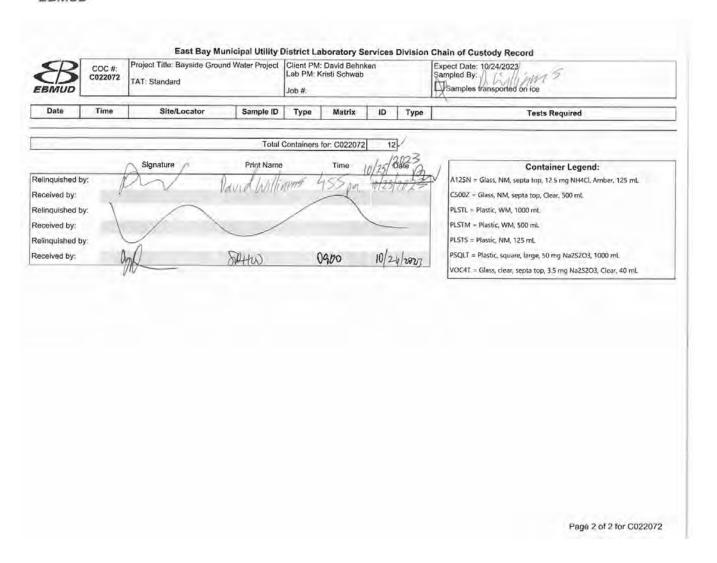
LCSD Laboratory Control Sample Duplicate

LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate
QCS Quality Control Sample

EBMUD	COC #: C022072	Project Title: Bayside Ground TAT: Standard	Water Project		: David Behn Kristi Schwab			Expect Date: 10/24/2923/ Sampled By: // // // // // // // // // // // // /				
Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Туре					
14/75/2	1600	GW BAYSIDE - BAY1-MW4	C022072-01	GRAB Aqueous	GRAB Aqueous	GRAB Aqueous			+SAMP KIT			
10/21/27	100		1			-01A	PLSTL	EPA 200.7-W (Ca,Fe,K,N	lg.Mn.Na)			
A 1						-01B	PLSTL	TDS Hardness				
						-01C	PLSTM					
						-01D	PLSTS	EPA 300.1 (CI,NO3,SO4)				
1						-01F	PSQLT					
						-01G	A125N	EPA 552.2				
					1.0	-01H	A125N	EPA 552.2				
						-011	PLSTM	10				
1						-01J	VOC4T	EPA 8260B THM				
1						-01K	VOC4T	EPA 8260B				
						-01L	VOC4T	EPA 8260B				
						-01M	C500Z	Alkalinity: Species				
								Field Test Parameters:	1			
								CL2R =	9	mg/L		
		K							Depth =	30	Feet	
											pH =	7.63
								Temperature =	101.6	C		
				-					1	1		
Field Commen	10.0											
Field Instructio	ns:											



EBMUD	COC #: C022072	Project Title: Bayside Ground TAT: Standard	Water Project	Client PM: David Behnken Lab PM: Kristi Schwab Job #:				Received Date/Time: 10/28/2023 09:00 Received By: Cyrithia Soohoo Sampled By: DWilliams Due Date: 11/28/2023				
Date	Time	Site/Locator	Sample ID	Туре	Matrix	ID	Type		Tests Requi	red		
10/25/2023	16:00	GW BAYSIDE - BAY1-MW4	C022072-01	GRAB	Aqueous			+SAMP KIT				
						-01A PLSTL		EPA 200.7-W (Ca,Fe,K,Mg,Mn,Na)				
						-01B	PLSTL	TDS				
						-01C	PLSTM	Hardness				
						-01D	PLSTS	EPA 300.1 (CI,NO3,SC	EPA 300.1 (Cl,NO3,SO4)			
						-01F	PSQLT	Ammonia: Titr-AQ				
						-01G	A125N	EPA 552.2				
						-01H	A125N	EPA 552.2				
- 13						-011	PLSTM	Oxygen 18				
				1		-01J	VOC4T	EPA 8260B THM				
					-01K	VOC4T	EPA 8260B					
						-01L	VOC4T	EPA 8260B				
				1 1	14		-01M	G500Z	Alkalinity: Species			
												Field Test Parameters:
								CL2R =	0.0	mg/L		
				1 8				Depth =	30	Feet		
								pH =	7.63	pH Units		
								Temperature =	19.6	C		
ield Commen	ts:											
ield Instruction	ns.											
Sample Extern	al Comments	4										

Page 1 of 4 for C022072



C022072 Sample Acceptance Report Received: 10/26/2023 09:00 Received By: Cynthia Soohoo

Chain-of-Custody		Comments
Chilled During Transport?	Yes	
Missing or incorrect information	Yes	Relinquish date needs to be verified
Mode of receipt	Drop-off Room	
Shipping Slip?	No	
Containers		Comments
BACT (120 mL) lot number	Add lot no	
BACTL (290 mL) lot number	Add lot no	
Container and label are legible and match COC?	Yes	
Correct container used with field preservation?	Yes	
Received within holding times?	Yes	
Sufficient volume, undamaged, or uncontaminated?	Yes	
Sample: C022072-01		Comments
Bubbles in ZHS/VOA containers	No	
Intent to chill		
Cooler: 1		Comments
Corrected Temp (° C)	4.5	
R Thermometer Number	IR #13	
Representative temperature taken from	-01	
Uncorrected Temp (° C)	4.1	
Visible ice formed inside sample container?	No	
Acceptance		Comments
PM notified?	N/A	

Page 2 of 4 for C022072

EBMUD	C022072 Sample Acceptance Report Received: 10/26/2023 09:00 Received By: Cynthia Soohoo					
Samples meet acceptance requirements?	Yes					

Page 3 of 4 for C022072



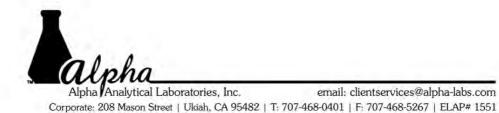
Sample Acceptance Preservation Report COC: C022072 Report Generated: 10/26/2023 09:06

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Ethylenediamine 12.5 mg/mL (EDA-42)	ST230927-005	N/A	09/27/2023	10/27/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1:1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028
			1	A Commence of the Commence of

Container Number	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022072-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time = 0510	pur	a whohor
C022072-01C	PLSTM	Hardness	HNO3 to pH <2	1	1
C022072-01F	PSQLT	Ammonia: Titr-AQ	Check Cl2R = 0 [PSQLT], then H2SO4 to pH <2		
C022072-01G	A125N	EPA 552.2	Check Container		
C022072-01H	A125N	EPA 552.2-FR	Check Container		
C022072-01K	VOC4T	EPA 8260B-FR	Check Container		
C022072-01L	VOC4T	EPA 8260B-FR	Check Container		11/

Page 4 of 4 for C022072





27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4193

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 22:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Reported:

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim

PO Box 24055 Project: Bayside Ground Water Project WDR

 Oakland CA, 94607
 Project Number: C022072
 C022072
 11/27/23 16:24

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 |
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922 |
North Bay: 737 Southpoint Blwd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2932 |
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 |
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022072-01	23J4193-01	Water	10/25/23 16:00	10/26/23 22:15

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim
PO Box 24055 Project: Bayside Ground Water Project WDR
Oakland CA, 94607 Project Number: C022072

Project: Bayside Ground Water Project WDR Reported:
Project Number: C022072 11/27/23 16:24

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# Not	tes
C022072-01 (23J4193-01) Water	Sampled: 10/2	5/23 16:00	Received	: 10/26	23 22:15							
Chloroform	ND	0.10	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	U
Bromodichloromethane	ND	0.30	1,0	ug/L	Ĭ-	AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	U
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	U
Bromoform	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	U
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	U
Surrogate: Dibromofluoromethane		101	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	
Surrogate: Toluene-d8		101	% 7	0-130		4.135161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MVA	2303	
Surrogate: Bromofluorobenzene		95.4	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 14:44	EPA 8260B	MYA	2303	

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.

Page 2 of 4



Lalpha

Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022072
 11/27/23 16:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD-	Limit	Notes

Blank (AJ35161-BLK1)					Prepared &	Analyzed	10/30/23				
1.1-Dichloroethene	ND	0.50	1.0	ug/L	r repared &	Attaryzeu.	10/30/23				ı
Benzene	ND	0.50	1.0	ug/L							Ţ
Trichloroethene	ND	0.50	1.0	ug/L							1
Toluene	ND	0.50	1.0	ug/L							1
Chlorobenzene	ND	0.50	1.0	ug/L							1
Surrogate: Dibromofluoromethane	21.4			ug/L	20.0		107	20-130			
Surrogate: Toluene-d8	20.3			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	18.9			ug/L	20.0		94.5	70-130			
Matrix Spike (AJ35161-MS1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	23.4	0.50	1.0	ug/L	25.0	ND	93.7	70-130			
Benzene	23.9	0.50	1.0	ug/L	25.0	ND	95.7	70-130			
Trichloroethene	22.3	0.50	1.0	ug/L	25.0	ND	89.1	70-130			
Toluene	24.7	0.50	1.0	ug/L	25.0	ND	98.8	70-130			
Chlorobénzene	24.8	0.50	1.0	ug/L	25.0	ND	99.0	70-130			
Surrogate: Dibromofluoromethane	19.8			ug/L	20.0		99.1	70-130			
Surrogate: Toluene-d8	20.8			ug/L	20.0		104	70-130			
Surrogate: Bromofluorohenzene	18.7			ug/L	20.0		93.3	70-130			
Matrix Spike Dup (AJ35161-MSD1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.2	70-130	13:0	25	
Benzene	21,3	0.50	1.0	ug/L	25.0	ND	85.2	70-130	11.5	25	
Trichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.4	70-130	7.84	25	
Toluene	21.5	0.50	1.0	ug/L	25.0	ND-	85.8	70-130	14.0	25	
Chlorobenzene	22.3	0.50	1.0	ug/L	25.0	ND	89.0	70-130	10.6	25	
Surrogate: Dibromofluoromethane	22.4			ug/L	20.0		112	70-130			
Surrogate: Toluene-d8	20.4			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	19.6			uo/L	20.0		97.8	70-130			

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.

Page 3 of 4





 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022072
 11/27/23 16:24

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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.

Page 4 of 4

^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



Lab #:	896192	Job #: 56	3573	IS-69368	Co. Job#:	
Sample Name: Company: API/Well:	23J4193-01 Alpha Analy	ical Laborat	ories, Inc.		Co. Lab#:	
Container: Field/Site Name: Location: Formation/Depth:	500ml Plasti 23J4193	c Bottle				
Sampling Point: Date Sampled:	C022072-01 10/25/2023		e Received:	11/06/2023	Date Reported	11/20/2023
δD of water		58.4	% relative t	o VSMOW		
δ^{18} O of water		-8,54	% relative t	o VSMOW		
Tritium content of	water	na				
δ ¹³ C of DIC		na				
¹⁴ C content of DIC		na				
δ ¹⁵ N of nitrate		na				
δ ¹⁸ O of nitrate		na				
δ ³⁴ S of sulfate		na				
δ ¹⁸ O of sulfate	2.010.010.	na				
Vacuum Distilled?		No				
Remarks:						



2324193

East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: DWilliams Submitted Date: Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier PO#: BRD-13921-AX Expiration: 12/31/2023 Project Title: Bayside Ground Water Project TAT: Standard COC#:

Date	Time	Sample ID	Location/PS Code	Matrix	Container	Туре	Tests Required	Method Reference
10/25/2023	16:00	C022072-01	C022072-01 GW BAYSIDE - BAY1-	Aqueous	110-	PLSTM	Oxygen 18	D180
			MW4		-013	VOC4T	EPA 8260B THM	EPA 8260B
					-01K	VOC4T	EPA 8260B	Bottle for QC (2)
					-01L	VOC4T	EPA 8260B	Bottle for QC (2)
Comments: Alpha	3: Isotope ana	lysis for Oxygen-	comments: Alpha: Isotope analysis for Oxygen-18 and Hydrogen-2 (subcontracted). THMs by EPA 8260 (report individual THM results and total sum).	ntracted). THMs I	by EPA 8260 (re	port individual T	HM results and total sum).	
			Total containers received:	4				

	Signature	Print Name	Time	Date
Relinquished by:	Jan /	できる	1/81	(renportal)
Received by:		Michallyone	11:55	56/36/01
Relinquished by:	3.			
Received by:	.3(John willis	1400	1026.23
Relinquished by:	· ·	•	5122	10.56.0]
Received by:	3.3	John willis	5122	1026.23

Send results and invoice to:
Kristi Schwab (kristi,lorenson@ebmud.com)
EBMUD Laboratory
PO Box 24055 MS #59
Oakland, CA 94623
(510) 287-1696

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded. Alpha Analytical Laboratory

Alpha Analytical Labora 208 Mason St

Ukiah, CA 95482 707-468-0401



Client: EBMUD			ORDER		Printed: 10/30/2023 10:26:55AN
Clients FRMIID	Alpha Analytica		4193 kiah to North Bay Ch	ain of Custody	
	round Water Project WDR	A NO L BURN OF STREET	RP_EBMUD		1_Master Price Sheet
Date Due: Received By: Logged In By:	11/10/23 15:00 (10 day TAT) Aaron J. Kooyers Aaron J. Kooyers	Date Rec	peived: 10/26/23 22:15 gged 10/30/23 10:10		
samples Received at:	deg C	All containe	ers received and intact:	YES NO)
Analysis	Department	Expires	s Comments		
J4193-01 C022072 NB 8260 THMs	2-01 [Water] Sampled 10/25/ NB GCMS	23 16:00 11/08/23 2	23:59		
Containers Supplie VOA Vial - HCH(B)	ed: 30				
VOA Vial - HET(C) VOA Vial - HET(D)	v.e				
12	19/39/23			<u></u>	10/3/23
	Date	Time	Received By	5	Date Time
Relinquished By	/	0100			
Relinquished By Relinquished By	Date		Received By		16/3//2-3 Date Time

Analytical Results Report

18 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022074

Report Generated: 01/18/2024 14:49

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Huit of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager



Laboratory Services Division ELAP#1060

Samples for C022074

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022074-01 GRAB Oct 26 2023 15:04 GW BAYSIDE - BAY1-MW5D

Samples Results for C022074

Sample ID: C022074-01

Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater

Locator: BAY1-MW5D Q APN 411-0003-0083 Via Barrett, San Lorenzo; Formerly BAY-MW-BARETT

