

February 25, 2014

Ms. Mary Rose Casa
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, 2013 Annual Report, Order No. R2-2007-0038

Dear Ms. Casa:

In accordance with the Waste Discharge Requirements of Order No. R2-2007-0038, this submittal is the 2013 annual self-monitoring report for East Bay Municipal Utility District's (EBMUD's) Bayside Groundwater Project.

No injection or extraction events took place in 2013 (see Tables 1 and 2). Table 3 summarizes the cumulative injection and extraction volume data since 2009.

The Self-Monitoring and Reporting Program (SMP) of Order No. R2-2007-0038 requires EBMUD to implement a phased approach for groundwater quality monitoring. The SMP requires EBMUD to begin groundwater level and quality monitoring three months prior to initiating operation and continue for one additional year after operation ceases. Table 3 of the SMP tabulates groundwater quality monitoring well groups for phased monitoring. Group 2 monitoring, consisting of the Bayside Well, MW-2s, MW-2D¹, MW-4, and MW-6, was implemented in 2013.

On December 18, 2013, annual groundwater quality sampling was conducted and samples were analyzed in accordance with Table 4 of the SMP. EBMUD retained Environmental Sampling Services (ESS) to collect water quality samples at the Bayside Well, MW-2S, MW-2I, MW-4, and MW-6. A Waterra Hydrolift II with dedicated lengths of tubing was used to purge and sample MW-2S and MW-2I. A centrifugal pump with a dedicated length of tubing was used to purge and sample MW-4, while a centrifugal pump and a disposable bailer were used to purge and sample MW-6. The Bayside Well was purged using a dedicated downhole turbine pump. The sample was collected from a spigot at the wellhead. Purge water discharges were disposed of on permeable ground adjacent to MW-2S, MW-2I, MW-4, and MW-6. The Bayside Well's purge water was pumped to an onsite holding tank and eventually discharged to Oro Loma Sanitary District under a permit. No surface water discharges occurred.

Sampling was completed according to the following procedure:

1. Measure static water level within each well and calculate the three-well volume of the well required for purging as per USEPA groundwater sampling protocol.
2. Purge the well.

¹ "MW-2D" is actually "MW-2I".

3. Field water quality parameters² were measured periodically during purging.
4. Residual chlorine was measured immediately prior to sample collection.
5. Collect samples in sample containers with appropriate preservatives as per relevant USEPA sampling protocols for individual constituents.
6. Transport samples to EBMUD's state certified laboratory in a cooler for further analyses, under chain of custody.

Table 4 contains construction details for all available wells in the groundwater monitoring system³. Table 5 contains groundwater elevation and depth to groundwater data. Table 6 summarizes general groundwater quality data; Table 7 summarizes sampling results for standard minerals; Table 8 summarizes haloacetic acids data; and Table 9 summarizes results for trihalomethanes. Tables 10 and 11 summarize vertical gradient calculations. Appendix A contains the original laboratory report including the analytical methods used and associated method detection limits and minimum levels of quantitation, and the chain of custody record.

Figure 1 shows the groundwater level monitoring network and Figure 2 shows the groundwater quality monitoring network. Pressure transducers were installed in all of the wells listed in Table 4, in addition to the Bayside Well. These transducers measure water level and temperature at 30-minute intervals. Figure 3 presents the groundwater level contour map for December 18, 2013. Figures 4 to 11 present the 2013 groundwater level trends for the available monitoring wells.

A chlorine residual of 0.07 mg/L was measured at MW-6 on December 18, 2013. HAAs were also detected at MW-6. The maximum HAA(9) concentration of 4 µg/L was measured at MW-4. It was significantly below the permit limit of 60 µg/L. THMs were only detected at the Bayside Well with TTHMs significantly below the permit limit of 80 µg/L as well. Therefore, no exceedances of water quality limits in the order were observed.

EBMUD continued to collect Oxygen-18 data from all of the wells in the current monitoring network, except for the Bayside Well, to provide information regarding the native stable isotopic compositions of the groundwater. This information can be used to evaluate the lateral and vertical extents of the injected water in the future, if necessary. Nevertheless, in response to the detection of chlorine residual and HAAs at MW-6, EBMUD will expand its groundwater quality monitoring network to include MW-5D beginning in 2014, in addition to those already being monitored under Group 2. Group 3 monitoring cannot be fully implemented at this time because MW-7 was damaged by a PG&E contractor and has yet to be repaired as PG&E is unwilling to accept responsibility. EBMUD hopes to resolve this issue by 2015.

A groundwater elevation contour map was prepared to represent subsurface conditions on December 18. Groundwater gradient direction and magnitude were not determined due to insufficient data. Possible groundwater mounding was observed in the deep aquifer in the area of MW-1; this is consistent with some recorded past conditions. Water level information was not available for MW-4, MW-5D, MW-7, and MW-10D due to missing or failed loggers.

² Measured field WQ parameters included pH, specific conductance, turbidity, temperature, and color. Chlorine residual was also measured immediately prior to sample collection.

³ Not all of the wells in Table 4 are required to be monitored according to Order No. R2-2007-0038.

Vertical gradients were calculated for MW-5S and MW-5I for June 18 and December 18 (see Tables 10 and 11). The gradient was downward in each case⁴.

Figures 4 through 11 show the typical pattern of higher groundwater levels that prevailed during the late winter/spring relative to summer/fall in wells screened at all levels. MW-1, which is adjacent to the Bayside Well, registered a drop in water level of approximately 5.5 ft in response to the purging of the Bayside Well during the December 18, 2013 sampling event. The nearby MW-3 also experienced a drop in water level (3.3 ft) at the same time.

The probes in MW-6 and MW-10D malfunctioned during 2013. Data from these two wells would indicate artesian conditions. However, no water has been injected by EBMUD since 2011 and wells near the Bayside Well such as MW-1 and MW-3 did not register similarly significant level rises. In addition, MW-6 and MW-10D were never observed to be flowing. Similarly, loggers in MW-2I and MW-9D were only functional for part of the year, while loggers were missing entirely from MW-2S, MW-4, MW-7, MW-10S, and MW-10I. The logger in MW-5D failed to re-launch after data download in January 2013.

Since most of the wells are located in areas readily accessible to the public, EBMUD cannot completely prevent equipment theft and/or damage. Nevertheless, starting in 2014, EBMUD's hydrographers have taken over the operation and maintenance of these wells. EBMUD utilizes our hydrographer team routinely for the operation and maintenance of a number of wells located in regions adjacent to our upcountry water supply reservoirs (Pardee Reservoir and Camanche Reservoir). As a result, the hydrographers are fully equipped to respond to the Bayside wells' O&M needs and can dedicate more resources toward this effort. For example, they have already replaced some of the failed and missing loggers and are in the process of acquiring additional equipment, as many of the existing loggers are now near the end of their useful life, and replacement is called for. In any event, since no water injection has occurred since August 2011 and no extraction since 2010, it is EBMUD's opinion that the lack of water level data from some of the wells did not contribute to the loss of any critical information.

EBMUD has now conducted monitoring over a period of years. As such, the District has developed a firm understanding of the response of the basin during and following both project operation and at times when no activities are taking place. Further, EBMUD has not put the project into operation due to a combination of factors, such as lack of water to inject as a result of dry-year conditions, EBMUD, therefore, respectfully requests a reduction in groundwater level monitoring frequency from hourly to quarterly during periods of inactivity (e.g., times during which the Bayside facility is not operating in either an injection mode or an extraction mode). As a reminder, hourly groundwater level monitoring was initially instituted to allow for a better understanding of groundwater movement during times of groundwater injection and extraction. To summarize the reason(s) why EBMUD views such an alteration as justified:

- EBMUD has already collected numerous data points for that purpose over the years;
- Frequent monitoring is especially unnecessary when the facility is not operating; and
- Quarterly monitoring is already permitted for MW-4 and MW-6 by the Order.

⁴ The gradient direction indicates the potential for ground water flow in that direction. However, the actual flow direction is also governed by the permeability of the porous medium and by the geology.

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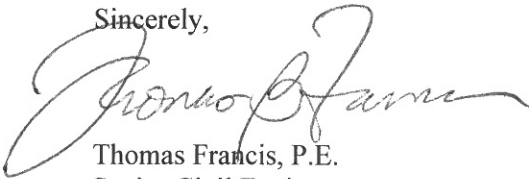
EBMUD proposes instituting the reduced water level monitoring frequency beginning in April 2014 and resuming more frequent monitoring, as described in Table 1 of the Order's SMRP, during times of injection/extraction and for three months thereafter.

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) 287-0345 or Derek Lee, Senior Environmental Health and Safety Specialist, at (510) 287-1086.

Sincerely,



Thomas Francis, P.E.
Senior Civil Engineer

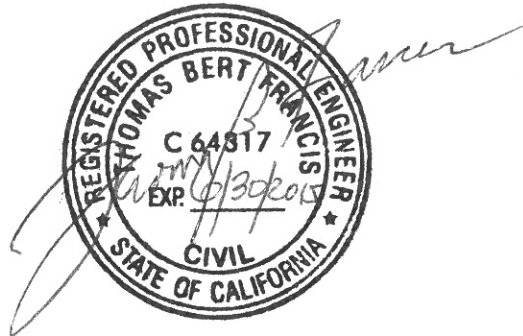


Table 1: Extraction Summary		
Date	Average Flow Rate (GPM)	Approx. Daily Volume (MGD)
Permit Limit = Annual Rate of 1 MGD		
2013	0	0
Annualized Daily Rate		0

Table 2: Injection Summary		
Date	Average Flow Rate (GPM)	Approx. Daily Volume (MGD)
Permit Limit = Annual Rate of 1 MGD		
2013	0	0
Annualized Daily Rate		0

Table 3: Cumulative Total Volume		
Year	Recovered Volume (gallons)	Injected Volume (gallons)
2009	4,545,000	445,000
2010	113,000,000	0
2011	0	28,432,401
2012	0	0
2013	0	0
Total	117,545,000	28,877,401

Table 4: Groundwater Monitoring Wells Information

Well ID	Latitude	Longitude	Address	City	Completion Date	Drilled Depth (ft bgs)	Casing Depth (ft bgs)	Depth of Perforation Begin (ft bgs)	Depth of Perforation End (ft bgs)	Casing Diameter (in)	Reference Elevation (ft amsl)	Reference Location on Well
MW-1 ¹	37° 40' 4.8"	122° 9' 25.2"	2600 Grant Ave	San Lorenzo		665	650	520	640	2	8.71	Top of steel casing
MW-2S ¹	37° 40' 4.8"	122° 9' 25.2"	2600 Grant Ave	San Lorenzo		210	60	40	60	2	9.9	Top of steel casing
MS-2 ¹	37° 40' 4.8"	122° 9' 25.2"	2600 Grant Ave	San Lorenzo		210	200	160	190	2	9.9	Top of steel casing
MW-3 ¹	37° 40' 4.8"	122° 9' 28.8"	2600 Grant Ave	San Lorenzo		665	660	520	650	2	8.12	Top of steel casing
MW-4 ¹	37° 40' 11.6"	122° 9' 28.8"	2575 Grant Ave	San Lorenzo		705	650	520	650	2	8.96	Top of steel rim
MW-5S ¹	37° 40' 34.4"	122° 9' 06.6"	2006 Via Barrett	San Lorenzo	Sep-08	460	210	200	210	2	13.88	Seat of vault lid @ e'ly edge
MW-5 ¹	37° 40' 34.4"	122° 9' 06.6"	2005 Via Barrett	San Lorenzo	Sep-08	460	325	315	325	2	13.88	Seat of vault lid @ e'ly edge
MW-5D ¹	37° 40' 34.4"	122° 9' 06.6"	2007 Via Barrett	San Lorenzo	Feb-01	1025	640	500	630	4	13.76	Top of casing @ n'ly fastener hole
MW-6 ¹	37° 40' 07"	122° 9' 04.5"	15600 Worthley Western tip of San	San Lorenzo	Nov-00	1000	655	480	650	4	9.46	Top of casing @ e'ly edge
MW-7 ¹	37° 39' 56.5"	122° 8' 44.2"	Lorenzo park	San Lorenzo	Nov-00	972	680	510	630	4	7.42	Top of casing @ n'ly edge
MW-8D	37° 43' 04"	122° 11' 50.3"	1970 Davis Street	San Leandro		910	490	420	480	2	14.76	Top of steel rim
MW-9S	37° 41' 11"	122° 6' 46"	589 E. Lewelling Ave	San Lorenzo	Jan-08	460	120	110	120	2	54.39	Seat of vault, w'ly side
MW-9 ¹	37° 41' 11"	122° 6' 46"	589 E. Lewelling Ave	San Lorenzo	Jan-08	460	210	200	210	2	54.39	Seat of vault, w'ly side
MW-9D ¹	37° 41' 11"	122° 6' 46"	589 E. Lewelling Ave	San Lorenzo	Jan-08	460	335	325	335	2	54.39	Seat of vault, w'ly side
MW-10S	37° 41' 19"	122° 9' 43"	15528 Wick Blvd	San Leandro	Sep-08	680	120	100	120	2	11.76	Seat of vault lid @ e'ly edge
MW-10 ¹	37° 41' 19"	122° 9' 43"	15528 Wick Blvd	San Leandro	Sep-08	680	360	340	360	2	11.76	Seat of vault lid @ e'ly edge
MW-10D ¹	37° 41' 19"	122° 9' 43"	15528 Wick Blvd	San Leandro	Sep-08	680	610	590	610	2	11.76	Seat of vault lid @ e'ly edge

Notes:

1 - Groundwater level monitoring required per Order No. R2-2007-0038

Table 5: Groundwater Elevation/Depth to Groundwater Data

	Groundwater Elevation ft. amsl										Depth to Groundwater ft							
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008			0.99		-4.07													
12/9/2008		-5.06		1.09	-3.75						13.74*	8.78*	8.73*	12.68*				
12/14/2009																		
12/15/2009			0.95	1.44										8.95				
12/8/2010	-7.22		1.71	0.25	-7.45				15.6					8.19				
12/21/2011		-4.16	1.12	3.59	-4.17					12.87	8.78	6.31		9.65				
1/5/2012		-3.94	1.04	6.24	-3.97					12.65	8.86	3.66		13.13				
12/13/2012		-4.49	2.38	1.72	-4.16					13.2	7.52	8.18		13.12				
12/18/2013		-4.06	1.59	0.37	-6.68					12.77	8.31	9.53		15.64				

Notes:

BW = Bayside Well

* Applicable well reference elevations are different from those in Table 4.