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 26 2023 15:04Sample Collector:DWilliamsDate Received:Oct 27 2023 07:00Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LIN	MS								
TARGET ANALYTES									
CL2R		0.0	0.02		mg/L				10/26/2023 15:04
TP-11 1.44	ALC:								
Field data entry into LIN	MS								
TARGET ANALYTES									
Depth		30			Feet				10/26/2023 15:04
Field data entry into LIN	MS								
TARGET ANALYTES									
рН		7.41			pH Units				10/26/2023 15:04
P		,,,,			pri emis				10,20,2020 10.0
Field data entry into LIN	MS								
TARGET ANALYTES									
Temperature		22.9			C				10/26/2023 15:04
Total Dissolved Solids by	, SM 2540 C	2011							
	y 5101 2540 C	-2011							
TARGET ANALYTES		4.00	4.0				D001001 011		10/01/0000 00 50
Total Dissolved Solids		460	10	55	mg/L	1.0	B231031-011		10/31/2023 08:52
Alkalinity by SM 2320 B	3-2011								
TARGET ANALYTES									
Alkalinity: Total as CaCO3		240	5	30	mg/L	1.0	B231027-007		10/27/2023 10:45
Alkalinity: Carbonate	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:45
Alkalinity: Bicarbonate		240	5	30	mg/L	1.0	B231027-007		10/27/2023 10:45
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:45
Ammonia as N by SM 45	500-NH3 C-2	2011							
TARGET ANALYTES									
Ammonia as N	U	0.29	0.29	1.5	mg/L	1.0	B231102-017		11/02/2023 12:32
7 mmoma us 1 v	C	0.2)	0.27	1.5	mg E	1.0	B231102 017		11,02,2023 12.32
Hardness as CaCO3 by S	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		150	4	7	mg/L	1.0	B231106-008		11/06/2023 09:00
Anions by EPA 300.1									
•									
TARGET ANALYTES		0.4	0.20	2.0	75	10	D021027 004		10/27/2022 12 54
Chloride Nitrate as N	E 1	84 0.033	0.38 0.023	2.0 0.30	mg/L mg/L	10 10	B231027-004 B231027-004		10/27/2023 12:54 10/27/2023 12:54
Sulfate	EI	50	0.023	2.0	mg/L	10	B231027-004 B231027-004		10/27/2023 12:54
SURROGATES		20	0.07	2.0	mg/L	10	2231027 004		10/2//2023 12.37
Dichloroacetate (%)		101			%	10	B231027-004		10/27/2023 12:54
Dismortane (70)		101			/0	10	D231027-00 1		10/2//2023 12.34



Laboratory Services Division ELAP#1060

Samples Results for C022074

Sample ID: C022074-01

Site: **GW BAYSIDE** East Bay Ground Water Injection/Extraction Project Bayside Groundwater Locator: BAY1-MW5D Q APN 411-0003-0083 Via Barrett, San Lorenzo; Formerly BAY-MW-BARETT

Client: Bayside Ground Water Project

Sample Type: **GRAB**

Date Collected: DWilliams Sample Collector: Oct 26 2023 15:04 **Date Received:** Oct 27 2023 07:00 Sample Receiver: C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7									
TARGET ANALYTES									
Calcium		39000	4.70	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Iron	E1	28.1	6.52	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Potassium		3120	73.5	208	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Magnesium		10100	1.01	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Manganese		188	0.12	16.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Sodium		118000	1.61	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
INTERNAL STANDARD									
Yttrium (%)		98			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Yttrium Radial (%)		101			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:00
Haloacetic Acids, GC/EC	D by EPA 5	552.2							
TARGET ANALYTES									
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
Trichloroacetic Acid	U	0.30	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
	Comments: I	HAA (5) calc	ulation uses	a zero for ar	ny individual HAA	result less	than the Californ	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		104			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10
SURROGATES									
2,3-Dibromopropionic Acid (%)		107			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:10

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES								
Bromodichloromethane	U	0.30	0.30	1.0	ug/L	1	11/01/2023 08:00	11/01/2023 22:22
	Comments: S	SUB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		
Bromoform	U	0.20	0.20	1.0	ug/L	1	11/01/2023 08:00	11/01/2023 22:22
	Comments: S	SUB: Analyte	e included in	analysis bu	it not detected at or a	bove MDL		
Chloroform	U	0.10	0.10	1.0	ug/L	1	11/01/2023 08:00	11/01/2023 22:22
	Comments: S	SUB: Analyte	e included in	analysis bu	it not detected at or a	bove MDL		
Dibromochloromethane	U	0.20	0.20	1.0	ug/L	1	11/01/2023 08:00	11/01/2023 22:22
	Comments: S	SUB: Analyte	e included in	analysis bu	it not detected at or a	bove MDL		
Total Trihalomethanes, calculated	U	0.30	0.30	1.0	ug/L	1	11/01/2023 08:00	11/01/2023 22:22
	Comments: S	SUB: Analyte	e included in	analysis bu	it not detected at or a	bove MDL		

			Qu	anty Contr	01 for C02207	4					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Total Dissolved Solids D	UP by SM 2	540 C-20	11, B231	031-011		,					
B231031-011 analyzed or	n 10/31/2023	3 08:52; S	Source =	C022074-0	1						
Total Dissolved Solids		470	10	55	mg/L		460			0.6	10
Total Dissolved Solids Lo	CS by SM 2	540 C-20	11, B231	031-011							
B231031-011 analyzed or	n 10/31/2023	8 08:52									
Total Dissolved Solids		370	20	110	mg/L	370		100	85 - 115		
Total Dissolved Solids		370	20	110	mg/L	370		100	85 - 115		
Total Dissolved Solids		370	20	110	mg/L	370		99	85 - 115		
Total Dissolved Solids		370	20	110	mg/L	370		101	85 - 115		
Total Dissolved Solids M	B by SM 25	340 C-201	1, B2310	31-011							
B231031-011 analyzed or	•		ŕ								
Total Dissolved Solids	U	10	10	55	mg/L						
Alkalinity DUP by SM 23	320 B-2011,	B231027	'-007								
B231027-007 analyzed or	n 10/27/2023	3 10:31; S	Source =	C022072-0)1						
Alkalinity: Total as CaCO3		200	5	30	mg/L		200			0.3	20
Alkalinity DUP by SM 23	320 B-2011,	B231027	'-007								
B231027-007 analyzed or	·			C021104-0) 6						
Alkalinity: Total as CaCO3		6700	62	380	mg/L		6700			0.3	20
Alkalinity LCS by SM 23	320 B-2011,	B231027	-007								
B231027-007 analyzed or	n 10/27/2023	3 09:25									
Alkalinity: Total as CaCO3		400	5	30	mg/L	400		99	85 - 115		
Alkalinity MB by SM 23	20 B-2011. I	B231027-	007								
B231027-007 analyzed or	*		007								
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalility. Total as CaCOS	O	3	J	30	mg/L						
Alkalinity MS by SM 232	20 B-2011, I	3231027-	007								
B231027-007 analyzed or	n 10/27/2023	3 10:36; S	Source =	C022072-0)1						
Alkalinity: Total as CaCO3		600	5	30	mg/L	400	200	99	80 - 120		
Alkalinity MS by SM 232	20 B-2011, I	3231027-	007								
B231027-007 analyzed or	n 10/27/2023	3 11:33; S	Source =	C021104-0)6						
Alkalinity: Total as CaCO3		12000	62	380	mg/L	5000	6700	96	80 - 120		
Alkalinity QCS by SM 23	320 B-2011,	B231027	'-007								
B231027-007 analyzed or	n 10/27/2023	3 10:12									
Alkalinity: Total as CaCO3		68	5	30	mg/L	66		104	91 - 111		

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Ammonia as N DUP by S	M 4500-NI	H3 C-201	1, B2311	02-017				1			
B231102-017 analyzed on	11/02/2023	3 12:32; S	ource =	C021859-0	9						
Ammonia as N		42	1.4	7.5	mg/L		43			1.8	10
Ammonia as N LCS by S	M 4500-NE	H3 C-2011	l, B23110	02-017							
B231102-017 analyzed on	11/02/2023	3 12:32									
Ammonia as N		12	0.29	1.5	mg/L	12		99	85 - 115		
Ammonia as N LOQ by S	SM 4500-NI	H3 C-201	1, B2311	02-017							
B231102-017 analyzed on	11/02/2023	3 12:32									
Ammonia as N		1.6	0.29	1.5	mg/L	1.5		108	50 - 150		
Ammonia as N MB by SN	и 4500-NH	3 C-2011,	B23110	2-017							
B231102-017 analyzed on	11/02/2023	3 12:32									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SN	Л 4500-NH .	3 C-2011,	B231102	2-017							
B231102-017 analyzed on	11/02/2023	3 12:32; S	ource =	C022238-0	1						
Ammonia as N		110	1.4	7.5	mg/L	60	48	98	80 - 120		
Ammonia as N MSD by S	SM 4500-NI	H3 C-201	1, B2311	02-017							
B231102-017 analyzed on	11/02/2023	3 12:32; S	ource =	C022238-0	1						
Ammonia as N		110	1.4	7.5	mg/L	60	48	97	80 - 120	0.6	15
Ammonia as N LCS by S	M 4500-NE	I3 C-2011	, B23110	02-017							
B231102-017 analyzed on	11/02/2023	3 12:32									
Ammonia as N		2900	62	380	mg/kg	3000		98	85 - 115		
Ammonia as N MB by SM	и 4500-NH	3 C-2011,	B23110	2-017							
B231102-017 analyzed on	11/02/2023	3 12:32									
Ammonia as N	U	62	62	380	mg/kg						
Hardness as CaCO3 DUI	P by SM 23	40 C-2011	l, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource =	C020700-0	1						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUI	P by SM 234	40 C-201 1	l, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	ource =	C020854-0	3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10

			Qua	anty Conti	ol for C0220/	4					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Hardness as CaCO3 LCS	by SM 234	40 C-2011	1, B23110	06-008		,					
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LOC) by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		
Hardness as CaCO3 MB	by SM 234	0 C-2011,	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3	U	4	4	7	mg/L						
Hardness as CaCO3 MS	by SM 2340	C-2011,	B23110	5-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	Source =	C020700-	01						
Hardness as CaCO3		120	4	7	mg/L	100	16	102	85 - 115		
Hardness as CaCO3 MS	by SM 2340	C-2011,	, B23110	5-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	Source =	C020854-0	03						
Hardness as CaCO3		120	4	7	mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QCS	by SM 234	40 C-201	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00									
Hardness as CaCO3		160	4	7	mg/L	150		104	91 - 107		
Anions LCS by EPA 300.	1, B231027	-004									
B231027-004 analyzed on	10/27/2023	3 11:38									
Chloride		0.98	0.061	0.2	mg/L	1.0		98	85 - 115		
Nitrate as N		0.045	0.0035	0.03	mg/L	0.05		90	85 - 115		
Sulfate Dichloroacetate (%)		0.88 100	0.079	0.2	mg/L %	1.0		88	85 - 115		
Anions LOQ by EPA 300	.1, B231027	7-004									
B231027-004 analyzed on	10/27/2023	3 11:00									
Chloride		0.21	0.061	0.2	mg/L	0.20		106	50 - 150		
Nitrate as N	E1	0.025	0.0035	0.03	mg/L	0.03		83	50 - 150		
Sulfate Dichloroacetate (%)	E1	0.20 101	0.079	0.2	mg/L %	0.20		98	50 - 150		
Anions MB by EPA 300.1	, B231027-	004									
B231027-004 analyzed on	,										
Chloride	U	0.061	0.061	0.2	mg/L						
Nitrate as N	U	0.0035	0.0035	0.03	mg/L						
Sulfate	U	0.079	0.079	0.2	mg/L						
Dichloroacetate (%)		100			%						



				anty Conti	rol for CU220	/4					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Anions DUP by EPA 30	0.1, B231027	7-004									
B231027-004 analyzed	on 10/27/202	3 14:09; \$	Source =	C021107-	03						
Nitrate as N Dichloroacetate (%)	E1	0.018 105	0.0035	0.030	mg/L %		0.018 102			0.5	10
, ,	1 D221025										
Anions MS by EPA 300 B231027-004 analyzed of			Course -	C021107	0.2						
· ·	JII 10/27/202	ŕ				0.05	0.010	20			
Nitrate as N Dichloroacetate (%)		0.063 105	0.0035	0.030	mg/L %	0.05	0.018 102	90	75 - 125		
Metals LCS by EPA 20	0.7, B231114	-002									
B231114-002 analyzed	on 11/15/202	3 12:18; 1	B231101-	-014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8120	4.90	43.4	ug/L	8300		97	85 - 115		
Iron		1110	6.80	43.4	ug/L	1100		100	85 - 115		
Potassium		9290	76.6	217	ug/L	8300		112	85 - 115		
Magnesium		8200	1.06	43.4	ug/L	8300		98	85 - 115		
Manganese		220	0.12	17.4	ug/L	220		99	85 - 115		
Sodium		8760	1.68	43.4	ug/L	8300		105	85 - 115		
Yttrium (%) Yttrium Radial (%)		100 100			% %						
	100 F D221 11	14.002									
Metals LCSD by EPA 2	-		D221101	014 mmama	d on 11/01	/2022 10.2	0				
B231114-002 analyzed)11 11/15/202.						9				
Calcium		8040	4.90	43.4	ug/L	8300		96	85 - 115	1.0	10
Iron		1100	6.80	43.4	ug/L	1100		99	85 - 115	0.9	10
Potassium		9200	76.6	217	ug/L	8300		110	85 - 115	1.0	10
Magnesium		8120	1.06	43.4	ug/L	8300		97	85 - 115	1.0	10
Manganese		218	0.12	17.4	ug/L	220		98	85 - 115	1.0	10
Sodium		8660	1.68	43.4	ug/L	8300		104	85 - 115	1.1	10
Yttrium (%)		101			%						
Yttrium Radial (%)		100			%						
Metals LOQ by EPA 20											
B231114-002 analyzed	on 11/15/2023	3 12:05; 1	B231101-	-014 prepa	red on 11/01	/2023 10:2	9				
Calcium	E1	38.9	4.75	42.0	ug/L	40		97	50 - 150		
Iron	E1	39.5	6.58	42.0	ug/L	40		99	50 - 150		
Potassium		230	74.2	210	ug/L	200		115	50 - 150		
Magnesium	E1	38.8	1.02	42.0	ug/L	40		97	50 - 150		
Manganese	E1	16.0	0.12	16.8	ug/L	16		100	50 - 150		
Sodium	E1	35.6	1.63	42.0	ug/L	40		89	50 - 150		
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MB by EPA 200	.7, B231114-	002									
B231114-002 analyzed	on 11/15/202	3 11:59; l	B231101-	-014 prepa	red on 11/01	/2023 10:2	9				
Calcium	**	4.70	4.70	41.6	ug/L						
	U	4.70	4.70								
Iron	U U	6.52	6.52	41.6	ug/L						
Iron Potassium											
	U	6.52	6.52	41.6	ug/L						



			Qu	ality Cont	rol for C0220'	74					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Sodium	U	1.61	1.61	41.6	ug/L	1					-
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MS by EPA 200.7	, B231114-	002									
B231114-002 analyzed or	11/15/202	3 13:23; B	231101-	014 prepa	red on 11/01	/2023 10:2	9; Sourc	e = C022	071-01		
Calcium		1290000	196	1740	ug/L	8300	1280000	102	70 - 130		
Iron	E1	1150	272	1740	ug/L	1100	261	103	70 - 130		
Potassium	M1	473000	3060	8680	ug/L	8300	461000	140	70 - 130		
Magnesium	M1	3060000	42.3	1740	ug/L	8300	3030000	258	70 - 130		
Manganese		37600	4.99	694	ug/L	220	37300	123	70 - 130		
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	254	70 - 130		
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				
Metals MSD by EPA 200	.7, B23111	4-002									
B231114-002 analyzed or	11/15/202	3 13:26; B	231101-	014 prepa	red on 11/01	/2023 10:2	9; Sourc	e = C022	071-01		
Calcium	M1	1280000	196	1740	ug/L	8300	1280000	23	70 - 130	0.5	20
Iron	E1	1140	272	1740	ug/L	1100	261	103	70 - 130	0.3	20
Potassium	M1	473000	3060	8680	ug/L	8300	461000	142	70 - 130	0.0	20
Magnesium		3040000	42.3	1740	ug/L	8300	3030000	81	70 - 130	0.5	20
Manganese	M1	37400	4.99	694	ug/L	220	37300	20	70 - 130	0.6	20
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	169	70 - 130	0.0	20
Yttrium (%)	1411	94	07.2	1740	%	0300	94	10)	70 130	0.0	20
Yttrium Radial (%)		106			%		106				
					,-						
Haloacetic Acids, GC/EC	•		•		1 11/01	12022 00 2	10				
B231101-021 analyzed or	n 11/01/202						39				
Dibromoacetic Acid		16	0.27	1	ug/L	15		106	70 - 130		
Dichloroacetic Acid		16	0.23	1	ug/L	15		104	70 - 130		
Monobromoacetic Acid		16	0.16	1	ug/L	15		104	70 - 130		
Monochloroacetic Acid		15	0.45	1	ug/L	15		102	70 - 130		
Trichloroacetic Acid		16	0.3	1	ug/L	15		107	70 - 130		
1,2,3-Trichloropropane (%)		97			%						
2,3-Dibromopropionic Acid (%)		109			%						
Haloacetic Acids, GC/EC	D LOQ by	EPA 552	.2, B231	101-021							
B231101-021 analyzed or	n 11/01/202	3 20:40; B	231101-	011 prepa	red on 11/01	/2023 09:3	39				
Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0		107	50 - 150		
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0		99	50 - 150		
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0		105	50 - 150		
Monochloroacetic Acid		1.1	0.45	1	ug/L	1.0		108	50 - 150		
Trichloroacetic Acid	E1	0.98	0.3	1	ug/L	1.0		98	50 - 150		
1,2,3-Trichloropropane (%)		104			%						
2,3-Dibromopropionic Acid (%)		107			%						
,rprome (/0)					, •						

Haloacetic Acids, GC/ECD MB by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:15; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	U	0.27	0.27	1	ug/L
Dichloroacetic Acid	U	0.23	0.23	1	ug/L
Monobromoacetic Acid	U	0.16	0.16	1	ug/L



2,3-Dibromopropionic Acid (%)

Ouality Control for C022074

			Qu	ality Cont	rol for C0220	74					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Monochloroacetic Acid	U	0.45	0.45	1	ug/L	ı					
Trichloroacetic Acid	U	0.3	0.3	1	ug/L						
1,2,3-Trichloropropane (%)		100			%						
2,3-Dibromopropionic Acid (%)		107			%						
Haloacetic Acids, GC/EC	CD MS by E	EPA 552.2	2, B23110	01-021							
B231101-021 analyzed or	n 11/01/202	3 21:55; I	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130		
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96			%		99				
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	CD MS by E	EPA 552.2	2, B23110	01-021							
B231101-021 analyzed or	n 11/02/202	3 02:55; 1	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C022	2072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		16	0.45	1.0	ug/L	15	0.45	110	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	110	70 - 130		
1,2,3-Trichloropropane (%)		100			%		100				
2,3-Dibromopropionic Acid (%)		112			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/01/202	3 22:20; I	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/02/202	3 03:20; I	B231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	104	70 - 130	5.3	20
1,2,3-Trichloropropane (%)		99	- 150 00		%		100				
2.2 Dilamananiania A aid (0/)		100			0/		100				

109

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Laboratory Services Division ELAP#1060

Qualifiers and Definitions

E1 Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated Concentration.

M1 The MS recovery was outside acceptance limits due to possible matrix interference. The analytical batch meets

accuracy criteria for reporting.

U Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate

QCS Quality Control Sample



BMUD	COC #: C022074	Project Title: Bayside Ground TAT: Standard	Water Project	Lab PM: Kristi Schwab				Expect Date: 10/25/2023 Sampled By: DAVID WILLIAMS Samples transported on ice 5.3 C# 13 C 10/27 (2)3				
Date	Time	Site/Locator	Sample ID	Type Matrix ID Type				Tests Required				
10/26/27	1504	GW BAYSIDE - BAY1-MW5D	C022074-01	GRAB	Aqueous			+SAMP KIT				
10120125	120-1					-01A	PLSTL	EPA 200.7-W (Ca,Fe,K,Mg,Mn,Na)				
						-01B	PLSTL	TDS				
						-01C	PLSTM	Hardness				
		1				-01D	PLSTS	EPA 300.1 (CI,NO3,SO4)				
						-01F	PSQLT	Ammonía: Titr-AQ				
						-01G	A125N	EPA 552.2				
						-01H	A125N	EPA 552.2				
						-011	PLSTM	Oxygen 18				
						-01J	VOC4T	EPA 8260B THM				
						-01K	VOC4T	The state of the s				
					11	-01L	VOC4T	EPA 8260B				
						-01M	01M C500Z	Alkalinity: Species				
								Field Test Parameters:				
								CL2R =	Ø	mg/L		
								Depth =	30	Feet		
								pH =	7.41	pH Units		
								Temperature =	22-	С		
ield Comment	s:			-								
ield Instruction	ns:					_						

BMUD	COC #: C022074	Project Title: Bayside Groun TAT: Standard	nd Water Project	Water Project Client PM: David Behnken Lab PM: Kristi Schwab Job #:				Expect Date: 10/25/2023 Sampled By: DAVID WILLIAMS Samples transported on ice
Date	Time	Site/Locator	Sample ID	Туре	Matrix	ID	Туре	Tests Required
			Total	Containers fo	or; C022074	12	/	
linquished by ceived by; linquished by ceived by; ceived by;	. 1	Signature	Print Name D. William ROTHO	m5	Time 622	10/2	B/28	Container Legend: A125N = Glass, NM, septa top, 12.5 mg NH4Cl, Amber, 125 mL C5002 = Glass, NM, septa top, Clear, 500 mL PLSTL = Plastic, WM, 1000 mL PLSTM = Plastic, WM, 500 mL PLSTS = Plastic, NM, 125 mL PSQLT = Plastic, square, large, 50 mg Na2S2O3, 1000 mL

EBMUD	COC #: C022074	Project Title: Bayside Ground \ TAT: Standard		: David Behn (risti Schwab			Received Date/Time: 10/27/2023 07:00 Received By: Cynthia Sochoo Sampled By: DWilliams Due Date: 11/29/2023				
Date	Time	Site/Locator	Sample ID			ID	Type		Tests Requi	red	
10/26/2023	15:04	GW BAYSIDE - BAY1-MW5D	C022074-01	GRAB	Aqueous			+SAMP KIT			
				100	100	-01A	PLSTL	EPA 200.7-W (Ca,Fe,K,Mg,Mn,Na)			
						-01B	PLSTL	TDS			
						-01C	PLSTM	Hardness			
		1				-01D	PLSTS	EPA 300.1 (CI,NO3,SO4)			
		1				-01F	PSQLT	Ammonia: Titr-AQ			
		1				-01G	A125N	EPA 552.2 EPA 552.2			
						-01H	A125N				
						-011	PLSTM	Oxygen 18	Dxygen 18		
						-01J	VOC4T	EPA 8260B THM	OB THM		
						-01K	VOC4T	EPA 8260B			
						-01L	VOC4T	EPA 8260B			
						-01M	C500Z	Alkalinity: Species			
1								Field Test Parameters:			
								CL2R =	0.0	mg/L	
1								.Depth =	30	Feet	
							pH =	7.41	pH Units		
								.Temperature =	22.9	C	
ield Commen	ts:										
ield Instructio	ns:										
Sample Extern	al Comments										

Page 1 of 4 for C022074



C022074 Sample Acceptance Report Received: 10/27/2023 07:00 Received By: Cynthia Soohoo

	Comments
Yes	
No	
Drop-off Room	
No	
	Comments
Add lot no	
Add lot no	
Yes	
Yes	
Yes	
Yes	
	Comments
No	
	Comments
5.7	
IR #13	
-01	
5.3	
No	
	Comments
N/A	
	No Drop-off Room No Add lot no Add lot no Yes Yes Yes No 8.7 IR #13 -01 5.3 No

Page 2 of 4 for C022074



C022074 Sample Acceptance Report Received: 10/27/2023 07:00 Received By: Cynthia Soohoo

Samples meet acceptance requirements? Yes

Page 3 of 4 for C022074



Sample Acceptance Preservation Report COC: C022074

Report Generated: 10/27/2023 07:05

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1:1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade.	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028

Container Number	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022074-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time = \(\frac{1}{1/0} \)	Dass	0/27/201
C022074-01C	PLSTM	Hardness	HNO3 to pH <2	1	1
C022074-01F	PSQLT Ammonia: Titr-AQ Check Cl2R = 0 [PSQLT], then H2SO4 to pH <2				
C022074-01G	A125N	EPA 552.2	Check Container	17.95	100000
C022074-01H	A125N	EPA 552.2-FR	Check Container		
C022074-01K	VOC4T	EPA 8260B-FR	Check Container	1	11- 0
C022074-01L	VOC4T	EPA 8260B-FR	Check Container	V	1

Page 4 of 4 for C022074





27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4274

Enclosed are the results of analyses for samples received by the laboratory on 10/30/23 22:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022074
 11/27/23 16:30

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 |
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922 |
North Bay: 737 Southpoint Blwd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2932 |
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 |
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022074-01	23J4274-01	Water	10/26/23 15:04	10/30/23 22:30

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4



Oakland CA, 94607



Alpha Analytical Laboratories, Inc.

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EBMUD Project Manager: Jack Lim
PO Box 24055 Project: Bayside Gr

Project: Bayside Ground Water Project WDR

Project Number: C022074

Reported: 11/27/23 16:30

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# No	les
C022074-01 (23J4274-01) Water	Sampled: 10/2	6/23 15:04	Received	: 10/30/	23 22:30							
Chloroform	ND	0.10	1.0	ug/L	1	AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	U
Bromodichloromethane	ND	0.30	1,0	ug/L	1	AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	U
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	U
Bromoform	ND	0.20	1.0	ug/L	1	AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	U
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	U
Surrogate: Dibromofluoromethane		111	¹ / ₆ 7	0-130		AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	
Surrogate: Toluene-d8		98.4	% 7	0-130		AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	
Surrogate: Bromofluorobenzene		88.8	% 7	0-130		AK32817	11/01/23 08:00	11/01/23 22:22	EPA 8260B	MVA	2303	

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.

Page 2 of 4



Lalpha

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 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022074
 11/27/23 16:30

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source	A	%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Athanyte	Result	MIDE	Lime	Cima	Level	Kesun	MINEC	Limits	KI-D	Linn	Notes
Batch AK32817 - NB EPA 5030 Water	er GCMS										
Blank (AK32817-BLK1)					Prepared &	Analyzed	: 11/01/23				
1,1-Dichloroethene	ND	0.50	1.0	ug/L							- U
Benzene	ND	0.50	1.0	ug/L							U
Trichloroethene	ND	0.50	1.0	ug/L							U
Toluene	ND	0.50	1.0	ug/L							U
Chlorobenzene	ND	0.50	1.0	ug/L							U
Surrogate: Dibromofluoromethane	20.5			ug/L	20.0		103	70-130			
Surrogate: Toluene-d8	19.4			ug/L	20.0		97.2	70-130			
Surrogate: Bromofluorobenzene	20.0			ug/L	20.0		100	70-130			
Matrix Spike (AK32817-MS1)		Source: 2	3J4307-01		Prepared &	Analyzed	11/01/23				
1,1-Dichloroethene	24.3	0.50	1.0	ug/L	25.0	ND	97.2	70-130			
Benzene	26.2	0.50	1.0	ug/L	25.0	ND	105	70-130			
Trichloroethene	21.9	0.50	1.0	ug/L	25.0	ND	87.5	70-130			
Toluene	24.8	0.50	1.0	ug/L	25.0	ND	99.2	70-130			
Chlorobenzene	25.7	0.50	1.0	ug/L	25.0	ND	103	70-130			
Surrogate: Dibromofluoromethane	20.6			ug/L	20.0		103	70-130			
Surrogate: Toluene-d8	20.2			ug/L	20.0		101	70-130			
Surrogate: Bromofluorobenzene	19.2			ug/L	20.0		95.8	70-130			
Matrix Spike Dup (AK32817-MSD1)		Source: 2	3J4307-01		Prepared &	Analyzed	11/01/23				
1,1-Dichloroethene	24.2	0.50	1.0	ug/L	25.0	ND	96.8	70-130	0.330	25	
Benzene	24.2	0.50	1.0	ug/L	25.0	ND	96.8	70-130	7.86	25	
Trichloroethene	21.9	0.50	1.0	ug/L	25.0	ND	87.8	70-130	0.320	25	
Toluene	24.4	0.50	1.0	ug/L	25.0	ND -	97.5	70-130	1.75	25	
Chlorobenzene	25.8	0.50	1.0	ug/L	25.0	ND	103	70-130	0.543	25	
Surrogate: Dibromofluoromethane	19.1			ug/L	20.0		95.3	70-130			
Surrogate: Toluene-d8	19.5			ug/L	20.0		97.4	70-130			
Surrogate: Bromofluorohenzene	19.6			ug/L	20.0		97.8	70-130			

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.

Page 3 of 4





 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022074
 11/27/23 16:30

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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.

Page 4 of 4

^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



Sample Name: 2	396193 Job # 23J4274-01 Alpha Analytical La		IS-69368	Co. Job#: Co. Lab#:	
Container: 5	500ml Plastic Bottle 23J4274	ė			
	C022074-01 10/26/2023 15:04	Date Received:	11/06/2023	Date Reported:	11/20/2023
δD of water	-	-46.6 ‰ relative to	o VSMOW		
δ ¹⁸ O of water		-7.04 ‰ relative to	o VSMOW		
Tritium content of w	ater	na			
δ ¹³ C of DIC	(Similarian)	na			
¹⁴ C content of DIC		na			
δ ¹⁵ N of nitrate		na			
δ ¹⁸ O of nitrate	(na			
δ ³⁴ S of sulfate	(na			
δ ¹⁸ O of sulfate		na			
Vacuum Distilled? *		No			
Remarks:					



2354274

East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: DWilliams Submitted Date: Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier PO#: BRD-13921-AX Expiration: 12/31/2023 Project Title: Bayside Ground Water Project TAT: Standard C022074

(3) On 10 anno	M results and total sum).	port individual Th	y EPA 8260 (reg	racted). THMs b	re analysis for Oxygen-18 and Hydrogen-2 (subcontracted). THMs by EPA 8260 (report individual THM results and total sum). Total containers received:	lysis for Oxygen-1	: Isotope ana	mments: Alpha: Isotop
Bottle for QC (2)	EPA 8260B	V0C4T	-01L					
Bottle for QC (2)	EPA 8260B	VOC4T	-01K					
EPA 8260B	EPA 8260B THM	VOC4T	-013					
D180	Oxygen 18	MLSTM	-011	Aqueous	GW BAYSIDE - BAY1-	C022074-01	15:04	10/26/2023
Method Reference	Tests Required	Туре	Container ID	Matrix	Location/PS Code	Sample ID	Time	Date

	Signature	Print Name	Time	Date
Relinquished by:	Relinquished by: 21201700000	Robert Molling	01:11	1011012013
Received by:		Michael Loper	11:10	10/30/23
Relinquished by:	SK SK			10/30/23
Received by:	3	John Willis	(400	(0.3023
Relinquished by:	3		2230	62-08-01
Received by:	⊰	Why willy	3230	(2-08-0)

Send results and invoice to:
Kristi Schwab (kristi,lorenson@ebmud.com)
EBMUD Laboratory
PO Box 24055 MS #59
Oakland, CA 94623
(510) 287-1696

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded.