Table 6: General Water Quality Data

	pH		Chlorine Residual										TDS															
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	
12/8/2008			6.6	7.82																								
12/9/2008		7.96	7.97																									
12/14/2009	8.18				8.02																							
12/15/2009			6.55	8.05																								
12/8/2010	7.37		6.33	7.56	7.51																							
12/21/2011	8.17		6.67	7.86	7.8																							
1/5/2012	7.82		6.83	7.82	7.42																							
12/13/2012	7.98		6.29	8.08	7.64	7.26																						
12/18/2013	7.87		6.67	7.83	7.78	7.41																						
		Ammonia as N																										
		mg/L																										
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	
12/8/2008			0.28		0.28																							
12/9/2008																												
12/14/2009	<0.3			0.84	<0.3																							
12/15/2009			<0.3	<0.3	<0.3																							
12/8/2010	<0.3		<0.3	<0.3	<0.3																							
12/21/2011	<0.12		<0.12	0.168	<0.12																							
12/13/2012	<0.3		0.42	<0.3	<0.3	<0.3																						
12/18/2013	0.56		0.7	<0.3	<0.3	<0.3																						
		Manganese																										
		µg/L																										
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	
12/8/2008			18800		206																							
12/9/2008		56.7		101																								
12/14/2009	55.4				228																							
12/15/2009			36900	98.6																								
12/8/2010	58.1		35000	99.8	203																							
12/21/2011	11.2		36400	102	260																							
12/13/2012	16.8		36700	105	232	302																						
12/18/2013	22.8		36100	115	237	223																						
		Iron																										
		µg/L																										
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	
12/8/2008																												
12/9/2008																												
12/14/2009																												
12/15/2009																												
12/8/2010																												
12/21/2011																												
12/13/2012																												
12/18/2013																												

Notes:
 BW = Bayside Well
 E = Estimated value, concentration outside calibration range. For SIP, E=DNQ, Estimated Concentration.
 NA = Not analyzed

Table 7: Standard Minerals Data

	Calcium µg/L											Magnesium µg/L						Potassium µg/L							
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008			630000	15000	25400														2300000						
12/9/2008	28000	17000			30000					5400	14000	10600						1100							
12/14/2009				15000					7400			12000						1400							
12/15/2009			1300000	15000								13000							500000						
12/8/2010	27000		1300000	17000	29000				7900		2.50E+06	15000	12000				1700		450000						
12/21/2011	10800		1250000	13900	27800				2780		2.78E+06	12600	10500				789		5090000						
12/13/2012	12200		1230000	14800	28900				3120		2.95E+06	13000	11200	7680			788		4880000						
12/18/2013	14000		1230000	14800	32200	32400			3770		2.58E+06	13400	13000	8580			1050		5680000						
	Sulfate mg/L											Hardness mg/L					Alkalinity: Hydroxide mg/L								
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008			11000000	150000	102000														16000						
12/9/2008		36000								16		27	32												
12/14/2009	41000				110000					23			37					97							
12/15/2009			2.30E+07	160000								26						100							
12/8/2010	84000		2.10E+07	170000	100000				42		4000	23	42				100	100	17000						
12/21/2011	15200		2.22E+07	153000	103000				11		5700	32	41				40	16000	16000						
12/13/2012	21300		2.49E+07	177000	119000	117000			13		6700	31	40	46			47	16000	16000						
12/18/2013	22500		2.23E+07	153000	113000	110000			15		5700	32	42	95			50	17000	17000						
	Sulfate mg/L											Hardness mg/L					Alkalinity: Carbonate mg/L								
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008			420		230														0.16						
12/9/2008		87		160						<0.1		<0.1	<0.1						0.74						
12/14/2009	110									<0.1		<0.1	<0.1					0.66							
12/15/2009			380	310																					
12/8/2010	170		390	310	230					<0.1	<0.1	<0.1	<0.1					0.37							
12/21/2011	47		420	310	230					<0.1	<0.1	<0.1	<0.1					0.64							
12/13/2012	59		390	310	250	220				<0.1	<0.1	<0.1	<0.1					0.53							
12/18/2013	65		430	310	260	230				<0.1	<0.1	<0.1	<0.1					0.45							
	Sulfate mg/L											Hardness mg/L					Alkalinity: Bicarbonate mg/L								
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008			420		229																				
12/9/2008		86.2		159																					
12/14/2009	109																								
12/15/2009			380	307																					
12/8/2010	170		390	310	230																				
12/21/2011	46		420	300	230																				
12/13/2012	59		390	310	240	220																			
12/18/2013	64		420	300	260	230																			

Notes:
BW = Bayside Well

Table 8: Haloacetic Acids Data

	HAA(5) µg/L							HAA(9) µg/L							Bromochloroacetic Acid µg/L										
	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-5D	MW-7	MW-10D		
12/8/2008			2.1		<2.9					3.6		<5													
12/9/2008		<2.9		<2.9					<5		<5														
12/14/2009	<2.9			<2.9																					
12/15/2009			<2.9	<2.9					<5	<5	<5														
12/8/2010	<2.9		<2.9	<2.9					<5	<5	<5														
12/21/2011	0.59	0.31	<2.9	<2.9				0.59	0.31	<5	<5														
12/13/2012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											
12/18/2013	0.35	ND	0.34	0.36	0.34			1.6	ND	0.34	4	3.9													
Bromodichloroacetic Acid µg/L																									
12/8/2008	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-5D	MW-7	MW-10D		
12/9/2008		<0.26		<0.26					<0.54		<0.54														
12/14/2009	<0.26			<0.26				<0.54			<0.54														
12/15/2009		<0.26	<0.26	<0.26				<0.54	<0.54	<0.54	<0.54														
12/8/2010	<0.26		<0.26	<0.26				<0.54	<0.54	<0.54	<0.54														
12/21/2011	<0.26		<0.26	<0.26				<0.54	<0.54	<0.54	<0.54														
12/13/2012	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16		<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19											
12/18/2013	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16		<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19											
Dichloroacetic Acid µg/L																									
12/8/2008	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-5D	MW-7	MW-10D		
12/9/2008		<0.99		<0.99					<0.54		<0.54														
12/14/2009	<0.99			<0.99				<0.54			<0.54														
12/15/2009		<0.99	<0.99	<0.99				<0.54	<0.54	<0.54	<0.54														
12/8/2010	<0.99		<0.99	<0.99				<0.54	<0.54	<0.54	<0.54														
12/21/2011	<0.99		<0.99	<0.99				<0.54	<0.54	<0.54	<0.54														
12/13/2012	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23		<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22											
12/18/2013	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23		<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22											
Trichloroacetic Acid µg/L																									
12/8/2008	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-7 10D	BW	MW-1	MW-2S	MW-2L	MW-4	MW-6	MW-5D	MW-7	MW-10D		
12/9/2008		<0.83		<0.83					<0.3		<0.3														
12/14/2009	<0.83			<0.83				<0.3			<0.3														
12/15/2009		<0.83	<0.83	<0.83				<0.3	<0.3	<0.3	<0.3														
12/8/2010	<0.83		<0.83	<0.83				<0.3	<0.3	<0.3	<0.3														
12/21/2011	<0.83		<0.83	<0.83				0.59	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3											
12/13/2012	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44		<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21											
12/18/2013	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44		<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21											

Notes:

- BW = Bayside Well
- I = Dual Column quantitation difference > 40% RPD
- N = Spike recovery outside of control limits

Table 9: Trihalomethanes Data

	TTHMs µg/L											Chloroform µg/L										Bromochloromethane µg/L					
	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D	BW	MW-1	MW-2S	MW-2I	MW-4	MW-6	MW-5D	MW-7	MW-10D
12/8/2008		<0.37	<0.37	<0.37	<0.37																						
12/9/2008		<0.37		<0.37				<0.37																			<0.074
12/16/2008																											
12/11/2009	0.1																										
12/4/2009	0.11																										
12/14/2009	<2.43 ¹				<2.43 ¹					<0.57			<0.57														
12/15/2009	<2.43 ¹	<2.43 ¹	<2.43 ¹	<2.43 ¹	<2.43 ¹					<0.57	<0.57	<0.57	<0.57	<0.57													<0.58
12/8/2010	≥39.86 & <40.09 ¹								<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹												<0.58
1/5/2012					<0.609 ¹				<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹												<0.58
12/13/2012	≥ 9.35 & < 9.71 ¹				<0.609 ¹				<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹												<0.58
12/18/2013	≥ 2.5 & < 2.94 ¹				<0.609 ¹				<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹	<0.609 ¹												<0.58

Notes:
 BW = Bayside Well
 1 - Calculated from individual THMs

Table 10: Vertical Gradients for the Nested MW-5 Wells on June 18, 2013

Nested Well Set	MW-5S	MW-5I	MW5-D
Elevation at land surface (ft amsl)	13.88	13.88	13.76
Depth of monitoring well (ft bgs)	210	325	640
Depth to water (ft bgs)	3.25	8.67	N/A
Hydraulic head (ft)	10.63	5.21	#VALUE!
Pressure head (ft)	206.75	316.33	#VALUE!
Elevation head (ft)	-196.12	-311.12	-626.24
Vertical Hydraulic Gradient (ft/ft)	N/A	0.047	#VALUE!

Table 11: Vertical Gradients for the Nested MW-5 Wells on December 18, 2013

Nested Well Set	MW-5S	MW-5I	MW5-D
Elevation at land surface (ft amsl)	13.88	13.88	13.76
Depth of monitoring well (ft bgs)	210	325	640
Depth to water (ft bgs)	3.15	10.3	N/A
Hydraulic head (ft)	10.73	3.58	#VALUE!
Pressure head (ft)	206.85	314.7	#VALUE!
Elevation head (ft)	-196.12	-311.12	-626.24
Vertical Hydraulic Gradient (ft/ft)	N/A	0.062	#VALUE!

* The numbers in red are the ones to change.