Alpha Analytical Laboratory 208 Mason St Ukiah, CA 95482

707-468-0401

vko_UKtoNB_COC.rpt		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ORK ORD				Printed: 10/31/20	23 10:20:17AM
	Alpha Analyti	cal Laborato	23J4274	o North Bay C	hain of Cu	stody		
Client: EBMUD			Code: RP		main or cu		1_Master Price	Shoot
Project: Bayside Ground	Water Project WDR	Project Nu	mber: C02		F	O #:	1_Master Frice	Succi
Date Due: 11/14	1/23 15:00 (10 day TAT	Γ)						
	Willis n J. Kooyers		ate Received: ate Logged	10/30/23 22:30 10/31/23 09:0:				
amples Received at:	deg C	All c	ontainers rece	eived and intact:	YES	NO		
Analysis	Department	E	xpires	Comments				
J4274-01 C022074-01 [NB 8260 THMs	Water] Sampled 10/2 NB GCMS		09/23 23:59					
Containers Supplied: VOA Vial - Na2S2O3 (B)								
VOA Vial - Na2S2O3 (C)								
VOA Vial - Na2S2O3 (D)								
Relinquished By	0 31 Da		Fime R	eceived By	7		11/1/23 Date	O73C Time
Relinquished By		te 123 12	250	eceived By	7		11/1/23 Date	O73 Time

Analytical Results Report

19 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022073

Report Generated: 01/18/2024 17:08

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Huit of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager



Laboratory Services Division ELAP#1060

Samples for C022073

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022073-01 GRAB Oct 24 2023 14:07 GW BAYSIDE - BAY1-MW6 -



Laboratory Services Division ELAP#1060

Samples Results for C022073

Sample ID: C022073-01

Site: **GW BAYSIDE** East Bay Ground Water Injection/Extraction Project Bayside Groundwater R APN 438-0010-003 2364 Baumann Ave., San Lorenzo; formerly BAY-MW-Locator: BAY1-MW6

WORTHLEY

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected: Oct 24 2023 14:07 **Sample Collector:** MTseng **Date Received:** Oct 25 2023 09:00 Sample Receiver: C Soohoo

Sample Comments:

Sample Comments:									
Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LIN	MS								
TARGET ANALYTES									
CL2R		0.0	0.02		mg/L				10/24/2023 14:07
Tital Jaka and a fish TT	ATC.								
Field data entry into LIN	VIS								
TARGET ANALYTES									
Depth		30			Feet				10/24/2023 14:07
Field data entry into LIN	MS								
TARGET ANALYTES									
рН		6.0			pH Units				10/24/2023 14:07
r					pri omo				10,2,2020 11.07
Field data entry into LIN	MS								
TARGET ANALYTES									
Temperature		20.6			C				10/24/2023 14:07
Total Dissolved Solids by	v SM 2540 C	-2011							
Total Dissolved Solids by	y 51V1 254U C	-2011							
TARGET ANALYTES		410	10			1.0	D221025 012		10/05/0000 00 00
Total Dissolved Solids		410	10	55	mg/L	1.0	B231025-012		10/26/2023 09:25
Alkalinity by SM 2320 B	3-2011								
TARGET ANALYTES									
Alkalinity: Total as CaCO3		220	5	30	mg/L	1.0	B231025-009		10/25/2023 10:03
Alkalinity: Carbonate	U	5	5	30	mg/L	1.0	B231025-009		10/25/2023 10:03
Alkalinity: Bicarbonate		220	5	30	mg/L	1.0	B231025-009		10/25/2023 10:03
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231025-009		10/25/2023 10:03
Ammonia as N by SM 45	500-NH3 C-2	2011							
TARGET ANALYTES									
Ammonia as N	U	0.29	0.29	1.5	mg/L	1.0	B231026-007		10/26/2023 12:14
Zimionia as 14	U	0.27	0.27	1.5	mg/L	1.0	5251020-007		10/20/2023 12.14
Hardness as CaCO3 by S	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		120	4	7	mg/L	1.0	B231106-008		11/06/2023 09:00
A.* EDA 200 4									
Anions by EPA 300.1									
TARGET ANALYTES									
Chloride		61	0.38	2.0	mg/L	10	B231025-005		10/25/2023 17:41
Nitrate as N	E1	0.079	0.023	0.30	mg/L	10	B231025-005		10/25/2023 17:41
Sulfate		46	0.69	2.0	mg/L	10	B231025-005		10/25/2023 17:41
SURROGATES		100			0/	10	D221025 005		10/05/0002 17 41
Dichloroacetate (%)		100			%	10	B231025-005		10/25/2023 17:41



Laboratory Services Division ELAP#1060

Samples Results for C022073

Sample ID: C022073-01

Site: East Bay Ground Water Injection/Extraction Project Bayside Groundwater **GW BAYSIDE** Locator: BAY1-MW6 R APN 438-0010-003 2364 Baumann Ave., San Lorenzo; formerly BAY-MW-

WORTHLEY

Client: Bayside Ground Water Project

Sample Type: **GRAB**

Date Collected: Oct 24 2023 14:07 **Sample Collector:** MTseng Sample Receiver: C Soohoo **Date Received:** Oct 25 2023 09:00

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7								,	
TARGET ANALYTES									
Calcium		32600	4.70	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Iron	E 1	33.4	6.52	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Potassium		3300	73.5	208	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Magnesium		8110	1.01	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Manganese		184	0.12	16.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Sodium		109000	1.61	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
INTERNAL STANDARD									
Yttrium (%)		98			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Yttrium Radial (%)		98			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 12:51
Haloacetic Acids, GC/EC	D by EPA 5	552.2							
TARGET ANALYTES	•								
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
Trichloroacetic Acid	U	0.30	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
	Comments: I	HAA (5) calc	ulation uses	a zero for an	y individual HAA	result less	than the Californ	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		106			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45
SURROGATES									
2,3-Dibromopropionic Acid (%)		102			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 03:45

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

TARGET ANALITES									
Bromodichloromethane	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:58	
	Comments: S	UB: Analyte	included in	analysis bu	t not detected at or ab	ove MDL			
Bromoform	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:58	
	Comments: S	UB: Analyte	included in	analysis bu	t not detected at or ab	ove MDL			
Chloroform	U	0.10	0.10	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:58	
	Comments: S	UB: Analyte	included in	analysis bu	t not detected at or ab	ove MDL			
Dibromochloromethane	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:58	
	Comments: S	UB: Analyte	included in	analysis bu	t not detected at or ab	ove MDL			
Total Trihalomethanes, calculated	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:58	
	Comments: S	IIB: Analyte	included in	analysis bu	t not detected at or ab	ove MDI.			

Quality Control for C022073

			Qu	anty Contro	or 10r C02207	<u> </u>					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Total Dissolved Solids DU	UP by SM 2	2540 C-20	11, B23 1	1025-012							
B231025-012 analyzed on	10/26/2023	3 09:25; S	ource =	C022073-0	1						
Total Dissolved Solids		400	10	55	mg/L		410			0.7	10
Total Dissolved Solids LC	CS by SM 2	540 C-20	11, B231	1025-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids		370	20	110	mg/L	370		99	85 - 115		
Total Dissolved Solids M	B by SM 25	540 C-201	1, B2310	025-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids	U	10	10	55	mg/L						
Alkalinity DUP by SM 23	320 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 10:08; S	ource =	C022073-0	1						
Alkalinity: Total as CaCO3		220	5	30	mg/L		220			0.7	20
Alkalinity DUP by SM 23	320 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 10:59; S	ource =	C021078-1	0						
Alkalinity: Total as CaCO3		6600	62	380	mg/L		6600			0.1	20
Alkalinity LCS by SM 23	320 B-2011,	B231025	-009								
B231025-009 analyzed on	10/25/2023	3 09:30									
Alkalinity: Total as CaCO3		300	5	30	mg/L	300		99	85 - 115		
Alkalinity MB by SM 232	20 B-2011, l	B231025-	009								
B231025-009 analyzed on	10/25/2023	3 09:18									
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalinity MS by SM 232	20 B-2011, I	3231025-0	009								
B231025-009 analyzed on	10/25/2023	3 10:13; S	ource =	C022073-0	1						
Alkalinity: Total as CaCO3		520	5	30	mg/L	300	220	99	80 - 120		
Alkalinity MS by SM 232	20 B-2011, I	3231025-0	009								
B231025-009 analyzed on	10/25/2023	3 11:04; S	ource =	C021078-1	0						
Alkalinity: Total as CaCO3		11000	62	380	mg/L	5000	6600	98	80 - 120		
Alkalinity QCS by SM 23	320 B-2011,	B231025	-009								
B231025-009 analyzed on	·										
Alkalinity: Total as CaCO3		68	5	30	mg/L	66		103	91 - 111		

Laboratory Services Division ELAP#1060

Quality Control for C022073

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Ammonia as N DUP by S	SM 4500-NI	H3 C-2011	l, B23102	26-007		,					
B231026-007 analyzed or	n 10/26/2023	3 12:14; S	ource =	C021337-0	9						
Ammonia as N		39	1.4	7.5	mg/L		38			1.2	10
Ammonia as N LCS by S	M 4500-NH	I3 C-2011	, B23102	26-007							
B231026-007 analyzed or	10/26/2023	3 12:14									
Ammonia as N		12	0.29	1.5	mg/L	12		97	85 - 115		
Ammonia as N LOQ by S	SM 4500-N	H3 C-201	1, B2310	26-007							
B231026-007 analyzed or	10/26/2023	3 12:14									
Ammonia as N	E1	1.5	0.29	1.5	mg/L	1.5		99	50 - 150		
Ammonia as N MB by SN	м 4500-NH	3 C-2011,	B23102	6-007							
B231026-007 analyzed or	10/26/2023	3 12:14									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SM	И 4500-NH	3 C-2011,	B231026	5-007							
B231026-007 analyzed or	10/26/2023	3 12:14; S	ource =	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	99	80 - 120		
Ammonia as N MSD by S	SM 4500-N	H3 C-201	1, B2310	26-007							
B231026-007 analyzed or	10/26/2023	3 12:14; S	ource =	C021337-0	8						
Ammonia as N		110	1.4	7.5	mg/L	60	50	98	80 - 120	0.0	15
Hardness as CaCO3 DUI	P by SM 23	40 C-201 1	l, B23110	06-008							
B231106-008 analyzed or	n 11/06/2023	3 09:00; S	ource =	C020700-0	1						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUI	P by SM 23	40 C-201 1	l, B23110	06-008							
B231106-008 analyzed or	11/06/2023	3 09:00; S	ource =	C020854-0	3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10
Hardness as CaCO3 LCS	S by SM 234	40 C-2011	, B23110	06-008							
B231106-008 analyzed or	11/06/2023	3 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LO	Q by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed or	11/06/2023	3 09:00									
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		

Quality Control for C022073

					ol for C02207	<u></u>					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Hardness as CaCO3 MB I	by SM 2340	C-2011	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	09:00									
Hardness as CaCO3	U	4	4	7	mg/L						
Hardness as CaCO3 MS b	y SM 2340	C-2011,	, B23110	6-008							
B231106-008 analyzed on	11/06/2023	99:00; S	Source =	C020700-0)1						
Hardness as CaCO3		120	4	7	mg/L	100	16	102	85 - 115		
Hardness as CaCO3 MS b	oy SM 2340	C-2011,	B23110	6-008							
B231106-008 analyzed on	11/06/2023	99:00; S	Source =	C020854-0)3						
Hardness as CaCO3		120	4	7	mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QCS	by SM 234	40 C-201	1, B23110	06-008							
B231106-008 analyzed on	11/06/2023	09:00									
Hardness as CaCO3		160	4	7	mg/L	150		104	91 - 107		
Anions LCS by EPA 300.1	1, B231025	-005									
B231025-005 analyzed on	10/25/2023	17:03									
Chloride		0.97	0.061	0.2	mg/L	1.0		97	85 - 115		
Nitrate as N Sulfate		0.045 0.87	0.0035 0.079	0.03 0.2	mg/L mg/L	0.05 1.0		90 87	85 - 115 85 - 115		
Dichloroacetate (%)		99	0.077	0.2	%	1.0		07	65 - 115		
Anions LOQ by EPA 300.	1, B231025	5-005									
B231025-005 analyzed on	10/25/2023	16:25									
Chloride		0.21	0.061	0.2	mg/L	0.20		107	50 - 150		
Nitrate as N	E1	0.028	0.0035	0.03	mg/L	0.03		93	50 - 150		
Sulfate Dichloroacetate (%)	E1	0.20 102	0.079	0.2	mg/L %	0.20		100	50 - 150		
Anions MB by EPA 300.1	, B231025-	005									
B231025-005 analyzed on	10/25/2023	15:48									
Chloride	U	0.061	0.061	0.2	mg/L						
Nitrate as N	U	0.0035	0.0035	0.03	mg/L						
Sulfate Dichloroacetate (%)	U	0.079 100	0.079	0.2	mg/L %						
Anions DUP by EPA 300.	1, B231025	-005									
B231025-005 analyzed on	10/25/2023	20:12; S	Source =	C021081-1	10						
Nitrate as N	E1	0.020	0.0035	0.030	mg/L		0.020			2.4	10
Dichloroacetate (%)		103			%		101				
Anions MS by EPA 300.1,	B231025-0	005									
B231025-005 analyzed on	10/25/2023	20:50; S	Source =	C021081-1	10						
Nitrate as N		0.066	0.0035	0.030	mg/L	0.05	0.020	92	75 - 125		



Calcium

Iron

Quality Control for C022073

			Qu	ality Cont	rol for C0220	73					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetate (%)		101			%		101				
Metals LCS by EPA	200.7, B231114	-002									
B231114-002 analyze	d on 11/15/202	3 12:18; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8120	4.90	43.4	ug/L	8300		97	85 - 115		
Iron		1110	6.80	43.4	ug/L	1100		100	85 - 115		
Potassium		9290	76.6	217	ug/L	8300		112	85 - 115		
Magnesium		8200	1.06	43.4	ug/L	8300		98	85 - 115		
Manganese		220	0.12	17.4	ug/L	220		99	85 - 115		
Sodium		8760	1.68	43.4	ug/L	8300		105	85 - 115		
Yttrium (%)		100			%						
Yttrium Radial (%)		100			%						
Metals LCSD by EPA	200.7. B2311 1	14-002									
B231114-002 analyze	•		3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8040	4.90	43.4	ug/L	8300		96	85 - 115	1.0	10
Iron		1100	6.80	43.4	ug/L	1100		99	85 - 115	0.9	10
Potassium		9200	76.6	217	ug/L	8300		110	85 - 115	1.0	10
Magnesium		8120	1.06	43.4	ug/L	8300		97	85 - 115	1.0	10
Manganese		218	0.12	17.4	ug/L	220		98	85 - 115	1.0	10
Sodium		8660	1.68	43.4	ug/L	8300		104	85 - 115	1.1	10
Yttrium (%)		101	1.00	43.4	%	0500		104	05 115	1.1	10
Yttrium Radial (%)		100			%						
Metals LOQ by EPA	200.7, B231114	4-002									
B231114-002 analyze	d on 11/15/202	3 12:05; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium	E1	38.9	4.75	42.0	ug/L	40		97	50 - 150		
Iron	E1	39.5	6.58	42.0	ug/L	40		99	50 - 150		
Potassium		230	74.2	210	ug/L	200		115	50 - 150		
Magnesium	E1	38.8	1.02	42.0	ug/L	40		97	50 - 150		
Manganese	E1	16.0	0.12	16.8	ug/L	16		100	50 - 150		
Sodium	E1	35.6	1.63	42.0	ug/L	40		89	50 - 150		
Yttrium (%)		102			%						
Yttrium Radial (%)		103			%						
Metals MB by EPA 2	00.7, B231114-	002									
B231114-002 analyze	d on 11/15/202	3 11:59; I	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium	U	4.70	4.70	41.6	ug/L						
Iron	U	6.52	6.52	41.6	ug/L						
Potassium	U	73.5	73.5	208	ug/L						
Magnesium	U	1.01	1.01	41.6	ug/L						
Manganese	U	0.12	0.12	16.6	ug/L						
Sodium	U	1.61	1.61	41.6	ug/L						
Yttrium (%)	Ü	102	1.01		wg/L						
Yttrium Radial (%)		103			%						
Metals MS by EPA 20	00.7. B231114.	002									
B231114-002 analyze			2231101	.014 nrons	red on 11/01	/2023 10.2	0. Saura	na – C022	071-01		
D231114-UU2 allalyZe	u vii 11/15/202.	J 13:43; I	<i>,</i> 2311U1-	or4 brebs	11/01 11/01	14043 10:4	, Source	.c – CU22	W/1-U1		