N/A - Water level not available

Figure 1 – Groundwater Level Monitoring Well Network

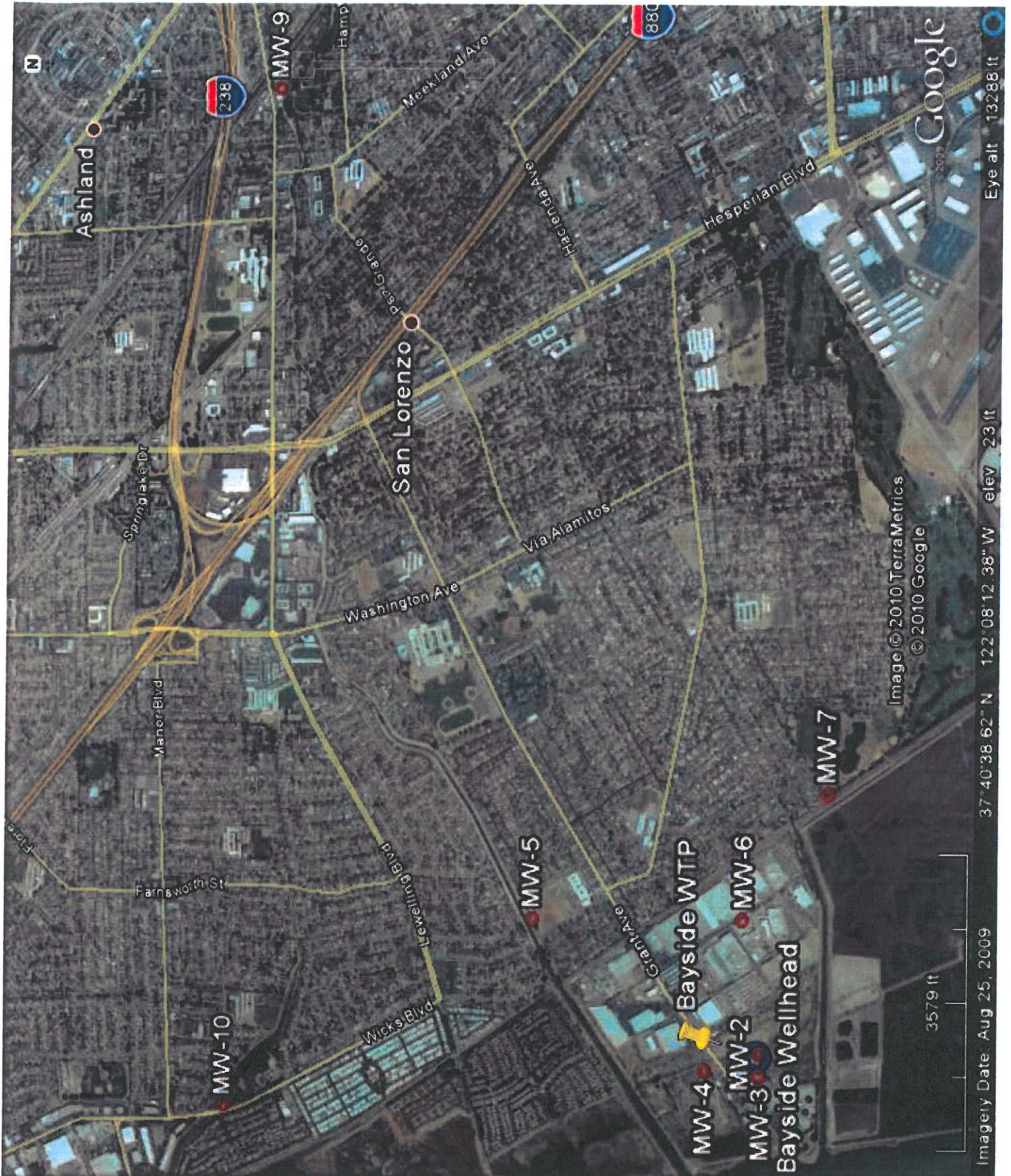
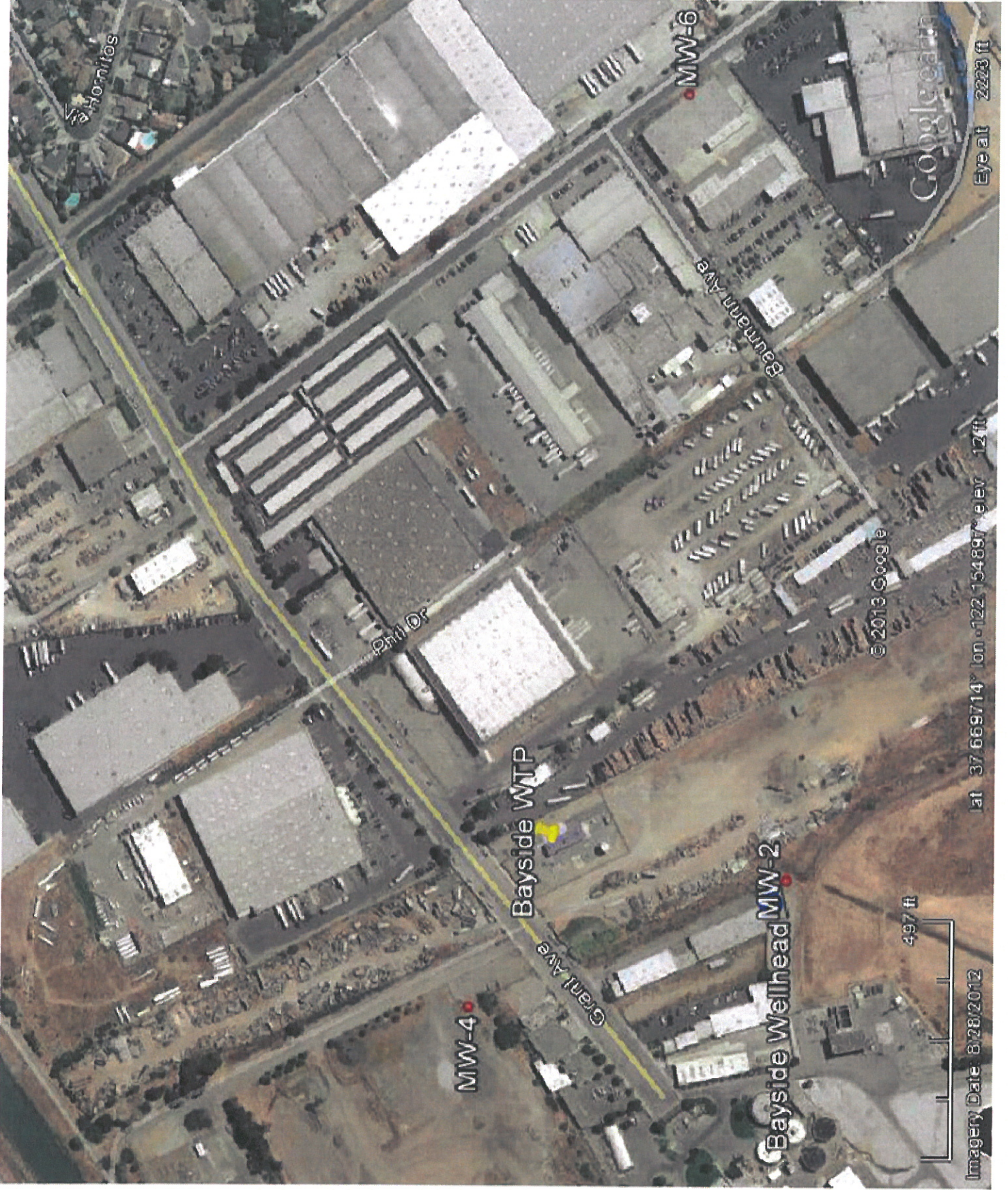





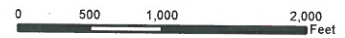
Figure 2 - Groundwater Quality Monitoring Well Network





LEGEND

-  Groundwater monitoring well
 -  (-4.06) Groundwater elevation in feet below mean sea level (measured December 18, 2013)
 -  ---(-5.0)--- Inferred groundwater elevation contour in feet below mean sea level
- Note: Groundwater gradient direction and magnitude was not determined due to insufficient data



L:\Project\EBMUD_BaySide02_Map02_Map_Production_and_Report\Figure_3_Groundwater_Elevation.mxd



Project no. 26817754.2008

EBMUD

Groundwater Elevation Contour Map
December 18, 2013

Figure
3

Figure 4 - 2013 MW-1 GW Level Trend (ft amsl)

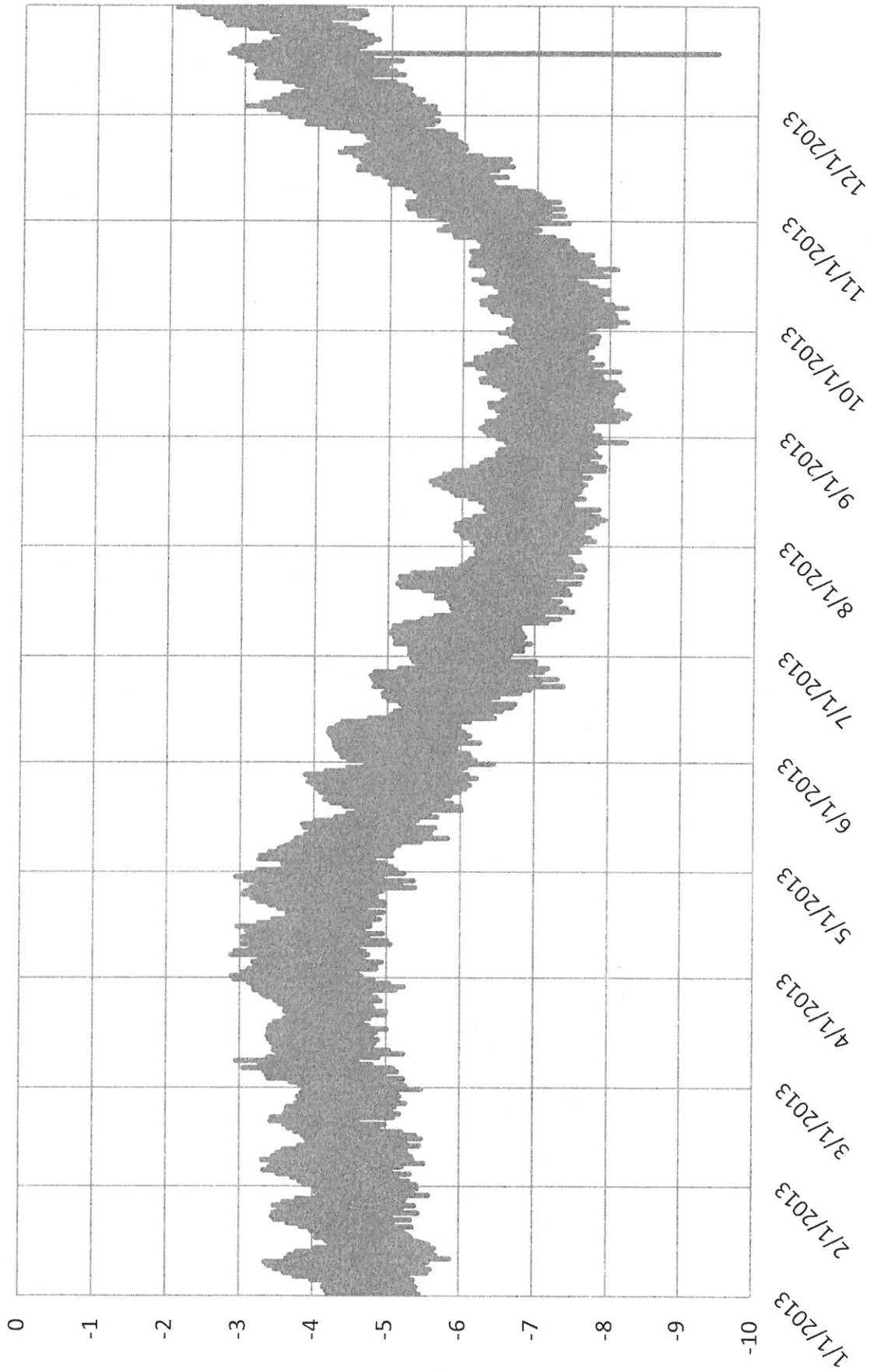


Figure 5 - 2013 MW-2i GW Level Trend (ft amsl)

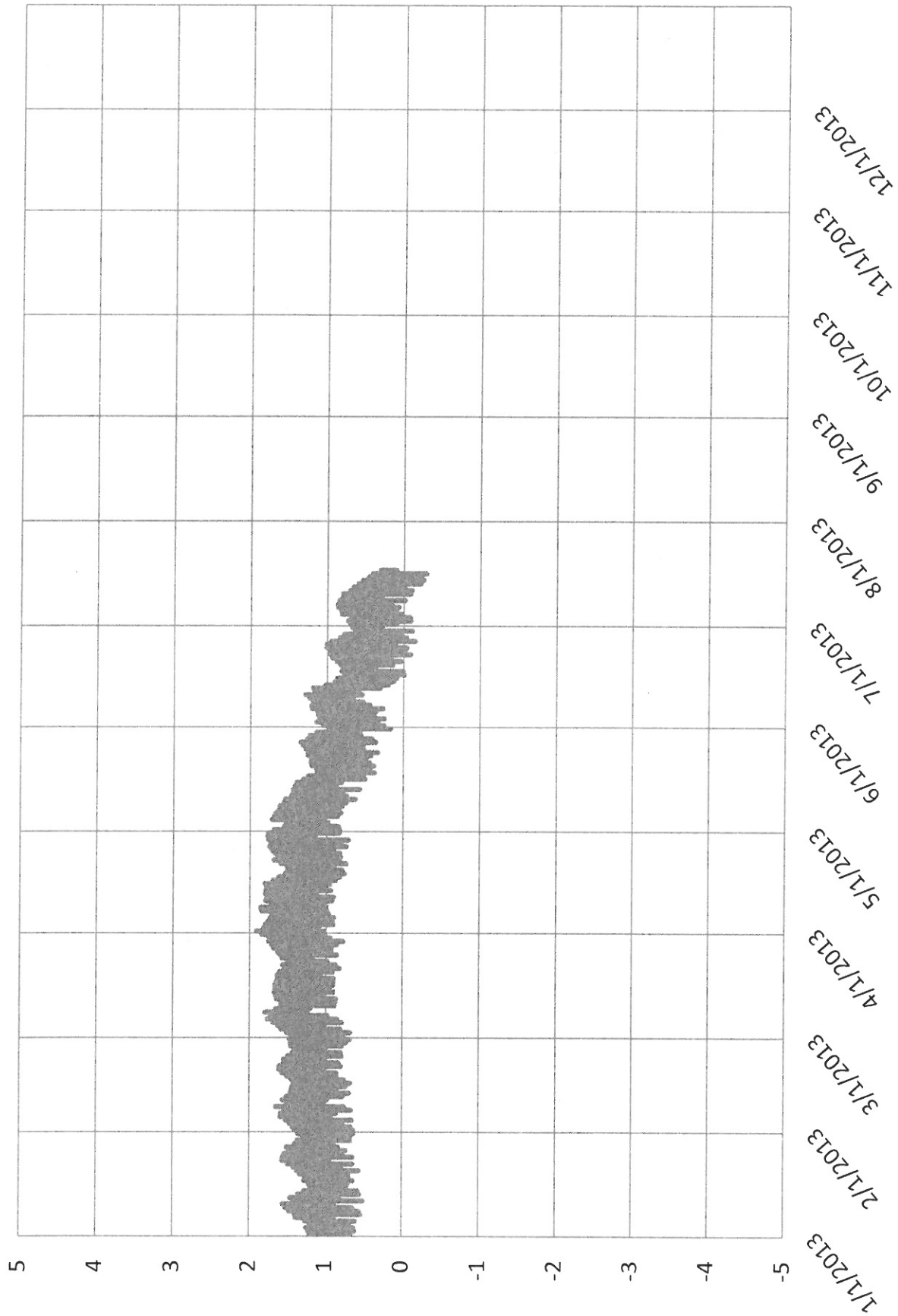


Figure 6 - 2013 MW-3 GW Level Trend (ft amsl)

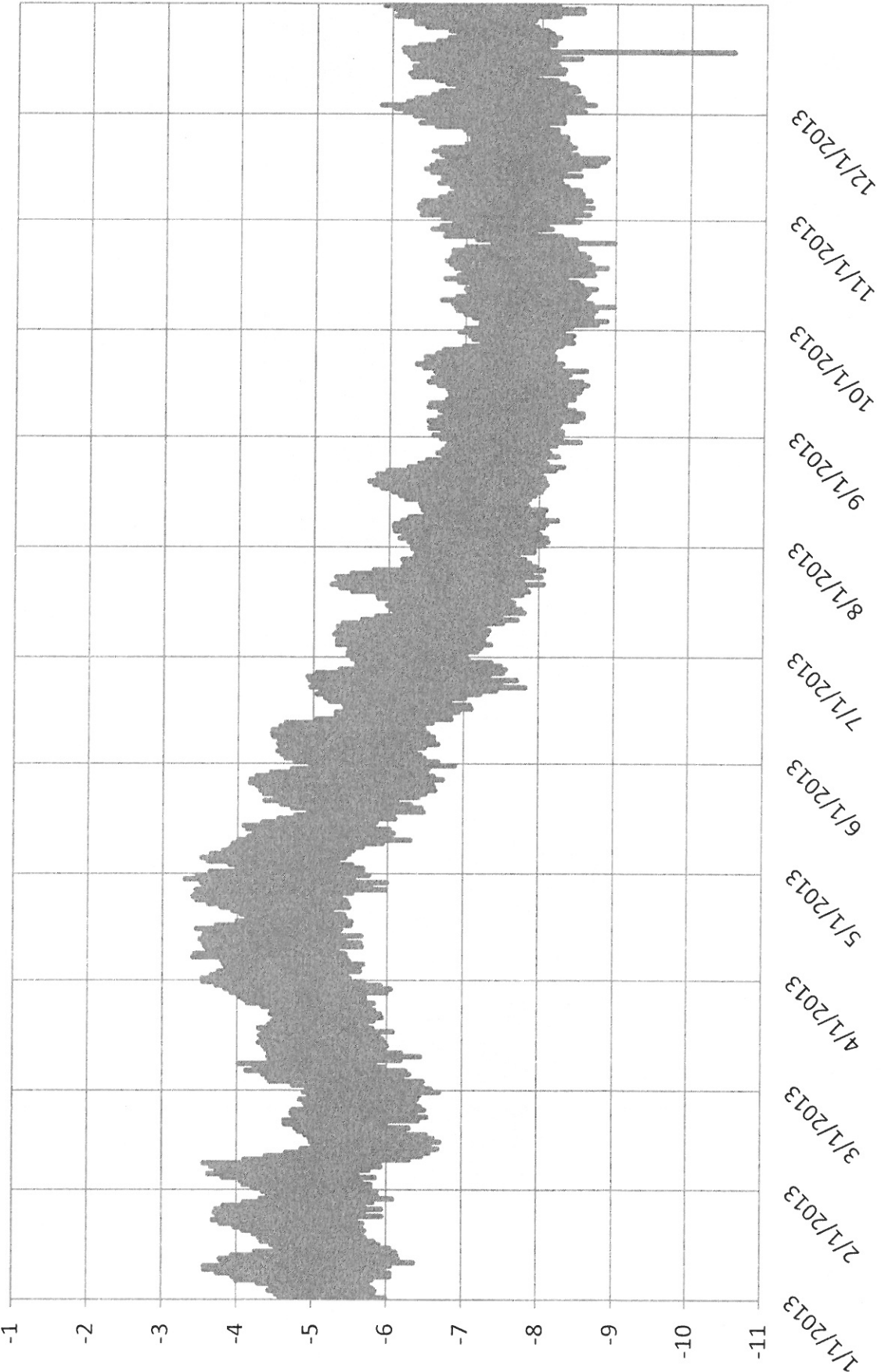


Figure 7 - 2013 MW-5s GW Level Trend (ft amsl)

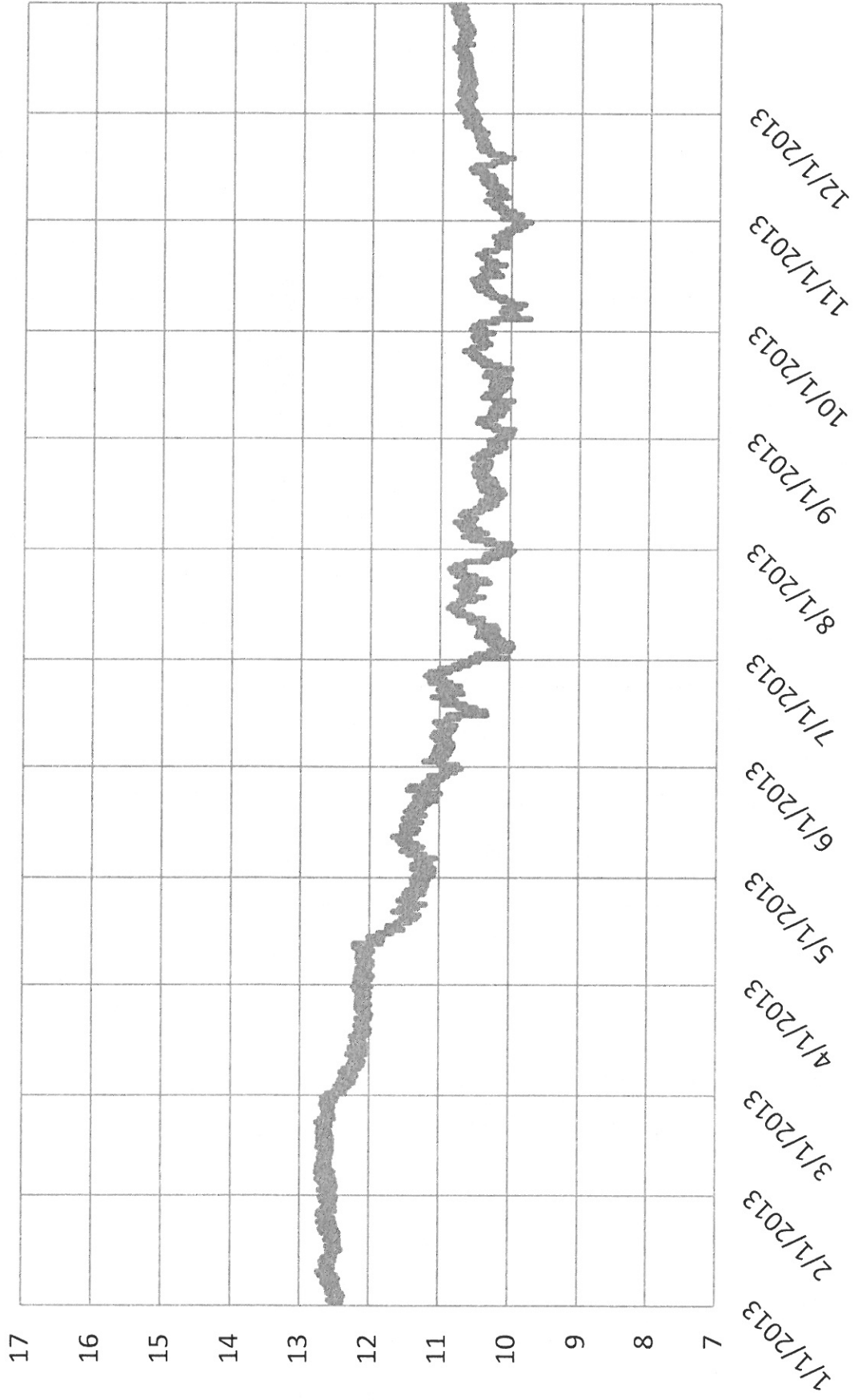


Figure 8 - 2013 MW-5i GW Level Trend (ft amsl)

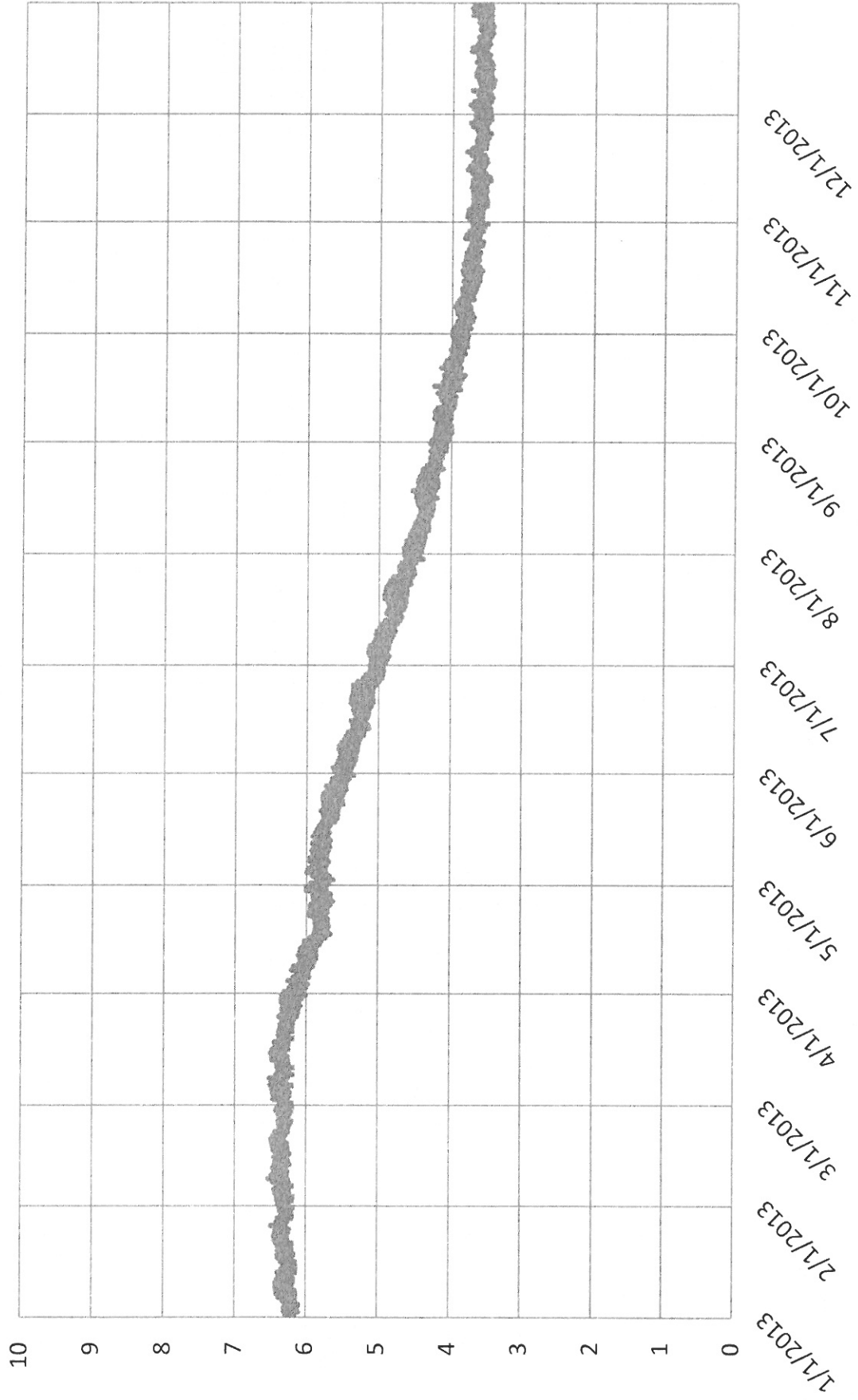


Figure 9 - 2013 MW-6 GW Level Trend (ft amsl)

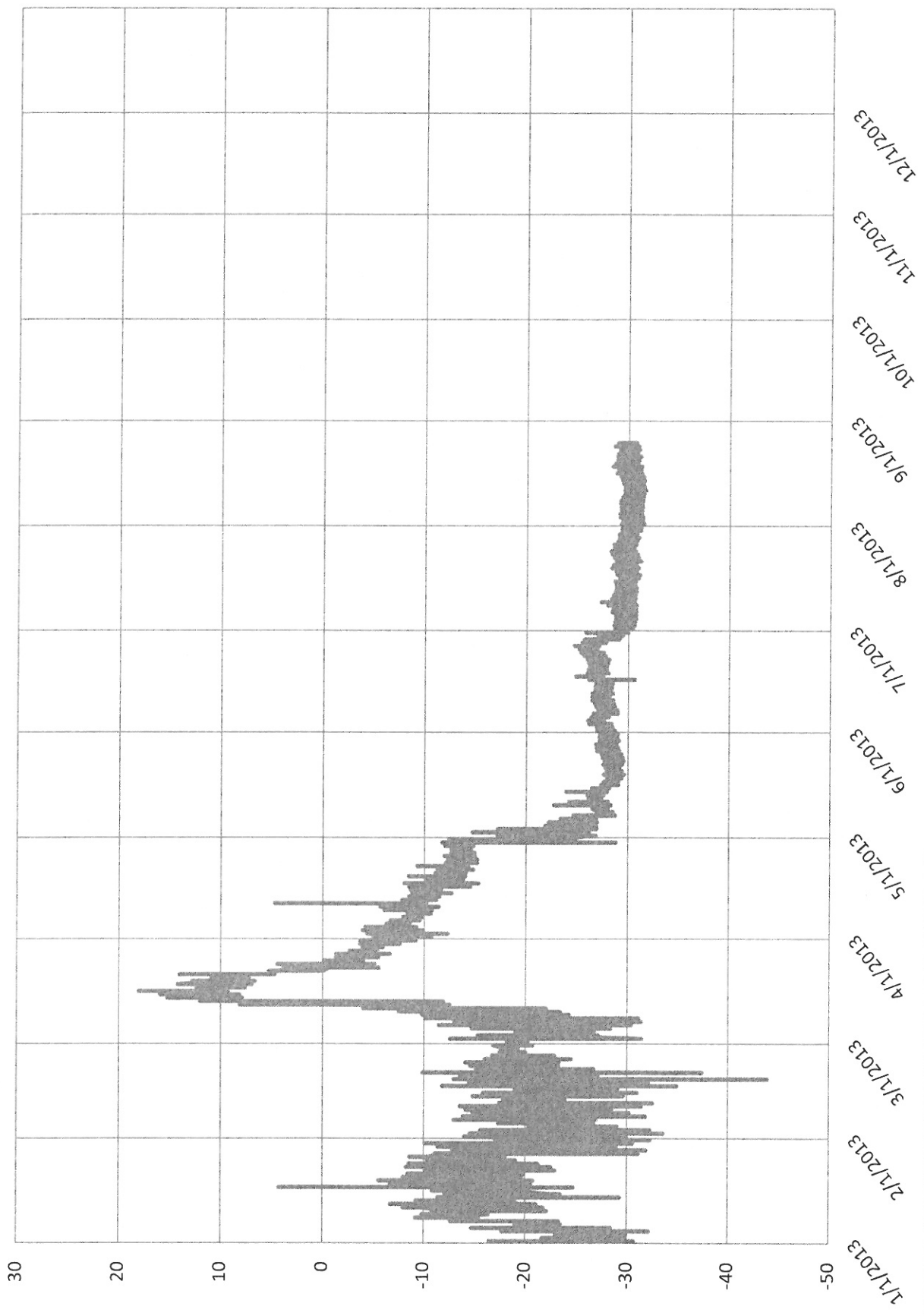


Figure 10 - 2013 MW-9D GW Level Trend (ft amsl)