196

272

1740

1740

ug/L

ug/L

8300

1100

1280000

261

102

103

1290000

1150

E1

70 - 130

70 - 130

Sodium

Yttrium (%)

Yttrium Radial (%)

			Qua	ality Cont	rol for C022073						
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Potassium	M1	473000	3060	8680	ug/L	8300	461000	140	70 - 130		
Magnesium	M1	3060000	42.3	1740	ug/L	8300	3030000	258	70 - 130		
Manganese		37600	4.99	694	ug/L	220	37300	123	70 - 130		
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	254	70 - 130		
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				
Metals MSD by EPA 2	00.7, B23111	4-002									
B231114-002 analyzed	on 11/15/202	3 13:26; B	231101-	014 prepa	ared on 11/01/20	023 10:2	9; Sourc	e = C022	071-01		
Calcium	M1	1280000	196	1740	ug/L	8300	1280000	23	70 - 130	0.5	20
Iron	E1	1140	272	1740	ug/L	1100	261	103	70 - 130	0.3	20
Potassium	M1	473000	3060	8680	ug/L	8300	461000	142	70 - 130	0.0	20
Magnesium		3040000	42.3	1740	ug/L	8300	3030000	81	70 - 130	0.5	20
Manganese	M1	37400	4.99	694	ug/L	220	37300	20	70 - 130	0.6	20

ug/L

8300

21100000

94

106

169

70 - 130

0.0

20

Haloacetic Acids, GC/ECD LCS by EPA 552.2, B231101-021

M1

B231101-021 analyzed on 11/01/2023 21:05; B231101-011 prepared on 11/01/2023 09:39

21100000

94

106

67.2

Dibromoacetic Acid	16	0.27	1	ug/L	15	106	70 - 130
Dichloroacetic Acid	16	0.23	1	ug/L	15	104	70 - 130
Monobromoacetic Acid	16	0.16	1	ug/L	15	104	70 - 130
Monochloroacetic Acid	15	0.45	1	ug/L	15	102	70 - 130
Trichloroacetic Acid	16	0.3	1	ug/L	15	107	70 - 130
1,2,3-Trichloropropane (%)	97			%			
2,3-Dibromopropionic Acid (%)	109			%			

1740

Haloacetic Acids, GC/ECD LOQ by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:40; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0	107	50 - 150
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0	99	50 - 150
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0	105	50 - 150
Monochloroacetic Acid		1.1	0.45	1	ug/L	1.0	108	50 - 150
Trichloroacetic Acid	E1	0.98	0.3	1	ug/L	1.0	98	50 - 150
1,2,3-Trichloropropane (%)		104			%			
2,3-Dibromopropionic Acid (%)		107			%			

Haloacetic Acids, GC/ECD MB by EPA 552.2, B231101-021

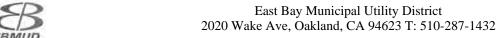
B231101-021 analyzed on 11/01/2023 20:15; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	U	0.27	0.27	1	ug/L
Dichloroacetic Acid	U	0.23	0.23	1	ug/L
Monobromoacetic Acid	U	0.16	0.16	1	ug/L
Monochloroacetic Acid	U	0.45	0.45	1	ug/L
Trichloroacetic Acid	U	0.3	0.3	1	ug/L
1,2,3-Trichloropropane (%)		100			%
2,3-Dibromopropionic Acid (%	6)	107			%

Haloacetic Acids, GC/ECD MS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:55; B231101-011 prepared on 11/01/2023 09:39; Source = C020680-01

Dibromoacetic Acid 16 0.27 1.0 ug/L 15 0.27 104 70 - 130





1,2,3-Trichloropropane (%)

2,3-Dibromopropionic Acid (%)

Quality Control for C022073

			Qu	ality Cont	rol for C0220	/3					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96			%		99				
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	CD MS by E	PA 552.2	2, B2311 0	1-021							
B231101-021 analyzed or	n 11/02/2023	3 02:55; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		16	0.45	1.0	ug/L	15	0.45	110	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	110	70 - 130		
1,2,3-Trichloropropane (%)		100			%		100				
2,3-Dibromopropionic Acid (%)		112			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	•				red on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/02/2023	3 03:20; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	104	70 - 130	5.3	20

%

100

108

99

109

Laboratory Services Division ELAP#1060

Qualifiers and Definitions

E1	Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated
	Concentration

- M1 The MS recovery was outside acceptance limits due to possible matrix interference. The analytical batch meets accuracy criteria for reporting.
- U Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

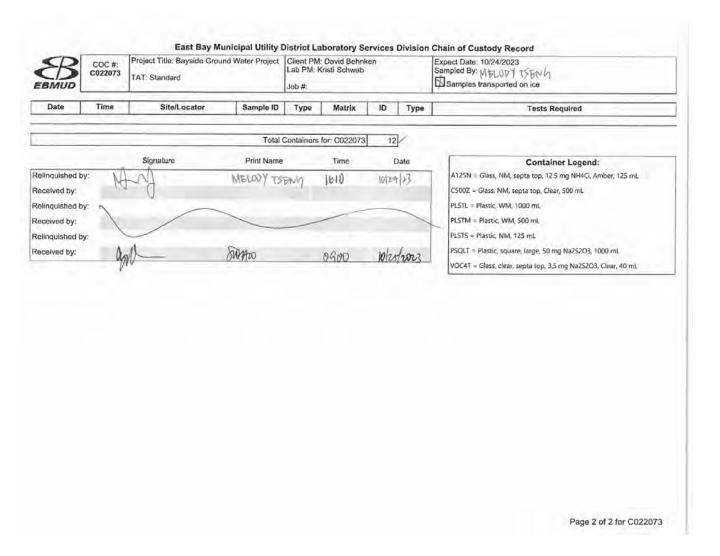
LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate

QCS Quality Control Sample

BEBMUD	COC #: C022073	Project Title: Bayside Ground TAT: Standard	Water Project	Lab PM: Kristi Schwab				Expect Date: 10/24/2023 Sampled By: MELDDY TSEN/) Samples transported on ice 4.1°CH 3 c. 10 25					
Date	Time	Site/Locator	Sample ID	Туре	Matrix	ID	Type						
10/24/23	1407	GW BAYSIDE - BAY1-MW6	C022073-01	GRAB	Aqueous			+SAMP KIT					
To I To I	7.44	1				-01A	PLSTL	EPA 200.7-W (Ca,Fe,K,N	Mg,Mn,Na)				
						-01B	PLSTL	TDS					
									-01C	PLSTM			
					-0				14	-01D	PLSTS	EPA 300.1 (CI,NO3,SO4)
						-01F	PSQLT	Ammonia: Titr-AQ					
						-01G	A125N	EPA 552.2					
			1			-01H	A125N	EPA 552.2					
						-011	PLSTM	Oxygen 18					
						-01J	VOC4T	EPA 8260B THM					
						-01K	VOC4T	EPA 8260B					
						-01L	VOC4T	EPA 8260B					
				-01M	C500Z	Alkalinity: Species							
										Field Test Parameters:			
								CL2R =	Ø	mg/L			
								Depth =	12	Feet			
								pH =	6.0	pH Units			
								Temperature =	20-b	С			
ield Commer	nts:			1									
ield Instruction	14.16												
Toro Inputo out	STEEL .												





Soohoo, Cynthia

Tseng. Metody

nt: Wednesday, October 25, 2023 9,12 AM

Nolina, Robert, Sociboo, Cynthia

C022073

Apologies! I have a correction for the C022073.

The sampling depth notated is 12ft but corrected sampling depth should be 30ft.

Please let me know if I need to stop in this afternoon to make the correction on the hardcopy.

Sorry again!

Melody Get Outlook for 105

EBMUD	COC #: C022073	Project Title: Bayside Ground TAT: Standard	Water Project	Lab PM; Kristi Schwab Job #:				Received Date/Tymhe: 10/25/2023 09:00 Received By: Cynthia Soohoo Sampled By: MTseng Due Date: 11/27/2023						
Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type		Tests Requi	red				
10/24/2023	14:07	GW BAYSIDE - BAY1-MWB	C022073-01	GRAB	Aqueous			+SAMP KIT						
						-01A	PLSTL	EPA 200.7-W (Ca,Fe,	Ca,Fe,K,Mg,Mn,Na)					
			1			-01B	PLSTL	TDS						
									-01C	PLSTM	Hardness			
										-01D	PLSTS	EPA 300.1 (CI,NO3,S0	PA 300.1 (CI,NO3,SO4)	
			1					-01F	PSQLT	Ammonia: Titr-AQ				
			1						-01G	A125N	EPA 552.2			
						-01H	A125N	EPA 552.2						
						1	-011	PLSTM	Oxygen 18					
							-01J	VOC4T	EPA 8260B THM					
						-01K	VOC4T	EPA 8260B						
						-01L	VOC4T	EPA 8260B						
			1			-01M C	-01M	C500Z	Alkalinity: Species					
			1					Field Test Parameters						
								CL2R =	0.0	mg/L				
										Depth = 30		Feet		
			8					pH =	6.0	pH Units				
						6		Temperature =	20,6	C				
ield Commen	ts:													
ield Instructio	ns:													
amole Extern	al Comments													

Page 1 of 4 for C022073



PM notified?

C022073 Sample Acceptance Report Received: 10/25/2023 09:00 Received By: Cynthia Soohoo

Chain-of-Custody		Comments
Chilled During Transport?	Yes	
Missing or incorrect information	No	
Mode of receipt	Drop-off Room	
Shipping Slip?	No	
Containers		Comments
BACT (120 mL) lot number	Add lot no	
BACTL (290 mL) lot number	Add lot no	
Container and label are legible and match COC?	Yes	
Correct container used with field preservation?	Yes	
Received within holding times?	Yes	
Sufficient volume, undamaged, or uncontaminated?	Yes	
Sample: C022073-01		Comments
Bubbles in ZHS/VOA containers	Yes	
Intent to chill		
Cooler: 1		Comments
Corrected Temp (° C)	4.5	
IR Thermometer Number	IR #13	
Representative temperature taken from	-01	
Uncorrected Temp (° C)	4.1	
Visible ice formed inside sample container?	No	
Acceptance		Comments

Page 2 of 4 for C022073

N/A



Page 3 of 4 for C022073



Sample Acceptance Preservation Report COC: C022073 Report Generated: 10/25/2023 09:15

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Ethylenediamine 12.5 mg/mL (EDA-42)	ST230927-005	N/A	09/27/2023	10/27/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1:1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A.	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028

Container Number	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022073-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time	Own:	Colorison
C022073-01C	PLSTM	Hardness	HNO3 to pH <2	1	1
C022073-01F	PSQLT Ammonia: Titr-AQ Check Ct2R = 0 [PSQLT], then H2SQ4 to pH <2				
C022073-01G	A125N	EPA 552.2	Check Container		
C022073-01H	A125N	EPA 552.2-FR	Check Container		
C022073-01K	VOC4T	VOC4T EPA 8260B-FR Check Container		1/	
C022073-01L	VOC4T	3303		1	1

Page 4 of 4 for C022073





Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4205

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 22:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim

PO Box 24055 Project: Bayside Ground Water Project WDR Reported: Oakland CA, 94607 Project Number: C022073 11/27/23 16:28

> Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922 North Bay: 737 Southpoint Blvd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2303 San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022073-01	23J4205-01	Water	10/24/23 14:07	10/26/23 22:15

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4



Oakland CA, 94607



Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim
PO Box 24055 Project: Bayside G

Project: Bayside Ground Water Project WDR
Project Number: C022073

Reported: 11/27/23 16:28

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# Notes
C022073-01 (23J4205-01) Water	Sampled: 10/2	4/23 14:07	Received	1: 10/26/	23 22:15						
Chloroform	ND	0.10	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Bromodichloromethane	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Bromoform	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Surrogate: Dibromofluoromethane		107 9	Vo 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Surrogate: Toluene-d8		104 9	% 7	0-130		4.135161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303
Surrogate: Bromofluorobenzene		92.79	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:58	EPA 8260B	MVA	2303

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.

Page 2 of 4



Lalpha

Alpha Analytical Laboratories, Inc.

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022073
 11/27/23 16:28

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source	A	%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (AJ35161-BLK1)					Prepared &	Analyzada	10/20/22				
1.1-Dichloroethene	ND	0.50	1.0		riepaieu &	Analyzeu.	10/30/23				- 1
Benzene	ND ND	0.50	1.0	ug/L							Ţ
Trichloroethene	ND	0.50	1.0	ug/L							t
Toluene	ND	0.50	1.0	ug/L							I
Chlorobenzene	ND	0.50	1.0	ug/L							1
		0.50	1.0	14	40.0		100	20.120			· ·
Surrogate: Dibromofluoromethane	21.4			ug/L	20.0		107	70-130 70-130			
Surrogate: Toluene-d8	20.3			ug/L	20.0		102				
Surrogate: Bromofluorobenzene	18.9			ug/L	20.0		94.5	70-130			
Matrix Spike (AJ35161-MS1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	23.4	0.50	1.0	ug/L	25.0	ND	93.7	70-130			
Benzene	23.9	0.50	1.0	ug/L	25.0	ND	95.7	70-130			
Trichloroethene	22.3	0.50	1.0	ug/L	25.0	ND	89.1	70-130			
Toluené	24.7	0.50	1.0	ug/L	25.0	ND	98.8	70-130			
Chlorobenzene	24.8	0.50	1.0	ug/L	25.0	ND	99.0	70-130			
Surrogate: Dibromofluoromethane	19.8			ug/L	20.0		99.1	70-130			
Surrogate: Toluene-d8	20.8			ug/L	20.0		104	70-130			
Surrogate: Bromofluorohenzene	18.7			ug/L	20.0		93.3	70-130			
Matrix Spike Dup (AJ35161-MSD1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.2	70-130	13:0	25	
Benzene	21,3	0.50	1.0	ug/L	25.0	ND	85.2	70-130	11.5	25	
Trichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.4	70-130	7.84	25	
Toluene	21.5	0.50	1.0	ug/L	25.0	ND-	85.8	70-130	14.0	25	
Chlorobenzene	22.3	0.50	1.0	ug/L	25.0	ND	89.0	70-130	10.6	25	
Surrogate: Dibromofluoromethane	22.4			ug/L	20.0		112	70-130			
Surrogate: Toluene-d8	20.4			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	19.6			ug/L	20.0		97.8	70-130			

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.

Page 3 of 4





 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022073
 11/27/23 16:28

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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.

Page 4 of 4

^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



	896190	Job #:	56573	IS-69368	Co. Job#:	
	23J4205-01 Alpha Analyt	ical Lab	oratories, Inc.		Co. Lab#:	
	500ml Plasti 23J4205	c Bottle				
Sampling Point:	C022073-01			30.00.0000	2112	10212222
Date Sampled:	10/24/2023	14:07	Date Received:	11/06/2023	Date Reported:	11/20/2023
δD of water			48.0 ‰ relative t	to VSMOW		
δ ¹⁸ O of water	1		7.20 ‰ relative t	to VSMOW		
Tritium content of v	vater	······ r	na			
δ ¹³ C of DIC		r	na			
¹⁴ C content of DIC		r	na			
δ ¹⁵ N of nitrate	**********		na			
δ ¹⁸ O of nitrate		r	na			
δ ³⁴ S of sulfate		r	na			
δ ¹⁸ O of sulfate	~~~~	r	na			
Vacuum Distilled?		N	No			
Remarks:						



-

2354205

East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: MTseng

Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier

Project Title: Bayside Ground Water Project

TAT: Standard

C022073

PO#: BRD-13921-AX Expiration: 12/31/2023

Submitted Date:

	diana paga paga paga paga		100000000000000000000000000000000000000	4	Comments: Alpha: isotope analysis for Oxygen-16 and rydrogen-2 (succonfideded); Trivis by ETA 6200 (report individual in instance and comments. Alpha: isotope analysis for Oxygen-16 and rydrogen-12 (succonfideded).	ils for Oxygen-	diy	: isotope analys
						1		
Bottle for QC (2)	EPA 8260B	VOC4T	-011					
Bottle for QC (2)	EPA 8260B	VOC4T	-01K					
EPA 8260B	EPA 8260B THM	VOC4T	-013					
D18O	Oxygen 18	PLSTM	-011	Aqueous	GW BAYSIDE - BAY1- MW6		C022073-01 GW BAYS	
Method Reference	Tests Required	Type	Container ID	Matrix	Location/PS Code	Location	Sample ID Location	

STED BY	Selinguished by:	Signature	Print Name	
	Received by:	250	122 T	100
45%	Relinquished by:	الع		
	Received by:	(3)	John willis	ç
	Relinquished by:	, 3		
	Received by:	71	Jake willis	

Send results and invoice to:
Kristi Schwab (kristi.lorenson@ebmud.com)
EBMUD Laboratory
PO Box 24055 MS #59
Oakland. CA 94623
(510) 287-1896

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded.

Alpha Analytical Laboratory 208 Mason St

Ukiah, CA 95482 707-468-0401



	Alpha Apalytica	23J42	05		Printed: 10/30/2023 11:34:47AN
2017 400000	Alpha Analytica	Laboratories Ukia		in of Custody	
Client: EBMUD Project: Bayside Gro	ound Water Project WDR	Client Code: R Project Number: C		Bid: PO #:	1_Master Price Sheet
Received By: Jo	1/10/23 15:00 (10 day TAT) ohn Willis aron J. Kooyers		ed: 10/26/23 22:15 1 10/30/23 11:28		
amples Received at:	deg C	All containers r	eceived and intact:	YES NO	
Analysis	Department	Expires	Comments		
J4205-01 C022073-0 NB 8260 THMs	11 [Water] Sampled 10/24/2 NB GCMS	23 14:07 11/07/23 23:5	9		
Containers Supplied:					
VOA Vial - Na2S2O3 (B) VOA Vial - Na2S2O3 (C)					
VOA Vial - Na2S2O3 (D)					
11	10/30/2	23	-	72	10/31/23
	Date	Time	Received By		Date Time
Relinquished By	-				1/.////
Relinquished By Relinquished By	Date	16/31/27 Time	Received By		0/3//23
	Date	76/31/2 Time	Received By		Date Time
Relinquished By Relinquished By	Date	76/31/23 Time	Received By		

Analytical Results Report

18 January 2024

David Behnken

MS 704

Re: Bayside Ground Water Project

COC# C022075

Report Generated: 01/18/2024 14:50

Login Performance Summary

- 0 Lost Analyses
- 0 Hold Time Exceedances
- Analytical analyses did not meet the turnaround time

Report Notes

For questions concerning this report, please contact:

Reported By:

Kristi Schwab

Huit of Set

Senior Chemist

Approved By:

Yuyun Shang

Lab Manager



Laboratory Services Division ELAP#1060

Samples for C022075

Samples Included in the Report

Sample Number Sample Type Sampled Date Location Name Sample Name

C022075-01 GRAB Oct 25 2023 14:32 GW BAYSIDE - BAY1-MW7 -

Samples Results for C022075

Sample ID: C022075-01

Site:GW BAYSIDEEast Bay Ground Water Injection/Extraction Project Bayside GroundwaterLocator:BAY1-MW7S APN 411-0078-001 Via Buena Vista; formerly BAY-MW-SL PARK

Client: Bayside Ground Water Project

Sample Type: GRAB

Date Collected:Oct 25 2023 14:32Sample Collector:DWilliamsDate Received:Oct 26 2023 09:00Sample Receiver:C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Field data entry into LIN	AS								
TARGET ANALYTES									
CL2R		0.0	0.02		mg/L				10/25/2023 14:32
	-~				J				
Field data entry into LIN	AS								
TARGET ANALYTES									
Depth		30			Feet				10/25/2023 14:32
Field data entry into LIN	AS								
TARGET ANALYTES									
pH		7.70			pH Units				10/25/2023 14:32
pii		7.70			pir Onits				10/23/2023 14.32
Field data entry into LIN	IS								
TARGET ANALYTES									
Temperature		21.9			С				10/25/2023 14:32
	G3.5.05.40.6	. 2011							
Total Dissolved Solids by	SM 2540 C	-2011							
TARGET ANALYTES									
Total Dissolved Solids		460	10	55	mg/L	1.0	B231025-012		10/26/2023 09:25
Alkalinity by SM 2320 B	-2011								
TARGET ANALYTES									
Alkalinity: Total as CaCO3		230	5	30	mg/L	1.0	B231027-007		10/27/2023 10:50
Alkalinity: Carbonate	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:50
Alkalinity: Bicarbonate		230	5	30	mg/L	1.0	B231027-007		10/27/2023 10:50
Alkalinity: Hydroxide	U	5	5	30	mg/L	1.0	B231027-007		10/27/2023 10:50
Ammonia as N by SM 45	00-NH3 C-2	2011							
TARGET ANALYTES									
Ammonia as N	U	0.29	0.29	1.5	mg/L	1.0	B231026-007		10/26/2023 12:14
			0.2	1.0	g 2	1.0	5201020 007		10/20/2020 12.11
Hardness as CaCO3 by S	SM 2340 C-2	2011							
TARGET ANALYTES									
Hardness as CaCO3		140	4	7	mg/L	1.0	B231106-008		11/06/2023 09:00
Anions by EPA 300.1									
•									
TARGET ANALYTES		on.	0.05	5.0		25	D221026 012		10/26/2022 17:47
Chloride Nitrate as N	E1	89 0.11	0.95 0.058	5.0 0.75	mg/L mg/L	25 25	B231026-013 B231026-013		10/26/2023 17:47 10/26/2023 17:47
Sulfate	12.1	55	1.7	5.0	mg/L	25	B231026-013		10/26/2023 17:47
SURROGATES				2.0	9.1	20	2201020 010		-0,20,2020 11.11
Dichloroacetate (%)		100			%	25	B231026-013		10/26/2023 17:47
Diemorouceune (/0)		100			70	23	2231020 013		10/20/2023 17.77



Laboratory Services Division ELAP#1060

Samples Results for C022075

Sample ID: C022075-01

Site: **GW BAYSIDE** East Bay Ground Water Injection/Extraction Project Bayside Groundwater Locator: BAY1-MW7 S APN 411-0078-001 Via Buena Vista; formerly BAY-MW-SL PARK

Client: Bayside Ground Water Project

Sample Type: **GRAB**

DWilliams Date Collected: Oct 25 2023 14:32 **Sample Collector: Date Received:** Oct 26 2023 09:00 Sample Receiver: C Soohoo

Sample Comments:

Analyte	Qualifier	Result	MDL	RL	Units	DF	Batch	Prepared	Analyzed
Metals by EPA 200.7									
TARGET ANALYTES									
Calcium		37900	4.70	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Iron	E1	16.2	6.52	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Potassium		3220	73.5	208	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Magnesium		9990	1.01	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Manganese		226	0.12	16.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Sodium		126000	1.61	41.6	ug/L	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
INTERNAL STANDARD									
Yttrium (%)		97			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Yttrium Radial (%)		102			%	1.0	B231114-002	11/01/2023 10:29	11/15/2023 13:07
Haloacetic Acids, GC/EC	D by EPA 5	552.2							
TARGET ANALYTES									
Dibromoacetic Acid	U	0.27	0.27	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
Dichloroacetic Acid	U	0.23	0.23	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
Monobromoacetic Acid	U	0.16	0.16	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
Monochloroacetic Acid	U	0.45	0.45	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
Trichloroacetic Acid	U	0.30	0.30	1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
HAA(5), calculated		0.00		1.0	ug/L	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
	Comments: I	HAA (5) calc	ulation uses	a zero for an	y individual HAA	result less	than the Californ	ia DLR for that HAA	
INTERNAL STANDARD									
1,2,3-Trichloropropane (%)		102			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35
SURROGATES									
2,3-Dibromopropionic Acid (%)		102			%	1.0	B231101-021	11/01/2023 09:39	11/02/2023 04:35

Oxygen 18 Isotope Analysis

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES

See subcontract report

Trihalomethanes, Total, GC/MS by EPA 8260B

Subcontract data from: Alpha Analytical Laboratory ELAP#: Refer to external lab report

TARGET ANALYTES								
Bromodichloromethane	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:33
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		
Bromoform	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:33
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		
Chloroform	U	0.10	0.10	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:33
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		
Dibromochloromethane	U	0.20	0.20	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:33
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		
Total Trihalomethanes, calculated	U	0.30	0.30	1.0	ug/L	1	10/31/2023 07:00	10/31/2023 15:33
	Comments: S	UB: Analyte	included in	analysis bu	it not detected at or a	bove MDL		

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC	RPD	RPD Limits
Total Dissolved Solids DU	JP by SM 2	540 C-20	11, B231	025-012			2100411				
B231025-012 analyzed on	10/26/2023	3 09:25; S	ource = (C 022073-0 3	l						
Total Dissolved Solids		400	10	55	mg/L		410			0.7	10
Total Dissolved Solids LC	CS by SM 2	540 C-201	11, B231	025-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids		370	20	110	mg/L	370		99	85 - 115		
Total Dissolved Solids MI	B by SM 25	40 C-201	1, B2310	25-012							
B231025-012 analyzed on	10/26/2023	3 09:25									
Total Dissolved Solids	U	10	10	55	mg/L						
Ammonia as N DUP by S	M 4500-NF	I3 C-2011	, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C021337-09	9						
Ammonia as N		39	1.4	7.5	mg/L		38			1.2	10
Ammonia as N LCS by Si	M 4500-NH	I3 C-2011	, B23102	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N		12	0.29	1.5	mg/L	12		97	85 - 115		
Ammonia as N LOQ by S	M 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	E1	1.5	0.29	1.5	mg/L	1.5		99	50 - 150		
Ammonia as N MB by SM	1 4500-NH	3 C-2011,	B231020	6-007							
B231026-007 analyzed on	10/26/2023	3 12:14									
Ammonia as N	U	0.29	0.29	1.5	mg/L						
Ammonia as N MS by SM	I 4500-NH3	3 C-2011,	B231026	5-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C021337-0	3						
Ammonia as N		110	1.4	7.5	mg/L	60	50	99	80 - 120		
Ammonia as N MSD by S	M 4500-NI	H3 C-201	1, B2310	26-007							
B231026-007 analyzed on	10/26/2023	3 12:14; S	ource = (C021337-0	3						
Ammonia as N		110	1.4	7.5	mg/L	60	50	98	80 - 120	0.0	15
Alkalinity DUP by SM 23	20 B-2011,	B231027	-007								
B231027-007 analyzed on	10/27/2023	3 10:31; S	ource = (C022072-0	1						
Alkalinity: Total as CaCO3		200	5	30	mg/L		200			0.3	20

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Alkalinity DUP by SM 23	320 B-2011,	B231027	'-007			-					
B231027-007 analyzed on	n 10/27/2023	3 11:28; S	Source =	C021104-0	6						
Alkalinity: Total as CaCO3		6700	62	380	mg/L		6700			0.3	20
Alkalinity LCS by SM 23	320 B-2011,	B231027	-007								
B231027-007 analyzed on	n 10/27/2023	3 09:25									
Alkalinity: Total as CaCO3		400	5	30	mg/L	400		99	85 - 115		
Alkalinity MB by SM 232	20 B-2011 , l	B231027-	007								
B231027-007 analyzed on	n 10/27/2023	3 09:14									
Alkalinity: Total as CaCO3	U	5	5	30	mg/L						
Alkalinity MS by SM 232	20 B-2011, I	B231027-0	007								
B231027-007 analyzed on	n 10/27/2023	3 10:36; S	Source =	C022072-0	1						
Alkalinity: Total as CaCO3		600	5	30	mg/L	400	200	99	80 - 120		
Alkalinity MS by SM 232	20 B-2011, I	B231027-0	007								
B231027-007 analyzed on	n 10/27/2023	3 11:33; S	Source =	C021104-0	6						
Alkalinity: Total as CaCO3		12000	62	380	mg/L	5000	6700	96	80 - 120		
Alkalinity QCS by SM 23	320 B-2011,	B231027	-007								
B231027-007 analyzed on	n 10/27/2023	3 10:12									
Alkalinity: Total as CaCO3		68	5	30	mg/L	66		104	91 - 111		
Hardness as CaCO3 DUI	P by SM 23	40 C-201 1	1, B2311	06-008							
B231106-008 analyzed on	11/06/2023	3 09:00; S	Source =	C020700-0	1						
Hardness as CaCO3		15	4	7	mg/L		16			5.1	10
Hardness as CaCO3 DUI	P by SM 23	40 C-201 1	1, B2311	06-008							
B231106-008 analyzed on	n 11/06/2023	3 09:00; S	ource =	C020854-0	3						
Hardness as CaCO3		11	4	7	mg/L		12			7.1	10
Hardness as CaCO3 LCS	S by SM 234	40 C-2011	l, B23110	06-008							
B231106-008 analyzed on	n 11/06/2023	3 09:00									
Hardness as CaCO3		110	4	7	mg/L	100		106	85 - 115		
Hardness as CaCO3 LOC	Q by SM 23	40 C-201	1, B2311	06-008							
B231106-008 analyzed on	•										
Hardness as CaCO3		7	4	7	mg/L	7.0		103	50 - 150		