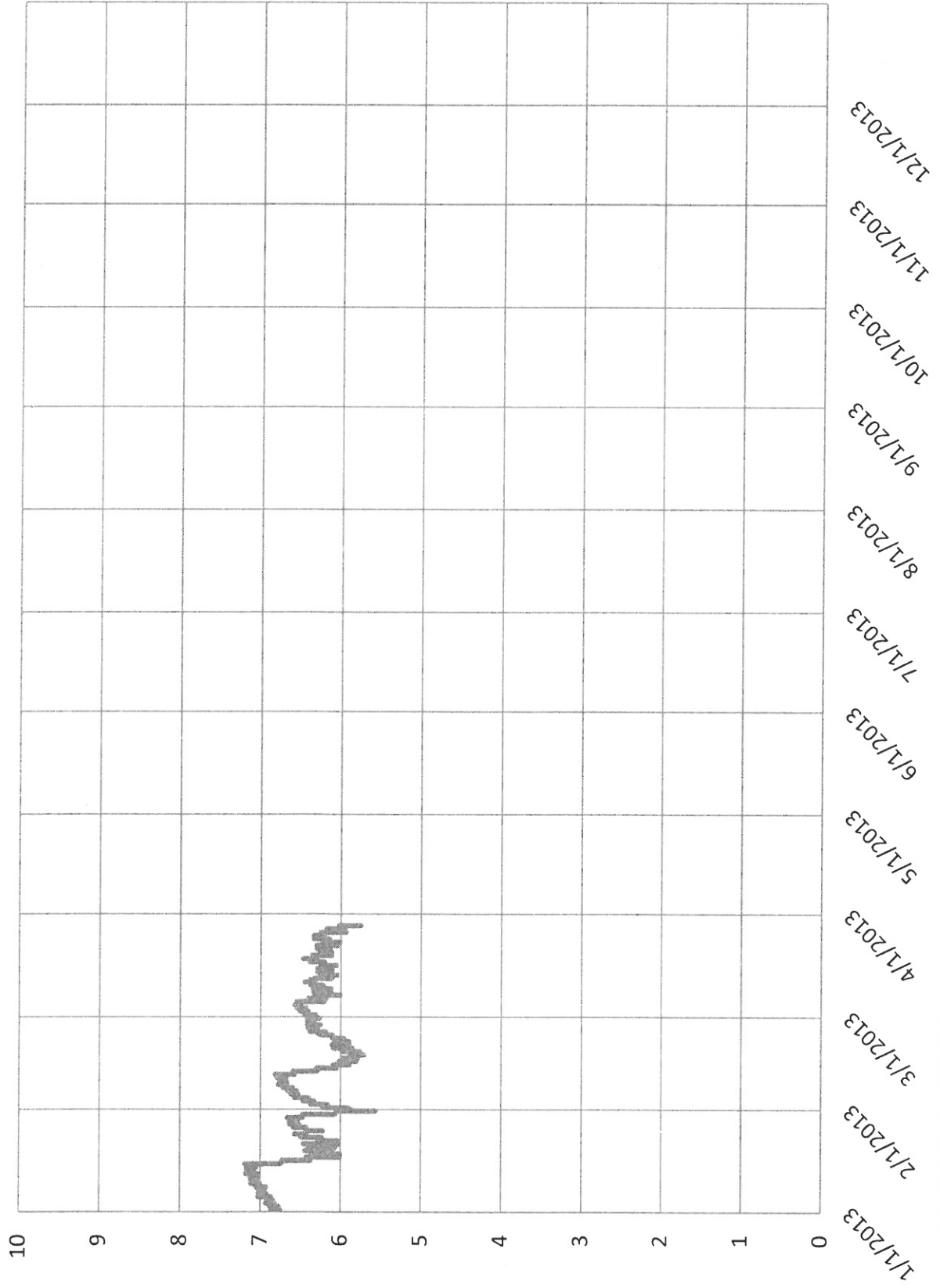
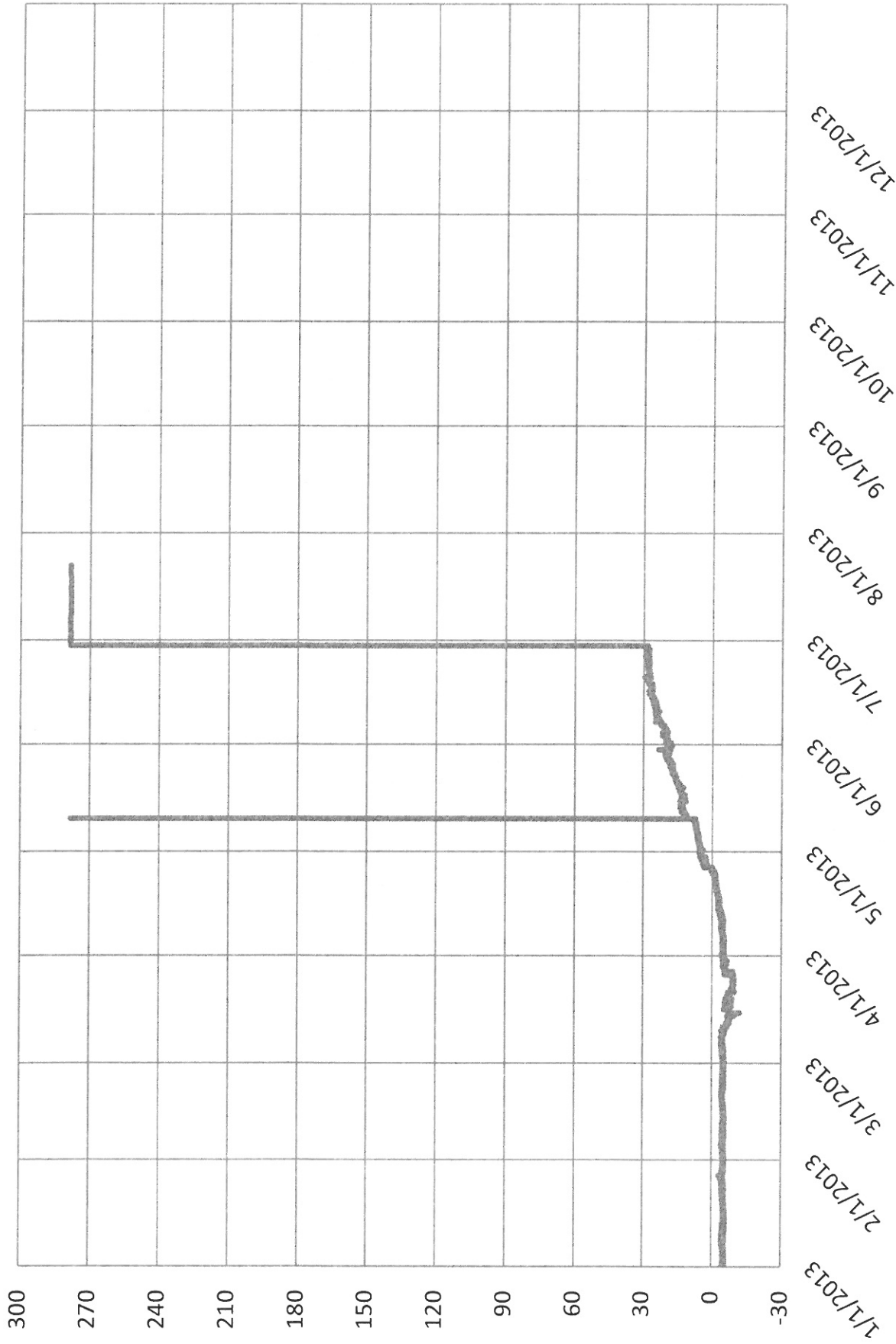


Figure 11 - 2013 MW-10D GW Level Trend (ft amsl)



Appendix A

**Lab Report
&
Chain of Custody Record**



Analytical Report Prepared for DEREK LEE

Report generated on: Jan 28, 2014 04:13 pm
 Login No.: L187280

Reported by:

Jack Lim

JACK C. LIM
 Laboratory Program Manager

Approved by:

Nirmela Arsem

NIRMELA ARSEM
 Laboratory Services Division Manager

LSR B455-0706-1
 Project Title: BAYSIDE GROUND WATER PROJECT

Login Performance Summary
 6 - Samples received by the lab on: Dec 19 2013, 07:48 am
 0 - Lost Analyses
 0 - Hold Time Exceedences
 Turn-around-time not met

Samples included in this report:

Sample	Type	Collected	Site	Locator	ClientID
L187280-1	GRAB	18-Dec-2013 08:29	WTP BAYSIDE	BAY WELL HEAD	Bayside well
L187280-2	GRAB	18-Dec-2013 13:05	GW BAYSIDE	BAY1-MW2S	MW-2S
L187280-3	GRAB	18-Dec-2013 16:40	GW BAYSIDE	BAY1-MW2I	MW-2I
L187280-4	GRAB	18-Dec-2013 10:42	GW BAYSIDE	BAY1-MW4	MW-4
L187280-5	GRAB	18-Dec-2013 14:40	GW BAYSIDE	BAY1-MW6	MW-6
L187280-6	QCFB	18-Dec-2013 15:45	FIELD QC	COLLECTION QC	-

Legend to the laboratory qualifiers used in this report:
 I - Dual Column quantitation difference > 40% RPD
 N - Spike recovery outside of control limits
 U - Analyte not detected
 Qualifiers for subcontract work - See textvalue for description



EAST BAY MUNICIPAL UTILITY DISTRICT
 Laboratory Services Division
 PO Box 24055, MS 59, Oakland, CA 94623
 Phone (510)287-1432 Fax (510)465-5462
Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: WTP BAYSIDE Bayside GW Project Extraction Wells at 2540 Grant Avenue, San Lorenzo
 Locator: BAY WELL HEAD Sample tap at the well, as shown in Drawing No. 2097-C-002
 ClientID: Bayside well
 Lab ID: L187280-1 (P193782-1)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 08:29am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: BAYSIDE WELL; +FLD DATA: pH =7.87 ; Cl2R = 0.03 mg/L; Labelled as RAW
 WATER for the program

Method Reference	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 218.7 - Hexavalent Chromium by IC Subcontract data from E. S. Babcock Lab Comment: ND - ANALYTE NOT DETECTED AT OR ABOVE THE MDL; UCMR3 PROTOCOL SUBCONTRACT LAB DATA HEXAVALENT CHROMIUM	ND	0.01	ug/L	1	0.01	0.03	RawH2O
Run ID: R248559 / Work Group No.: WG188471 Prep Date: 26-DEC-13 Analyzed 26-Dec-13 19:11							
Method: SAMPLER PROVIDED FIELD MEASUREMENTS - DATA ENTRY LIST FOR FIELD DATA FIELD ANALYSIS/OBSERVATION DATA PARAMETERS PH CHLORINE RESIDUAL: TOTAL		7.87 0.03	pH units mg/L	1 1			GroundH2O
Run ID: R248205 / Work Group No.: WG188183 Prep Date: 18-DEC-13 Analyzed 18-Dec-13 08:29							
Method: EPA 8260B - Trihalomethanes, GC/MS TARGET ANALYTES CHLOROFORM BROMODICHLOROMETHANE DIBROMOCHLOROMETHANE BROMOFORM INTERNAL STANDARD FLUOROBENZENE D5-CHLOROBENZENE D4-1,4-DICHLOROBENZENE SURROGATE D8-TOLUENE 4-BROMOFLUOROBENZENE		2.5 0.079 0.13 0.23 84.4 88.4 92.6 104 102	ug/L ug/L ug/L ug/L % recovery % recovery % recovery % recovery % recovery	1 1 1 1 1 1 1 1 1		0.17 0.079 0.13 0.23	GroundH2O
Run ID: R248306 / Work Group No.: WG188203 Prep Date: 20-DEC-13 Analyzed 20-Dec-13 13:20							
Method: EPA 300.1 - Ion Chromatography Instrument calibrated 19-DEC-13 TARGET ANALYTES CHLORIDE NITRATE AS N SULFATE SURROGATE DICHLOROACETATE		13 0.0030 15 100	mg/L mg/L mg/L % recovery	1 1 1 1	0.002 0.003 0.003	0.4 0.5	GroundH2O 1
Run ID: R248215 / Work Group No.: WG188172 Prep Date: 19-DEC-13 Analyzed 20-Dec-13 00:24							
Method: EPA 552.2 - Haloacetic Acids & Dalapon TARGET ANALYTES BROMOCHLOROACETIC ACID BROMODICHLOROACETIC ACID CHLORODIBROMOACETIC ACID DALAPON DIBROMOACETIC ACID DICHLOROACETIC ACID MONOBROMOACETIC ACID MONOCHLOROACETIC ACID	I U U U I U U U	1.3 0.16 0.19 0.18 0.35 0.23 0.22 0.68	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1 1 1 1 1 1 1 1	0.14 0.16 0.19 0.18 0.11 0.23 0.22 0.68	1 1 1 2	GroundH2O

RL is either the client requested or regulatory mandated Reporting Limit. ML is the regulatory mandated Minimum Level



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Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: WTP BAYSIDE Bayside GW Project Extraction Wells at 2540 Grant Avenue, San Lorenzo
 Locator: BAY WELL HEAD Sample tap at the well, as shown in Drawing No. 2097-C-002
 ClientID: Bayside well
 Lab ID: L187280-1 (P193782-1)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 08:29am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: BAYSIDE WELL; +FLD DATA: pH =7.87 ; Cl2R = 0.03 mg/L; Labelled as RAW
 WATER for the program

Method Reference	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Parameter							
TRIBROMOACETIC ACID	U	0.44	ug/L	1	0.44		
TRICHLOROACETIC ACID	U	0.21	ug/L	1	0.21	1	
VALUE CALCULATED FROM OTHER RESULTS							
HAA (5)		0.35	ug/L		1.4		
HAA (9)		1.6	ug/L		2.4		
INTERNAL STANDARD							
1,2,3-TRICHLOROPROPANE		110	% recovery		1		
SURROGATE							
2,3-DIBROMOPROPIONIC ACID		100	% recovery		1		
Run ID: R248483 / Work Group No.: WG188370							
Prep Date1: 23-DEC-13 Prep Date2: 02-JAN-14 Analyzed 02-Jan-14 22:40							
Method: SM2320B - 1997, Titration							GroundH2O
TARGET ANALYTES							
ALKALINITY: TOTAL AS CaCO3		65	mg/L	1	5		
Run ID: R248223 / Work Group No.: WG188194							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM2340C - 1997, Titration: EDTA							GroundH2O
TARGET ANALYTES							
HARDNESS: TOTAL AS CaCO3		50	mg/L	1	3		
Run ID: R248385 / Work Group No.: WG188328							
Prep Date1: 31-DEC-13 Analyzed 31-Dec-13 08:00							
Method: SM2540C - 1997, Dried at 180C							GroundH2O
TARGET ANALYTES							
TOTAL DISSOLVED SOLIDS		120	mg/L	1	11		
Run ID: R248239 / Work Group No.: WG188197							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 07:30							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: BICARBONATE		64	mg/L	1	5		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: CARBONATE		0.45	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: HYDROXIDE	U	0.10	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							

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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: WTP BAYSIDE Bayside GW Project Extraction Wells at 2540 Grant Avenue, San Lorenzo
 Locator: BAY WELL HEAD Sample tap at the well, as shown in Drawing No. 2097-C-002
 ClientID: Bayside well
 Lab ID: L187280-1 (P193782-1)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 08:29am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: BAYSIDE WELL; +FLD DATA: pH =7.87 ; Cl2R = 0.03 mg/L; Labelled as RAW
 WATER for the program

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: SM4500-NH3 B, C - 1997, Distillation & Titration						GroundH2O	
TARGET ANALYTES							
AMMONIA AS N		0.560	mg/L	1	0.3		
Run ID: R248194 / Work Group No.: WG188168							
Prep Date: 19-DEC-13 Analyzed 19-Dec-13 09:00							
Method: EPA 200.7 - Rev. 4.4, ICP Scan						RawH2O	
TARGET ANALYTES							
CALCIUM		14,000	ug/L	1.04	32.2		
IRON		580	ug/L	1.04	4.16	100	
POTASSIUM		1,050	ug/L	1.04	10.4		
MAGNESIUM		3,770	ug/L	1.04	10.4		
MANGANESE		22.8	ug/L	1.04	0.52	20	
SODIUM		22,500	ug/L	1.04	6.24		
Run ID: R248493 / Work Group No.: WG188391							
Prep Date: 03-JAN-14 Analyzed 03-Jan-14 14:05							

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 Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-2S
 Lab ID: L187280-2 (P193782-2)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 01:05pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEPE
 Sample Comments: MW-2S; +FLD DATA: pH =6.67 ; Cl2R = 0.08 mg/L; Depth to GW = 8.38 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. (Analytical NOTE: may need to dilute for ICP & IC - salt water intrusion)

Method Reference	Qualifier	Result	Units	Dilution	MDL	Matrix	Tag
Parameter						RL/ML	
Method: PER SUBCONTRACT LABORATORY REPORT - Subcontract data transmittal							GroundH2O
<i>Subcontract data</i>							
Comment: Original report transmitted to client. Copy of report archived with data packet.							
SUBCONTRACT LAB DATA							
DATA TRANSMITTAL							
Run ID: R248940 / Work Group No.: WG188504							
Prep Date: 26-DEC-13 Analyzed 27-Jan-14 00:00							
Method: PER SUBCONTRACT LABORATORY REPORT - Subcontract data transmittal for oxygen 18							GroundH2O
<i>Subcontract data from Alpha Analytical Lab</i>							
Comment: Refer to sublab data report attached							
SUBCONTRACT LAB DATA							
DATA TRANSMITTAL							
Run ID: R248936 / Work Group No.: WG188837							
Prep Date: 27-JAN-14 Analyzed 27-Jan-14 00:00							
Method: SAMPLER PROVIDED FIELD MEASUREMENTS - DATA ENTRY LIST FOR FIELD DATA							GroundH2O
<i>FIELD ANALYSIS/OBSERVATION DATA PARAMETERS</i>							
PH		6.67	pH units	1			
DEPTH		8.38	feet	1			
CHLORINE RESIDUAL: TOTAL		0.08	mg/L	1	0.005		
Run ID: R248205 / Work Group No.: WG188183							
Prep Date: 18-DEC-13 Analyzed 18-Dec-13 13:05							
Method: EPA 8260B - Trihalomethanes, GC/MS							GroundH2O
<i>TARGET ANALYTES</i>							
CHLOROFORM	U	0.17	ug/L	1	0.17		
BROMODICHLOROMETHANE	U	0.079	ug/L	1	0.079		
DIBROMOCHLOROMETHANE	U	0.13	ug/L	1	0.13		
BROMOFORM	U	0.23	ug/L	1	0.23		
<i>INTERNAL STANDARD</i>							
FLUOROBENZENE		81.8	% recovery	1			
D5-CHLOROBENZENE		86.8	% recovery	1			
D4-1,4-DICHLOROBENZENE		90.6	% recovery	1			
<i>SURROGATE</i>							
D8-TOLUENE		105	% recovery	1			
4-BROMOFLUOROBENZENE		101	% recovery	1			
Run ID: R248306 / Work Group No.: WG188203							
Prep Date: 20-DEC-13 Analyzed 20-Dec-13 13:43							
Method: EPA 300.1 - Ion Chromatography							GroundH2O 1
<i>Instrument calibrated 19-DEC-13</i>							
<i>TARGET ANALYTES</i>							
NITRATE AS N	U	0.15	mg/L	50	0.15	0.4	
<i>SURROGATE</i>							
DICHLOROACETATE		100	% recovery	50			
Run ID: R248215 / Work Group No.: WG188172							
Prep Date: 19-DEC-13 Analyzed 20-Dec-13 01:00							

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Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT

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
 ClientID: MW-2S
 Lab ID: L187280-2 (P193782-2)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 01:05pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-2S; +FLD DATA: pH =6.67 ; Cl2R = 0.08 mg/L; Depth to GW = 8.38 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. (Analytical NOTE: may need to dilute for ICP & IC - salt water intrusion)

Method Reference	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 300.1 - Ion Chromatography							GroundH2O
<i>Instrument calibrated 19-DEC-13</i>							
TARGET ANALYTES							
CHLORIDE		45,000	mg/L	5000	10		
SULFATE		5,700	mg/L	5000	15	0.5	
SURROGATE							
DICHLOROACETATE		100	% recovery	5000			
Run ID: R248215 / Work Group No.: WG188172							
Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 15:55							
Method: EPA 552.2 - Haloacetic Acids & Dalapon							GroundH2O
TARGET ANALYTES							
BROMOCHLOROACETIC ACID	U	0.14	ug/L	1	0.14		
BROMODICHLOROACETIC ACID	U	0.16	ug/L	1	0.16		
CHLORODIBROMOACETIC ACID	U	0.19	ug/L	1	0.19		
DALAPON	U	0.18	ug/L	1	0.18		
DIBROMOACETIC ACID	U	0.11	ug/L	1	0.11		1
DICHLOROACETIC ACID	U	0.23	ug/L	1	0.23		1
MONOBROMOACETIC ACID	U	0.22	ug/L	1	0.22		1
MONOCHLOROACETIC ACID	U	0.68	ug/L	1	0.68		2
TRIBROMOACETIC ACID	U	0.44	ug/L	1	0.44		
TRICHLOROACETIC ACID	U	0.21	ug/L	1	0.21		1
VALUE CALCULATED FROM OTHER RESULTS							
HAA(5)		0.0	ug/L		1.4		
HAA(9)		0.0	ug/L		2.4		
INTERNAL STANDARD							
1,2,3-TRICHLOROPROPANE		120	% recovery		1		
SURROGATE							
2,3-DIBROMOPROPIONIC ACID		110	% recovery		1		
Run ID: R248483 / Work Group No.: WG188370							
Prep Date1: 23-DEC-13 Prep Date2: 02-JAN-14 Analyzed 02-Jan-14 23:24							
Method: SM2320B - 1997, Titration							GroundH2O
TARGET ANALYTES							
ALKALINITY: TOTAL AS CaCO3		430	mg/L	12.5	62		
Run ID: R248223 / Work Group No.: WG188194							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM2340C - 1997, Titration: EDTA							GroundH2O
TARGET ANALYTES							
HARDNESS: TOTAL AS CaCO3		17,000	mg/L	1	3		
Run ID: R248385 / Work Group No.: WG188328							
Prep Date1: 31-DEC-13 Analyzed 31-Dec-13 08:00							
Method: SM2540C - 1997, Dried at 180C							GroundH2O
TARGET ANALYTES							
TOTAL DISSOLVED SOLIDS		85,000	mg/L	33.3	370		
Run ID: R248239 / Work Group No.: WG188197							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 07:30							

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Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-2S
 Lab ID: L187280-2 (P193782-2)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 01:05pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-2S; +FLD DATA: pH =6.67 ; Cl2R = 0.08 mg/L; Depth to GW = 8.38 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. (Analytical NOTE: may need to dilute for ICP & IC - salt water intrusion)

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: HYDROXIDE	U	0.10	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: CARBONATE		0.19	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: BICARBONATE		420	mg/L	1	5		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-NH3 B, C - 1997, Distillation & Titration							GroundH2O
TARGET ANALYTES							
AMMONIA AS N		0.700	mg/L	1	0.3		
Run ID: R248194 / Work Group No.: WG188168							
Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 09:00							
Method: EPA 200.7 - Rev. 4.4, ICP Scan							RawH2O
TARGET ANALYTES							
CALCIUM		1.23E+06	ug/L	10.4	322		
IRON		2,530	ug/L	10.4	41.6	100	
POTASSIUM		568,000	ug/L	10.4	104		
MAGNESIUM		2.58E+06	ug/L	10.4	104		
MANGANESE		36,100	ug/L	10.4	5.2	20	
SODIUM		2.23E+07	ug/L	52	312		
Run ID: R248493 / Work Group No.: WG188391							
Prep Date1: 03-JAN-14 Analyzed 03-Jan-14 15:20							