Hardness as CaCO3 MB by SM 2340 C-2011, B231106-008 B231106-008 analyzed on 11/06/2023 09:00 Hardness as CaCO3 U 4 4 7 mg/L Hardness as CaCO3 MS by SM 2340 C-2011, B231106-008	spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
B231106-008 analyzed on 11/06/2023 09:00 Hardness as CaCO3 U 4 4 7 mg/L Hardness as CaCO3 MS by SM 2340 C-2011, B231106-008	100	16				
Hardness as CaCO3 MS by SM 2340 C-2011, B231106-008	100	16				
Hardness as CaCO3 MS by SM 2340 C-2011, B231106-008	100	16				
·	100	16				
P221106 008 analyzed on 11/06/2022 00:00. Course - C020700 01	100	16				
B231106-008 analyzed on 11/06/2023 09:00; Source = C020700-01	100	16				
Hardness as CaCO3 120 4 7 mg/L			102	85 - 115		
Hardness as CaCO3 MS by SM 2340 C-2011, B231106-008						
B231106-008 analyzed on 11/06/2023 09:00; Source = C020854-03						
Hardness as CaCO3 120 4 7 mg/L	100	12	104	85 - 115		
Hardness as CaCO3 QCS by SM 2340 C-2011, B231106-008						
B231106-008 analyzed on 11/06/2023 09:00						
Hardness as CaCO3 160 4 7 mg/L	150		104	91 - 107		
Anions LCS by EPA 300.1, B231026-013						
B231026-013 analyzed on 10/26/2023 16:31						
· · · · · · · · · · · · · · · · · · ·	1.0		97	85 - 115		
	0.05 1.0		89 87	85 - 115 85 - 115		
Sulfate 0.87 0.079 0.2 mg/L Dichloroacetate (%) 99 % %	1.0		87	65 - 115		
Anions LOQ by EPA 300.1, B231026-013						
B231026-013 analyzed on 10/26/2023 15:53						
Chloride 0.22 0.061 0.2 mg/L	0.20		109	50 - 150		
	0.03		95	50 - 150		
Sulfate E1 0.20 0.079 0.2 mg/L 0.0 Dichloroacetate (%) 103 % %	0.20		99	50 - 150		
Anions MB by EPA 300.1, B231026-013						
B231026-013 analyzed on 10/26/2023 14:38						
Chloride U 0.061 0.061 0.2 mg/L						
Nitrate as N U 0.0035 0.0035 0.03 mg/L						
Sulfate U 0.079 0.079 0.2 mg/L Dichloroacetate (%) 99 %						
Anions DUP by EPA 300.1, B231026-013						
B231026-013 analyzed on 10/26/2023 19:40; Source = C021096-13						
Nitrate as N E1 0.018 0.0035 0.030 mg/L		0.018			1.0	10
Dichloroacetate (%) 103 %		103				
Anions MS by EPA 300.1, B231026-013						
B231026-013 analyzed on 10/26/2023 20:18; Source = C021096-13						
Nitrate as N 0.061 0.0035 0.030 mg/L 0	0.05	0.018	86	75 - 125		



Calcium

Iron

Quality Control for C022075

Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetate (%)		102			%		103				
Metals LCS by EPA 200.	7, B231114	-002									
B231114-002 analyzed or	n 11/15/2023	3 12:18; E	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8120	4.90	43.4	ug/L	8300		97	85 - 115		
Iron		1110	6.80	43.4	ug/L	1100		100	85 - 115		
Potassium		9290	76.6	217	ug/L	8300		112	85 - 115		
Magnesium		8200	1.06	43.4	ug/L	8300		98	85 - 115		
Manganese		220	0.12	17.4	ug/L	220		99	85 - 115		
Sodium		8760	1.68	43.4	ug/L	8300		105	85 - 115		
Yttrium (%)		100			%						
Yttrium Radial (%)		100			%						
Metals LCSD by EPA 20	0.7, B23111	14-002									
B231114-002 analyzed or	n 11/15/2023	3 12:22; E	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium		8040	4.90	43.4	ug/L	8300		96	85 - 115	1.0	10
Iron		1100	6.80	43.4	ug/L	1100		99	85 - 115	0.9	10
Potassium		9200	76.6	217	ug/L	8300		110	85 - 115	1.0	10
Magnesium		8120	1.06	43.4	ug/L	8300		97	85 - 115	1.0	10
Manganese		218	0.12	17.4	ug/L	220		98	85 - 115	1.0	10
Sodium		8660	1.68	43.4	ug/L	8300		104	85 - 115	1.1	10
Yttrium (%)		101			%						
Yttrium Radial (%)		100			%						
Metals LOQ by EPA 200	.7, B231114	1-002									
B231114-002 analyzed or	n 11/15/2023	3 12:05; E	3231101-	014 prepa	red on 11/01	/2023 10:2	9				
Calcium	E1	38.9	4.75	42.0	ug/L	40		97	50 - 150		
Iron	E1	39.5	6.58	42.0	ug/L	40		99	50 - 150		
Potassium		230	74.2	210	ug/L	200		115	50 - 150		
Magnesium	E1	38.8	1.02	42.0	ug/L	40		97	50 - 150		
Manganese	E1	16.0	0.12	16.8	ug/L	16		100	50 - 150		
Sodium	E1	35.6	1.63	42.0	ug/L	40		89	50 - 150		
Yttrium (%)		102			%						
		102 103			% %						
Yttrium (%) Yttrium Radial (%)	7, B231114-	103									
Yttrium (%)	,	103 002	3231101-	014 prepa	%	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or	,	103 002	3231101- 4.70	014 prepa 41.6	%	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or	n 11/15/2023	103 002 3 11:59; F			% red on 11/01	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium	11/15/202 3	103 002 3 11:59; E	4.70	41.6	% . red on 11/01 ug/L ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium	U U U	103 002 3 11:59; F 4.70 6.52	4.70 6.52	41.6 41.6	% . red on 11/01 ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium	11/15/2023 U U U U	103 002 3 11:59; F 4.70 6.52 73.5	4.70 6.52 73.5	41.6 41.6 208	% red on 11/01, ug/L ug/L ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium Magnesium Manganese	U U U U U U	103 002 3 11:59; F 4.70 6.52 73.5 1.01	4.70 6.52 73.5 1.01	41.6 41.6 208 41.6	% red on 11/01, ug/L ug/L ug/L ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium Magnesium	U U U U U U U U U	103 002 3 11:59; E 4.70 6.52 73.5 1.01 0.12	4.70 6.52 73.5 1.01 0.12	41.6 41.6 208 41.6 16.6	% red on 11/01, ug/L ug/L ug/L ug/L ug/L ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium Magnesium Manganese Sodium	U U U U U U U U U	103 002 3 11:59; F 4.70 6.52 73.5 1.01 0.12 1.61	4.70 6.52 73.5 1.01 0.12	41.6 41.6 208 41.6 16.6	% red on 11/01 ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	/2023 10:2	9				
Yttrium (%) Yttrium Radial (%) Metals MB by EPA 200.7 B231114-002 analyzed or Calcium Iron Potassium Magnesium Manganese Sodium Yttrium (%)	U U U U U U U U U	103 002 3 11:59; F 4.70 6.52 73.5 1.01 0.12 1.61 102 103	4.70 6.52 73.5 1.01 0.12	41.6 41.6 208 41.6 16.6	% red on 11/01 ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	/2023 10:2	9				

196

272

1740

1740

ug/L

ug/L

8300

1100

1280000

261

102

103

1290000

1150

E1

70 - 130

70 - 130

			~			_					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Potassium	M1	473000	3060	8680	ug/L	8300	461000	140	70 - 130		
Magnesium	M1	3060000	42.3	1740	ug/L	8300	3030000	258	70 - 130		
Manganese		37600	4.99	694	ug/L	220	37300	123	70 - 130		
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	254	70 - 130		
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				
Metals MSD by EPA	200.7, B23111	4-002									

$B231114-002 \ analyzed \ on \ 11/15/2023 \ 13:26; \ B231101-014 \ prepared \ on \ 11/01/2023 \ 10:29; \ Source = C022071-01 \ prepared \ on \ 11/01/2023 \ prepared \ on \ 11/01/2023 \$

Calcium	M1	1280000	196	1740	ug/L	8300	1280000	23	70 - 130	0.5	20
					_						
Iron	E1	1140	272	1740	ug/L	1100	261	103	70 - 130	0.3	20
Potassium	M1	473000	3060	8680	ug/L	8300	461000	142	70 - 130	0.0	20
Magnesium		3040000	42.3	1740	ug/L	8300	3030000	81	70 - 130	0.5	20
Manganese	M1	37400	4.99	694	ug/L	220	37300	20	70 - 130	0.6	20
Sodium	M1	21100000	67.2	1740	ug/L	8300	21100000	169	70 - 130	0.0	20
Yttrium (%)		94			%		94				
Yttrium Radial (%)		106			%		106				

Haloacetic Acids, GC/ECD LCS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:05; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	16	0.27	1	ug/L	15	106	70 - 130
Dichloroacetic Acid	16	0.23	1	ug/L	15	104	70 - 130
Monobromoacetic Acid	16	0.16	1	ug/L	15	104	70 - 130
Monochloroacetic Acid	15	0.45	1	ug/L	15	102	70 - 130
Trichloroacetic Acid	16	0.3	1	ug/L	15	107	70 - 130
1,2,3-Trichloropropane (%)	97			%			
2,3-Dibromopropionic Acid (%)	109			%			

Haloacetic Acids, GC/ECD LOQ by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:40; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid		1.1	0.27	1	ug/L	1.0	107	50 - 150
Dichloroacetic Acid	E1	0.99	0.23	1	ug/L	1.0	99	50 - 150
Monobromoacetic Acid		1.0	0.16	1	ug/L	1.0	105	50 - 150
Monochloroacetic Acid		1.1	0.45	1	ug/L	1.0	108	50 - 150
Trichloroacetic Acid	E1	0.98	0.3	1	ug/L	1.0	98	50 - 150
1,2,3-Trichloropropane (%)		104			%			
2,3-Dibromopropionic Acid (%)		107			%			

Haloacetic Acids, GC/ECD MB by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 20:15; B231101-011 prepared on 11/01/2023 09:39

Dibromoacetic Acid	U	0.27	0.27	1	ug/L
Dichloroacetic Acid	U	0.23	0.23	1	ug/L
Monobromoacetic Acid	U	0.16	0.16	1	ug/L
Monochloroacetic Acid	U	0.45	0.45	1	ug/L
Trichloroacetic Acid	U	0.3	0.3	1	ug/L
1,2,3-Trichloropropane (%)		100			%
2,3-Dibromopropionic Acid (%	6)	107			%

Haloacetic Acids, GC/ECD MS by EPA 552.2, B231101-021

B231101-021 analyzed on 11/01/2023 21:55; B231101-011 prepared on 11/01/2023 09:39; Source = C020680-01

Dibromoacetic Acid	16	0.27	1.0	ug/L	15	0.27	104	70 - 13
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1,2,3-Trichloropropane (%)

2,3-Dibromopropionic Acid (%)

East Bay Municipal Utility District 2020 Wake Ave, Oakland, CA 94623 T: 510-287-1432

Ouality Control for C022075

			Qu	ality Cont	rol for C02207	/5					
Analyte	Qualifier	Result	MDL	RL	Units	Spike Level	Source Result	% REC	% REC Limits	RPD	RPD Limits
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	103	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		15	0.45	1.0	ug/L	15	0.45	103	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	105	70 - 130		
1,2,3-Trichloropropane (%)		96			%		99				
2,3-Dibromopropionic Acid (%)		107			%		108				
Haloacetic Acids, GC/EC	CD MS by E	EPA 552.2	2, B2311 0	1-021							
B231101-021 analyzed or	n 11/02/2023	3 02:55; I	3231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	107	70 - 130		
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	104	70 - 130		
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	104	70 - 130		
Monochloroacetic Acid		16	0.45	1.0	ug/L	15	0.45	110	70 - 130		
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	110	70 - 130		
1,2,3-Trichloropropane (%)		100			%		100				
2,3-Dibromopropionic Acid (%)		112			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	2.2, B231	101-021							
B231101-021 analyzed or	n 11/01/202	3 22:20; I	3231101-	011 prepa	red on 11/01	/2023 09:3	9; Sourc	e = C020	680-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	106	70 - 130	1.1	20
Dichloroacetic Acid		16	0.23	1.0	ug/L	15	0.23	105	70 - 130	1.5	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	105	70 - 130	1.0	20
Monochloroacetic Acid		14	0.45	1.0	ug/L	15	0.45	92	70 - 130	10.7	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	106	70 - 130	0.8	20
1,2,3-Trichloropropane (%)		92			%		99				
2,3-Dibromopropionic Acid (%)		110			%		108				
Haloacetic Acids, GC/EC	CD MSD by	EPA 552	.2, B231	101-021							
B231101-021 analyzed or	n 11/02/2023	3 03:20; I	3231101-	011 prepa	ared on 11/01	/2023 09:3	9; Sourc	e = C022	072-01		
Dibromoacetic Acid		16	0.27	1.0	ug/L	15	0.27	104	70 - 130	3.1	20
Dichloroacetic Acid		15	0.23	1.0	ug/L	15	0.23	102	70 - 130	1.7	20
Monobromoacetic Acid		16	0.16	1.0	ug/L	15	0.16	106	70 - 130	2.1	20
Monochloroacetic Acid		17	0.45	1.0	ug/L	15	0.45	111	70 - 130	0.9	20
Trichloroacetic Acid		16	0.30	1.0	ug/L	15	0.30	104	70 - 130	5.3	20
1110111010000000 FICIG		10	0.50	1.0	u _b , L	1.5	0.50	101	, 0 150	5.5	20

%

100

108

99

109

Laboratory Services Division ELAP#1060

Qualifiers and Definitions

E1	Concentration estimated. Analyte detected below reporting limit (RL) but above MDL. For SIP, E1=DNQ, Estimated
	Concentration

- M1 The MS recovery was outside acceptance limits due to possible matrix interference. The analytical batch meets accuracy criteria for reporting.
- U Analyte not detected.

Qualifiers for subcontract work – see parameter comment for description Corrections for dilutions for matrix effects applied to the MDL and RL.