Results with 6 figures or more are expressed in scientific notation.
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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-2I
 Lab ID: L187280-3 (P193782-3)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 04:40pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-2I; +FLD DATA: pH =7.83; Cl2R =0.01 mg/L; Depth to GW =11.28 feet; GW
 Elevation =not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: PER SUBCONTRACT LABORATORY REPORT - Subcontract data transmittal for oxygen 18 <i>Subcontract data from Alpha Analytical Lab</i> Comment: Refer to sublab data report attached SUBCONTRACT LAB DATA DATA TRANSMITTAL Run ID: R248936 / Work Group No.: WG188837 Prep Date1: 27-JAN-14 Analyzed 27-Jan-14 00:00						GroundH2O	
Method: SAMPLER PROVIDED FIELD MEASUREMENTS - DATA ENTRY LIST FOR FIELD DATA FIELD ANALYSIS/OBSERVATION DATA PARAMETERS						GroundH2O	
PH		7.83	pH units	1			
DEPTH		11.28	feet	1			
CHLORINE RESIDUAL: TOTAL		0.01	mg/L	1	0.005		
Run ID: R248205 / Work Group No.: WG188183 Prep Date1: 18-DEC-13 Analyzed 18-Dec-13 16:40							
Method: EPA 8260B - Trihalomethanes, GC/MS TARGET ANALYTES						GroundH2O	
CHLOROFORM	U	0.17	ug/L	1	0.17		
BROMODICHLOROMETHANE	U	0.079	ug/L	1	0.079		
DIBROMOCHLOROMETHANE	U	0.13	ug/L	1	0.13		
BROMOFORM	U	0.23	ug/L	1	0.23		
INTERNAL STANDARD							
FLUOROBENZENE		85.2	% recovery	1			
D5-CHLOROBENZENE		90.4	% recovery	1			
D4-1,4-DICHLOROBENZENE		92.2	% recovery	1			
SURROGATE							
D8-TOLUENE		104	% recovery	1			
4-BROMOFLUOROBENZENE		106	% recovery	1			
Run ID: R248306 / Work Group No.: WG188203 Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 14:06							
Method: EPA 300.1 - Ion Chromatography Instrument calibrated 19-DEC-13 TARGET ANALYTES						GroundH2O	1
NITRATE AS N	U	0.0030	mg/L	1	0.003	0.4	
SURROGATE							
DICHLOROACETATE		100	% recovery	1			
Run ID: R248215 / Work Group No.: WG188172 Prep Date1: 19-DEC-13 Analyzed 20-Dec-13 01:37							
Method: EPA 300.1 - Ion Chromatography Instrument calibrated 19-DEC-13 TARGET ANALYTES						GroundH2O	
CHLORIDE		75	mg/L	10	0.02		
SULFATE		32	mg/L	10	0.03	0.5	
SURROGATE							
DICHLOROACETATE		99	% recovery	10			
Run ID: R248215 / Work Group No.: WG188172 Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 16:31							

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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
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
ClientID: MW-2I
Lab ID: L187280-3 (P193782-3)
Sample Type: GRAB (Instantaneous Grab)
Date Collected: Dec 18 2013, 04:40pm Sample collector: S. Penman/ESS
Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
Sample Comments: MW-2I; +FLD DATA: pH =7.83; Cl2R =0.01 mg/L; Depth to GW =11.28 feet; GW
Elevation =not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 552.2 - Haloacetic Acids & Dalapon							GroundH2O
TARGET ANALYTES							
BROMOCHLOROACETIC ACID	U	0.14	ug/L	1	0.14		
BROMODICHLOROACETIC ACID	U	0.16	ug/L	1	0.16		
CHLORODIBROMOACETIC ACID	U	0.19	ug/L	1	0.19		
DALAPON	U	0.18	ug/L	1	0.18		
DIBROMOACETIC ACID	I	0.34	ug/L	1	0.11	1	
DICHLOROACETIC ACID	U	0.23	ug/L	1	0.23	1	
MONOBROMOACETIC ACID	U	0.22	ug/L	1	0.22	1	
MONOCHLOROACETIC ACID	U	0.68	ug/L	1	0.68	2	
TRIBROMOACETIC ACID	U	0.44	ug/L	1	0.44		
TRICHLOROACETIC ACID	U	0.21	ug/L	1	0.21	1	
VALUE CALCULATED FROM OTHER RESULTS							
HAA (5)		0.34	ug/L		1.4		
HAA (9)		0.34	ug/L		2.4		
INTERNAL STANDARD							
1,2,3-TRICHLOROPROPANE		120	% recovery		1		
SURROGATE							
2,3-DIBROMOPROPIONIC ACID	U	100	% recovery		1		
Run ID: R248483 / Work Group No.: WG188370							
Prep Date1: 23-DEC-13 Prep Date2: 02-JAN-14 Analyzed 03-Jan-14 00:07							
Method: SM2320B - 1997, Titration							GroundH2O
TARGET ANALYTES							
ALKALINITY: TOTAL AS CaCO3		310	mg/L	1	5		
Run ID: R248223 / Work Group No.: WG188194							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM2340C - 1997, Titration: EDTA							GroundH2O
TARGET ANALYTES							
HARDNESS: TOTAL AS CaCO3		89	mg/L	1	3		
Run ID: R248385 / Work Group No.: WG188328							
Prep Date1: 31-DEC-13 Analyzed 31-Dec-13 08:00							
Method: SM2540C - 1997, Dried at 180C							GroundH2O
TARGET ANALYTES							
TOTAL DISSOLVED SOLIDS		500	mg/L	2	22		
Run ID: R248239 / Work Group No.: WG188197							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 07:30							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: HYDROXIDE	U	0.10	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							

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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
ClientID: MW-2I
Lab ID: L187280-3 (P193782-3)
Sample Type: GRAB (Instantaneous Grab)
Date Collected: Dec 18 2013, 04:40pm Sample collector: S. Penman/ESS
Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
Sample Comments: MW-2I; +FLD DATA: pH =7.83; Cl2R =0.01 mg/L; Depth to GW =11.28 feet; GW
Elevation =not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: SM4500-CO2 D - Calculation						GroundH2O	
TARGET ANALYTES							
ALKALINITY: CARBONATE		1.9	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation						GroundH2O	
TARGET ANALYTES							
ALKALINITY: BICARBONATE		300	mg/L	1	5		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-NH3 B, C - 1997, Distillation & Titration						GroundH2O	
TARGET ANALYTES							
AMMONIA AS N	U	0.300	mg/L	1	0.3		
Run ID: R248194 / Work Group No.: WG188168							
Prep Date: 19-DEC-13 Analyzed 19-Dec-13 09:00							
Method: EPA 200.7 - Rev. 4.4, ICP Scan						RawH2O	
TARGET ANALYTES							
CALCIUM		14,800	ug/L	1.04	32.2		
IRON		606	ug/L	1.04	4.16	100	
POTASSIUM		6,760	ug/L	1.04	10.4		
MAGNESIUM		13,400	ug/L	1.04	10.4		
MANGANESE		115	ug/L	1.04	0.52	20	
SODIUM		153,000	ug/L	1.04	6.24		
Run ID: R248493 / Work Group No.: WG188391							
Prep Date: 03-JAN-14 Analyzed 03-Jan-14 15:02							

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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-4
 Lab ID: L187280-4 (P193782-4)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 10:42am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-4; +FLD DATA: pH = 7.78; Cl2R = 0.03mg/L; Depth to GW =15.66 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 218.7 - Hexavalent Chromium by IC Subcontract data from E. S. Babcock Lab							RawH2O
Comment: ND - ANALYTE NOT DETECTED AT OR ABOVE THE MDL; UCMR3 PROTOCOL							
SUBCONTRACT LAB DATA							
HEXAVALENT CHROMIUM	ND	0.01	ug/L	1	0.01	0.03	
Run ID: R248559 / Work Group No.: WG188471 Prep Date1: 26-DEC-13 Analyzed 26-Dec-13 19:22							
Method: PER SUBCONTRACT LABORATORY REPORT - Subcontract data transmittal for oxygen 18 Subcontract data from Alpha Analytical Lab							GroundH2O
Comment: Refer to sublab data report attached							
SUBCONTRACT LAB DATA							
DATA TRANSMITTAL							
Run ID: R248936 / Work Group No.: WG188837 Prep Date1: 27-JAN-14 Analyzed 27-Jan-14 00:00							
Method: SAMPLER PROVIDED FIELD MEASUREMENTS - DATA ENTRY LIST FOR FIELD DATA							GroundH2O
FIELD ANALYSIS/OBSERVATION DATA PARAMETERS							
PH		7.78	pH units	1			
DEPTH		15.66	feet	1			
CHLORINE RESIDUAL: TOTAL		0.03	mg/L	1	0.005		
Run ID: R248205 / Work Group No.: WG188183 Prep Date1: 18-DEC-13 Analyzed 18-Dec-13 10:42							
Method: EPA 8260B - Trihalomethanes, GC/MS							GroundH2O
TARGET ANALYTES							
CHLOROFORM	U	0.17	ug/L	1	0.17		
BROMODICHLOROMETHANE	U	0.079	ug/L	1	0.079		
DIBROMOCHLOROMETHANE	U	0.13	ug/L	1	0.13		
BROMOFORM	U	0.23	ug/L	1	0.23		
INTERNAL STANDARD							
FLUOROBENZENE		84.6	% recovery	1			
D5-CHLOROBENZENE		91.8	% recovery	1			
D4-1,4-DICHLOROBENZENE		91.0	% recovery	1			
SURROGATE							
D8-TOLUENE		103	% recovery	1			
4-BROMOFLUOROBENZENE		97.2	% recovery	1			
Run ID: R248306 / Work Group No.: WG188203 Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 14:31							
Method: EPA 300.1 - Ion Chromatography							GroundH2O
Instrument calibrated 19-DEC-13							
TARGET ANALYTES							
CHLORIDE		59	mg/L	5	0.01		
SULFATE		42	mg/L	5	0.015	0.5	
SURROGATE							
DICHLOROACETATE		99	% recovery	5			
Run ID: R248215 / Work Group No.: WG188172 Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 17:08							

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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-4
 Lab ID: L187280-4 (P193782-4)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 10:42am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-4; +FLD DATA: pH = 7.78; Cl2R = 0.03mg/L; Depth to GW =15.66 feet; GW
 Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 300.1 - Ion Chromatography						GroundH2O	1
<i>Instrument calibrated 19-DEC-13</i>							
TARGET ANALYTES							
NITRATE AS N	U	0.0030	mg/L	1	0.003	0.4	
SURROGATE							
DICHLOROACETATE		100	% recovery	1			
Run ID: R248215 / Work Group No.: WG188172							
Prep Date1: 19-DEC-13 Analyzed 20-Dec-13 02:13							
Method: EPA 552.2 - Haloacetic Acids & Dalapon						GroundH2O	
TARGET ANALYTES							
BROMOCHLOROACETIC ACID	I	3.6	ug/L	1	0.14		
BROMODICHLOROACETIC ACID	U	0.16	ug/L	1	0.16		
CHLORODIBROMOACETIC ACID	U	0.19	ug/L	1	0.19		
DALAPON	U	0.18	ug/L	1	0.18		
DIBROMOACETIC ACID		0.36	ug/L	1	0.11	1	
DICHLOROACETIC ACID	U	0.23	ug/L	1	0.23	1	
MONOBROMOACETIC ACID	U	0.22	ug/L	1	0.22	1	
MONOCHLOROACETIC ACID	U	0.68	ug/L	1	0.68	2	
TRIBROMOACETIC ACID	U	0.44	ug/L	1	0.44		
TRICHLOROACETIC ACID	U	0.21	ug/L	1	0.21	1	
VALUE CALCULATED FROM OTHER RESULTS							
HAA (5)		0.36	ug/L		1.4		
HAA (9)		4.0	ug/L		2.4		
INTERNAL STANDARD							
1,2,3-TRICHLOROPROPANE		120	% recovery		1		
SURROGATE							
2,3-DIBROMOPROPIONIC ACID		100	% recovery		1		
Run ID: R248483 / Work Group No.: WG188370							
Prep Date1: 23-DEC-13 Prep Date2: 02-JAN-14 Analyzed 03-Jan-14 00:51							
Method: SM2320B - 1997, Titration						GroundH2O	
TARGET ANALYTES							
ALKALINITY: TOTAL AS CaCO3		260	mg/L	1	5		
Run ID: R248223 / Work Group No.: WG188194							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM2340C - 1997, Titration: EDTA						GroundH2O	
TARGET ANALYTES							
HARDNESS: TOTAL AS CaCO3		130	mg/L	1	3		
Run ID: R248385 / Work Group No.: WG188328							
Prep Date1: 31-DEC-13 Analyzed 31-Dec-13 08:00							
Method: SM2540C - 1997, Dried at 180C						GroundH2O	
TARGET ANALYTES							
TOTAL DISSOLVED SOLIDS		430	mg/L	2	22		
Run ID: R248239 / Work Group No.: WG188197							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 07:30							

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LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 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
 ClientID: MW-4
 Lab ID: L187280-4 (P193782-4)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 10:42am Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-4; +FLD DATA: pH = 7.78; Cl2R = 0.03mg/L; Depth to GW =15.66 feet; GW
 Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: HYDROXIDE	U	0.10	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: CARBONATE		1.5	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: BICARBONATE		260	mg/L	1	5		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-NH3 B, C - 1997, Distillation & Titration							GroundH2O
TARGET ANALYTES							
AMMONIA AS N	U	0.300	mg/L	1	0.3		
Run ID: R248194 / Work Group No.: WG188168							
Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 09:00							
Method: EPA 200.7 - Rev. 4.4, ICP Scan							RawH2O
TARGET ANALYTES							
CALCIUM		32,200	ug/L	1.04	32.2		
IRON		31.2	ug/L	1.04	4.16	100	
POTASSIUM		3,050	ug/L	1.04	10.4		
MAGNESIUM		13,000	ug/L	1.04	10.4		
MANGANESE		237	ug/L	1.04	0.52	20	
SODIUM		113,000	ug/L	1.04	6.24		
Run ID: R248493 / Work Group No.: WG188391							
Prep Date1: 03-JAN-14 Analyzed 03-Jan-14 15:08							

RL is either the client requested or regulatory mandated Reporting Limit. ML is the regulatory mandated Minimum Level