Laboratory Services Division ELAP#1060

QC Types and Definitions

DUP Duplicate Sample

LCS Laboratory Control Sample

LCSD Laboratory Control Sample Duplicate

LOQ Limit of Quantitation

MB Method Blank
MS Matrix Spike

MSD Matrix Spike Duplicate

QCS Quality Control Sample

BMUD	COC #: C022075	Project Title: Bayside Ground TAT: Standard	Water Project	Client PM Lab PM: I Job #:	: David Behn (risti Schwab	ken		Expect Date: 10/26/2023 Sampled By: 0					
Date	Time	Site/Locator			Туре		Tests Required						
11/15/23	1/137	GW BAYSIDE - BAY1-MW7	C022075-01	GRAB	Aqueous			+SAMP KIT					
10/62/22	1.17%		/	-		-01A	PLSTL	EPA 200.7-W (Ca,Fe,K,I	Mg,Mn,Na)				
								1	-01B	PLSTL	TDS		
							-01C	PLSTM	Hardness				
						-01D	PLSTS	EPA 300.1 (CI,NO3,SO4)				
		1					-01F	PSQLT	Ammonia: Titr-AQ				
- 1							-01G	A125N	EPA 552.2				
			1			-01H	A125N	EPA 552.2					
							-011	PLSTM	Oxygen 18				
								-01J	VOC4T	EPA 8260B THM			
		1						-01K	VOC4T	EPA 8260B			
							-01L	VOC4T	EPA 8260B	EPA 8260B			
							-01M	C500Z	Alkalinity: Species				
								Field Test Parameters:					
								CL2R =	4	mg/L			
								Depth =	30	Feet			
								pH =	7.70	pH Units			
				0				Temperature =	121.9	C			
ield Commen	ts:								100				
leld Instruction	ns:					-							

BMUD	COC #: C022075	Project Title: Bayside Groun TAT: Standard	nd Water Project		David Behn Iristi Schwab			Expect Date: 10/26/2023 Sampled By: Samples transported on ice
Date	Time	Site/Locator	Sample ID	Туре	Matrix	ID	Туре	Tests Required
			Total	Containers	for: C02207:	5 12	/	
nquished by eived by 11/2/20 nquished by	23 D	Signature	Print Name	nt i	Time 454 pm	10/231	ate 12023	Container Legend: A125N = Glass, NM, septa top, 12.5 mg NH4Cl, Amber, 125 mL C5002 = Glass, NM, septa top, Clear, 500 mL PLSTL = Plastic, WM, 1000 mL
ceived by: linquished by ceived by:	r. On		Siotto		0900	10/201	(182)	PLSTM = Plastic, WM, 500 mL PLSTS = Plastic, NM, 125 mL PSQLT = Plastic, square, large, 50 mg Na2S2O3, 1000 mL VOC4T = Glass, clear, septa top, 3.5 mg Na2S2O3, Clear, 40 ml.
	J.K.	/	3001100			10/ 00/	(00)	VOC4T = Glass, clear, septa top, 3.5 mg Na2S2O3, Clear, 40 ml.
								Page 2 of 2 for C0220

B	COC#: C022075	Project Title: Bayside Ground TAT: Standard	Water Project	Client PM: David Behnken Lab PM: Kristi Schwab				Received Date/Time: 10/26/2023 09:00 Received By: Cynthia Soohoo										
EBMUD	00,450	Try L diamadu		Job #:				Sampled By: DWilliams Due Date: 11/28/2023										
Date	Time	Site/Locator	Sample ID	Type	Matrix	ID	Type	Tests Required										
10/25/2023	14:32	GW BAYSIDE - BAY1-MW7	C022075-01	GRAB	Aqueous		4-5	+SAMP KIT										
								-	- E	-01A	PLSTL	1						
								-01B	PLSTL	TDS								
			1						-01C	PLSTM	Hardness							
			1			-01D	PLSTS	EPA 300.1 (CI,NO3,SC	04)									
			1			1	1 1		1	-01F	PSQLT	Ammonia: Titr-AQ						
			1				-01G	A125N	EPA 552.2									
			1		-01H	A125N	EPA 552.2											
			l.					-011	PLSTM	Oxygen 18								
									-01J	VOC4T	EPA 8260B THM							
						-01K	VOC4T	EPA 8260B										
										-01L	VOC4T	EPA 8260B						
								-01M	C500Z	Alkalinity: Species								
1 1								Field Test Parameters	4									
5 1/1										CL2R =	0.0	mg/L						
											Depth =	30	Feet					
								pH =	7.70	pH Units								
								Temperature =	21.9	C								
Field Commen	fe-																	
ield Instructio	1,01			_					_									
Sample Extern																		
sample extern	ar comments	li)																

Page 1 of 4 for C022075



C022075 Sample Acceptance Report Received: 10/26/2023 09:00 Received By: Cynthia Soohoo

Chain-of-Custody		Comments
Chilled During Transport?	Yes	
Missing or incorrect information	Yes	Relinquish date needs to be verified Sampler signed off on the Received by line
Mode of receipt	Drop-off Room	
Shipping Slip?	No	
Containers		Comments
BACT (120 mL) lot number	Add lot no	
BACTL (290 mL) lot number	Add lot no	
Container and label are legible and match COC?	Yes	
Correct container used with field preservation?	Yes	
Received within holding times?	Yes	
Sufficient volume, undamaged, or uncontaminated?	Yes	
Sample: C022075-01		Comments
Bubbles in ZHS/VOA containers	No	
Intent to chill		
Cooler: 1		Comments
Corrected Temp (" C)	4.9	
IR Thermometer Number	IR#13	
Representative temperature taken from	-0.1	
Uncorrected Temp (* C)	4.5	
Visible ice formed inside sample container?	No	
Acceptance		Comments
PM notified?	N/A	

Page 2 of 4 for C022075



Laboratory Services Division ELAP#1060



C022075 Sample Acceptance Report Received: 10/26/2023 09:00 Received By: Cynthia Soohoo

Samples meet acceptance requirements? Yes

Page 3 of 4 for C022075



Sample Acceptance Preservation Report COC: C022075 Report Generated: 10/26/2023 09:09

Inventory Item	Inventory ID	Open Date	Prep Date	Expiration Date
Ammonium Hydroxide	ST221116-012	11/16/2022	N/A	11/16/2023
Ammonium Sulfate Buffer (ASB-07)	ST230515-003	N/A	05/15/2023	11/15/2023
Ethylenediamine 12.5 mg/mL (EDA-42)	ST230927-005	N/A	09/27/2023	10/27/2023
Hydrochloric Acid 1+1 (HCI-04)	ST230104-013	N/A	01/04/2023	01/04/2024
NaOH 15 mL 1.1 LDPE dropper	ST230127-020	N/A	N/A	07/31/2024
Nitric Acid Trace Metals Grade	ST221118-013	01/03/2023	N/A	06/30/2024
pH Strip 0-14	ST221220-011	05/23/2023	N/A	07/31/2027
pH Strip 0-6	ST230131-001	01/31/2023	N/A	05/31/2026
pH Strip 6-10	ST230131-026	02/03/2023	N/A	06/30/2026
pH Strip 7-14	ST230126-011	06/27/2023	N/A	10/31/2026
Sulfuric Acid ACS Grade	ST230515-015	06/20/2023	N/A	05/15/2028

	Container Name	Tests	Preservation Requirement	Result	Initial/ Date
C022075-01A	PLSTL	EPA 200.7-W	HNO3 to pH <2. Preservation Time = 1)910	Own	a rolze han
C022075-01C	PLSTM	Hardness	HNO3 to pH <2	1	1
C022075-01F	PSQLT	Ammonia: Titr-AQ	Check Cl2R = 0 [PSQLT], then H2SO4 to pH <2		
C022075-01G	A125N	EPA 552.2	Check Container		1 15
C022075-01H	A125N	EPA 552.2-FR	Check Container		
C022075-01K	VOC4T	EPA 8260B-FR	Check Container		1
C022075-01L	VOC4T	EPA 8260B-FR	Check Container	12	1 1

Page 4 of 4 for C022075





Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

27 November 2023

EBMUD

Attn: Jack Lim PO Box 24055 Oakland, CA 94607

RE: Bayside Ground Water Project WDR

Work Order: 23J4201

Enclosed are the results of analyses for samples received by the laboratory on 10/26/23 22:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips Project Manager





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Reported:

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim

PO Box 24055 Project: Bayside Ground Water Project WDR Oakland CA, 94607 Project Number: C022075 11/27/23 16:27

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728 Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922

North Bay: 737 Southpoint Blvd Unit D | Petaluma. CA 94954 | 707-769-3128 | ELAP# 2303 San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055 Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C022075-01	23J4201-01	Water	10/25/23 14:32	10/26/23 22:15

This represents an amended copy of the original report. MDL values reported.

This represents a second amended copy of the original report. Subcontracted results added. Complete report.

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.

Page 1 of 4





Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

EBMUD Project Manager: Jack Lim PO Box 24055 Project: Bayside Ground Water Project WDR Oakland CA, 94607

Reported: Project Number: C022075 11/27/23 16:27

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	MDI.	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	ELAP# Note	ðS
C022075-01 (23J4201-01) Water	Sampled: 10/2	5/23 14:32	Received	1: 10/26	23 22:15							
Chloroform	ND	0.10	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	U
Bromodichloromethane	ND	0.30	1,0	ug/L	Ĭ-	AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	U
Dibromochloromethane	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	U
Bromoform	ND	0.20	1.0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	U
Trihalomethanes (total)	ND	0.30	1,0	ug/L	1	AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	U
Surrogate: Dibromofluoromethane		108	% 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	
Surrogate: Toluene-d8		103	% 7	0-130		4.135161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MVA	2303	
Surrogate: Bromofluorobenzene		99.0	%. 7	0-130		AJ35161	10/31/23 07:00	10/31/23 15:33	EPA 8260B	MYA	2303	

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Lalpha

Alpha Analytical Laboratories, Inc.

email: clientservices@alpha-labs.com

Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR:
 Reported:

 Oakland CA, 94607
 Project Number:
 C022075
 11/27/23 16:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control

			Reporting		Spike	Source		%REC		RPD	
Analyte	Result	MDL	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (AJ35161-BLK1)					Prepared &	Analyzed	10/30/23				
i,1-Dichloroethene	ND	0.50	1.0	ug/L							I
Benzene	ND	0.50	1.0	ug/L							τ
Trichloroethene	ND	0.50	1.0	ug/L							Ţ
Toluene	ND	0.50	1.0	ug/L							I
Chlorobenzene	ND	0.50	1.0	ug/L							1
Surrogate: Dibromofluoromethane	21.4			ug/L	20.0		107	70-130			
Surrogate: Toluene-d8	20.3			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	18.9			ug/L	20.0		94.5	70-130			
Matrix Spike (AJ35161-MS1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	23.4	0.50	1.0	ug/L	25.0	ND	93.7	70-130			
Benzene	23.9	0.50	1.0	ug/L	25.0	ND	95.7	70-130			
Trichloroethene	22.3	0.50	1.0	ug/L	25.0	ND	89.1	70-130			
Toluene	24.7	0.50	1.0	ug/L	25.0	ND	98.8	70-130			
Chlorobenzene	24.8	0.50	1.0	ug/L	25.0	ND	99.0	70-130			
Surrogate: Dibromofluoromethane	19.8			ug/L	20.0		99.1	70-130			
Surrogate: Toluene-d8	20.8			ug/L	20.0		104	70-130			
Surrogate: Bromofluorobenzene	18.7			ug/L	20.0		93.3	70-130			
Matrix Spike Dup (AJ35161-MSD1)		Source: 23	J4044-03		Prepared &	Analyzed:	10/30/23				
1,1-Dichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.2	70-130	13:0	25	
Benzene	21,3	0.50	1.0	ug/L	25.0	ND	85.2	70-130	11.5	25	
Trichloroethene	20.6	0.50	1.0	ug/L	25.0	ND	82.4	70-130	7.84	25	
Toluene	21.5	0.50	1.0	ug/L	25.0	ND-	85.8	70-130	14.0	25	
Chlorobenzene	22.3	0.50	1.0	ug/L	25.0	ND	89.0	70-130	10.6	25	
Surrogate: Dibromofluoromethane	22.4			ug/L	20.0		112	70-130			
Surrogate: Toluene-d8	20.4			ug/L	20.0		102	70-130			
Surrogate: Bromofluorobenzene	19.6			ug/L	20.0		97.8	70-130			

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 EBMUD
 Project Manager:
 Jack Lim

 PO Box 24055
 Project:
 Bayside Ground Water Project WDR
 Reported:

 Oakland CA, 94607
 Project Number:
 C022075
 11/27/23 16:27

Notes and Definitions

U Analyte included in analysis, but not detected at or above MDL

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

MDL Method detection limit

Rec Recovery

RPD Relative Percent Difference

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^{*} ELAP does not offer accreditation in this matrix for the requested analyte/method combination



	896191	Job #:	56573	IS-69368	Co. Job#:	
	23J4201-01 Alpha Analyt	ical Lab	oratories, Inc.		Co. Lab#:	
	500ml Plasti 23J4201	c Bottle				
Sampling Point:	C022075-01			1200000	2112	salessaee -
Date Sampled:	10/25/2023	14:32	Date Received:	11/06/2023	Date Reported:	11/20/2023
δD of water	-		49.5 ‰ relative	to VSMOW		
δ ¹⁸ O of water			-7,36 ‰ relative	to VSMOW		
Tritium content of v	vater	1	na			
δ ¹³ C of DIC			na			
¹⁴ C content of DIC			na			
δ ¹⁵ N of nitrate	********	1	na			
δ ¹⁸ O of nitrate			na			
δ ³⁴ S of sulfate		1	na			
δ^{18} O of sulfate	-		na			
Vacuum Distilled?	*		No			
Remarks:						



East Bay Municipal Utility District Laboratory Services Subcontract Chain of Custody

Sampled By: DWilliams

Submitted Date: No word PO#: BRD-13921-AX Expiration: 12/31/2023 TAT: Standard COC#:

Lab PM: Kristi Schwab (510) 287-1696 Shipping Method: Alpha Courier

Project Title: Bayside Ground Water Project

Method Reference	D180
Tests Required	Oxygen 18
Type	DI STM
Container	-041
Matrix	Actionis
Location/PS Code	CW BAYCINE BAY1
Sample ID	C022075.01
Time	44.20
Date	4012612032

Bottle for QC (2) Bottle for QC (2) **EPA 8260B** Comments: Alpha: Isotope analysis for Oxygen-18 and Hydrogen-2 (subcontracted). THMs by EPA 8260 (report individual THM results and total sum). **EPA 8260B THM** Oxygen 18 **EPA 8260B EPA 8260B** VOC4T VOC4T VOC4T -01K -013 -01L Total containers received: GW BAYSIDE MW7 14:32

	Signature	Print Name	Time	
Relinquished by:	Mal	CHES	1/35	~
Received by:	Man.	Michael Lopez	1:52	-
Relinquished by:	m			
Received by:	76	who willis	1900	~
Relinquished by:	3		2215	-
Received by:	3	John Willis	2215	~
				١

26/2013

6.50.03

SUBCONTRACT: Please notify Lab PM if TAT is delayed and/or Hold Time will be exceeded. Alpha Analytical Laboratory Kristi Schwab (kristi.lorenson@ebmud.com)

Send results and invoice to:

PO Box 24055 MS #59 Oakland, CA 94623 **EBMUD Laboratory**

(510) 287-1696

Ukiah, CA 95482 208 Mason St

707-468-0401

Page 1 of 1



Client: EBMUD Project: Bayside Ground W Date Due: 11/10/2:		l Laboratories Uk	4201 kiah to North Bay Ch	nain of Custody	
Project: Bayside Ground W					
Date Due: 11/10/2	Vater Project WDR	Client Code: Project Number:	RP_EBMUD C022075	Bid: PO #:	1_Master Price Sheet
Received By: John Wi	3 15:00 (10 day TAT) illis . Kooyers		ceived: 10/26/23 22:15 gged 10/30/23 10:59		
amples Received at:	deg C	All containe	ers received and intact:	YES N	0
Analysis	Department	Expires	s Comments		
J4201-01 C022075-01 [Wa NB 8260 THMs	NB GCMS	23 14:32 11/08/23 2	23:59		
Containers Supplied: VOA Vial - Na2S2O3 (B)					
VOA Vial - Na2S2O3 (C)					
VOA Vial - Na2S2O3 (D)					
	> 10/30/	23		> 2	16/31/23
Relinquished By	Date	Time	Received By	15	Date Time
,	Date		Received By		Date Time
Relinquished By	Dan		Charles And C		