EAST BAY MUNICIPAL UTILITY DISTRICT
 Laboratory Services Division
 PO Box 24055, MS 59, Oakland, CA 94623
 Phone (510)287-1432 Fax (510)465-5462
Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater
 Locator: BAY1-MW6 R APN 438-0010-003 2364 Baumann Ave., San Lorenzo; formerly BAY-MW-WORTHLEY
 ClientID: MW-6
 Lab ID: L187280-5 (P193782-5)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 02:40pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-6; +FLD DATA: pH =7.41 ; Cl2R =0.07 mg/L; Depth to GW = 15.75 feet; GW
 Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: EPA 218.7 - Hexavalent Chromium by IC Subcontract data from E. S. Babcock Lab Comment: ND - ANALYTE NOT DETECTED AT OR ABOVE THE MDL; UCMR3 PROTOCOL SUBCONTRACT LAB DATA							RawH2O
HEXAVALENT CHROMIUM	ND	0.01	ug/L	1	0.01	0.03	
Run ID: R248559 / Work Group No.: WG188471 Prep Date1: 26-DEC-13 Analyzed 26-Dec-13 19:34							
Method: PER SUBCONTRACT LABORATORY REPORT - Subcontract data transmittal for oxygen 18 Subcontract data from Alpha Analytical Lab Comment: Refer to sublab data report attached SUBCONTRACT LAB DATA DATA TRANSMITTAL							GroundH2O
Run ID: R248936 / Work Group No.: WG188837 Prep Date1: 27-JAN-14 Analyzed 27-Jan-14 00:00							
Method: SAMPLER PROVIDED FIELD MEASUREMENTS - DATA ENTRY LIST FOR FIELD DATA FIELD ANALYSIS/OBSERVATION DATA PARAMETERS							GroundH2O
PH		7.41	pH units	1			
DEPTH		15.75	feet	1			
CHLORINE RESIDUAL: TOTAL		0.07	mg/L	1	0.005		
Run ID: R248205 / Work Group No.: WG188183 Prep Date1: 18-DEC-13 Analyzed 18-Dec-13 14:40							
Method: EPA 8260B - Trihalomethanes, GC/MS TARGET ANALYTES							GroundH2O
CHLOROFORM	U	0.17	ug/L	1	0.17		
BROMODICHLOROMETHANE	U	0.079	ug/L	1	0.079		
DIBROMOCHLOROMETHANE	U	0.13	ug/L	1	0.13		
BROMOFORM	U	0.23	ug/L	1	0.23		
INTERNAL STANDARD							
FLUOROBENZENE		83.0	% recovery	1			
D5-CHLOROBENZENE		87.6	% recovery	1			
D4-1,4-DICHLOROBENZENE		88.6	% recovery	1			
SURROGATE							
D8-TOLUENE		103	% recovery	1			
4-BROMOFLUOROBENZENE		102	% recovery	1			
Run ID: R248306 / Work Group No.: WG188203 Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 14:53							
Method: EPA 300.1 - Ion Chromatography Instrument calibrated 19-DEC-13 TARGET ANALYTES							GroundH2O
CHLORIDE		120	mg/L	10	0.02		
SULFATE		95	mg/L	10	0.03	0.5	
SURROGATE							
DICHLOROACETATE		100	% recovery	10			
Run ID: R248215 / Work Group No.: WG188172 Prep Date1: 19-DEC-13 Analyzed 19-Dec-13 17:44							

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Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater
 Locator: BAY1-MW6 R APN 438-0010-003 2364 Baumann Ave., San Lorenzo; formerly BAY-MW-WORTHLEY
 ClientID: MW-6
 Lab ID: L187280-5 (P193782-5)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 02:40pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-6; +FLD DATA: pH =7.41 ; Cl2R =0.07 mg/L; Depth to GW = 15.75 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag	
Method: EPA 300.1 - Ion Chromatography							GroundH2O	1
<i>Instrument calibrated 19-DEC-13</i>								
<i>TARGET ANALYTES</i>								
NITRATE AS N		0.017	mg/L	1	0.003	0.4		
<i>SURROGATE</i>								
DICHLOROACETATE		100	% recovery	1				
Run ID: R248215 / Work Group No.: WG188172								
Prep Date1: 19-DEC-13 Analyzed 20-Dec-13 02:49								
Method: EPA 552.2 - Haloacetic Acids & Dalapon							GroundH2O	
<i>TARGET ANALYTES</i>								
BROMOCHLOROACETIC ACID	I,N	3.6	ug/L	1	0.14			
BROMODICHLOROACETIC ACID	U	0.16	ug/L	1	0.16			
CHLORODIBROMOACETIC ACID	U	0.19	ug/L	1	0.19			
DALAPON	U	0.18	ug/L	1	0.18			
DIBROMOACETIC ACID		0.34	ug/L	1	0.11		1	
DICHLOROACETIC ACID	U	0.23	ug/L	1	0.23		1	
MONOBROMOACETIC ACID	U	0.22	ug/L	1	0.22		1	
MONOCHLOROACETIC ACID	U	0.68	ug/L	1	0.68		2	
TRIBROMOACETIC ACID	U	0.44	ug/L	1	0.44			
TRICHLOROACETIC ACID	U	0.21	ug/L	1	0.21		1	
<i>VALUE CALCULATED FROM OTHER RESULTS</i>								
HAA (5)		0.34	ug/L		1.4			
HAA (9)		3.9	ug/L		2.4			
<i>INTERNAL STANDARD</i>								
1,2,3-TRICHLOROPROPANE		120	% recovery		1			
<i>SURROGATE</i>								
2,3-DIBROMOPROPIONIC ACID		100	% recovery		1			
Run ID: R248483 / Work Group No.: WG188370								
Prep Date1: 23-DEC-13 Prep Date2: 02-JAN-14 Analyzed 03-Jan-14 01:34								
Method: SM2320B - 1997, Titration							GroundH2O	
<i>TARGET ANALYTES</i>								
ALKALINITY: TOTAL AS CaCO3		230	mg/L	1	5			
Run ID: R248223 / Work Group No.: WG188194								
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10								
Method: SM2340C - 1997, Titration: EDTA							GroundH2O	
<i>TARGET ANALYTES</i>								
HARDNESS: TOTAL AS CaCO3		110	mg/L	1	3			
Run ID: R248385 / Work Group No.: WG188328								
Prep Date1: 31-DEC-13 Analyzed 31-Dec-13 08:00								
Method: SM2540C - 1997, Dried at 180C							GroundH2O	
<i>TARGET ANALYTES</i>								
TOTAL DISSOLVED SOLIDS		420	mg/L	1	11			
Run ID: R248239 / Work Group No.: WG188197								
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 07:30								

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 Laboratory Services Division
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Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
 Site: GW BAYSIDE East Bay Ground Water Injection/Extraction Project Bayside Groundwater
 Locator: BAY1-MW6 R APN 438-0010-003 2364 Baumann Ave., San Lorenzo; formerly BAY-MW-WORTHLEY
 ClientID: MW-6
 Lab ID: L187280-5 (P193782-5)
 Sample Type: GRAB (Instantaneous Grab)
 Date Collected: Dec 18 2013, 02:40pm Sample collector: S. Penman/ESS
 Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
 Sample Comments: MW-6; +FLD DATA: pH =7.41 ; Cl2R =0.07 mg/L; Depth to GW = 15.75 feet; GW
 Elevation = not reported feet; Labelled as RAW WATER for the program.

Method Reference Parameter	Qualifier	Result	Units	Dilution	MDL	Matrix RL/ML	Tag
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: HYDROXIDE	U	0.10	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: CARBONATE		0.55	mg/L	1	0.1		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-CO2 D - Calculation							GroundH2O
TARGET ANALYTES							
ALKALINITY: BICARBONATE		230	mg/L	1	5		
Run ID: R248235 / Work Group No.: WG188196							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 08:10							
Method: SM4500-NH3 B, C - 1997, Distillation & Titration							GroundH2O
TARGET ANALYTES							
AMMONIA AS N	U	0.300	mg/L	1	0.3		
Run ID: R248240 / Work Group No.: WG188214							
Prep Date1: 21-DEC-13 Analyzed 21-Dec-13 08:00							
Method: EPA 200.7 - Rev. 4.4, ICP Scan							RawH2O
TARGET ANALYTES							
CALCIUM		32,400	ug/L	1.04	32.2		
IRON		60.4	ug/L	1.04	4.16	100	
POTASSIUM		2,140	ug/L	1.04	10.4		
MAGNESIUM		8,580	ug/L	1.04	10.4		
MANGANESE		223	ug/L	1.04	0.52	20	
SODIUM		110,000	ug/L	1.04	6.24		
Run ID: R248493 / Work Group No.: WG188391							
Prep Date1: 03-JAN-14 Analyzed 03-Jan-14 15:14							

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EAST BAY MUNICIPAL UTILITY DISTRICT
Laboratory Services Division
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Phone (510)287-1432 Fax (510)465-5462
Analytical Results Report

LSR B455-0706-1 BAYSIDE GROUND WATER PROJECT
Site: FIELD QC Sample collection QC
Locator: COLLECTION QC Field QC Sample submitted for analysis
Lab ID: L187280-6 (P193782-6)
Sample Type: QCFB (Field Blank Grab)
Date Collected: Dec 18 2013, 03:45pm Sample collector: S. Penman/ESS
Date Received: Dec 19 2013, 07:48am Sample receiver: BBELLEFE
Sample Comments: QCFB for L187280-1; Prep'd on 12DEC13 by JA

Method Reference	Qualifier	Result	Units	Dilution	MDL	Matrix	Tag
Parameter						RL/ML	
Method: EPA 8260B - Trihalomethanes, GC/MS						GroundH2O	
<i>TARGET ANALYTES</i>							
CHLOROFORM	U	0.17	ug/L	1	0.17		
BROMODICHLOROMETHANE	U	0.079	ug/L	1	0.079		
DIBROMOCHLOROMETHANE	U	0.13	ug/L	1	0.13		
BROMOFORM	U	0.23	ug/L	1	0.23		
<i>INTERNAL STANDARD</i>							
FLUOROBENZENE		87.2	% recovery	1			
D5-CHLOROBENZENE		93.8	% recovery	1			
D4-1,4-DICHLOROBENZENE		94.0	% recovery	1			
<i>SURROGATE</i>							
D8-TOLUENE		101	% recovery	1			
4-BROMOFLUOROBENZENE		97.8	% recovery	1			
Run ID: R248306 / Work Group No.: WG188203							
Prep Date1: 20-DEC-13 Analyzed 20-Dec-13 12:58							

RL is either the client requested or regulatory mandated Reporting Limit. ML is the regulatory mandated Minimum Level

East Bay Municipal Utility District
Laboratory Services Chain of Custody Record

Prelog or Login No.: L187280
Project Title
BAYSIDE GROUND WATER PROJECT
Account or Project: B455-0706-1

Client PM: DEREK LEE
Tel No.: (510) 287-1086
Lab PM: JACK C. LIM

Sampled by: S. Penman/ESS
Rcvd: 19-DEC-13 07:48
Sample Date: 18-DEC-13

Lab No.	Sample Type	Time	Site	Locator	Sample Matrix	Tests Required	Container Barcode	Chemical Preservative	Date	DueDate	Initials	
L187280-1	GRAB	08:29	WTP BAYSIDE	BAY WELL HEAD	GroundH2O	*300 IC ANIONS (1-3); CHLORIDE: IC; NITRATE: IC;	1206108	PLSTM			09-JAN-14	
					GroundH2O	SULFATE: IC	1206109	PLSTL Y				
					RawH2O	*ICP EPA 200.7; CA EPA 200.7; FE EPA 200.7; K EPA 200.7; MG EPA 200.7; MN EPA 200.7; NA EPA 200.7	1206110	PLSTL				
					GroundH2O	ALKALINITY: CO3; ALKALINITY: HCO3; ALKALINITY: OH;	1206111	AL25N Y				
					GroundH2O	ALKALINITY: TOTAL; HARDNESS: TOTAL; TDS: GRAVIMETRIC	1206112	AL25N Y				
					GroundH2O	552	1206113	VOC4T Y				
					GroundH2O	552	1206114	VOC4T Y				
					GroundH2O	8260-THMS	1206115	VOC4T Y				
					GroundH2O	8260-THMS	1206116	PLSTL Y				
					GroundH2O	8260-THMS	1206422	CLAB Y				
					RawH2O	AMMONIA: TITR						
					RawH2O	UMMR-CHROMIUM +6: IC						
					RawH2O	+FLD DATA; +REPORT; +SAMP KIT						

Client ID: Bayside well

Sample Comments: BAYSIDE WELL; +FLD DATA: pH = 7.87 ; Cl2R = 0.03 mg/L; Labelled as RAW WATER for the program Pricing: STD

Lab No.	Sample Type	Time	Site	Locator	Sample Matrix	Tests Required	Container Barcode	Chemical Preservative	Date	DueDate	Initials	
L187280-2	GRAB	13:05	GW BAYSIDE	BAY1-MW2S	GroundH2O	*300 IC ANIONS (1-3); CHLORIDE: IC; NITRATE: IC;	1206126	PLSTM			09-JAN-14	
					GroundH2O	SULFATE: IC	1206127	PLSTL Y				
					RawH2O	*ICP EPA 200.7; CA EPA 200.7; FE EPA 200.7; K EPA 200.7; MG EPA 200.7; MN EPA 200.7; NA EPA 200.7	1206128	PLSTL				
					GroundH2O	ALKALINITY: CO3; ALKALINITY: HCO3; ALKALINITY: OH;	1206129	AL25N Y				
					GroundH2O	ALKALINITY: TOTAL; HARDNESS: TOTAL; TDS: GRAVIMETRIC	1206130	AL25N Y				
					GroundH2O	552	1206131	VOC4T Y				
					GroundH2O	552	1206132	VOC4T Y				
					GroundH2O	8260-THMS	1206133	VOC4T Y				
					GroundH2O	8260-THMS	1206134	PLSTL Y				
					GroundH2O	AMMONIA: TITR	1206153	FLSTS				
					GroundH2O	+FLD DATA; +REPORT; +TRANSMITTAL						

Client ID: MW-2S

Sample Comments: MW-2S; +FLD DATA: pH = 6.67 ; Cl2R = 0.08 mg/L; Depth to GW = 8.38 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. (Analytical NOTE: may need to dilute for ICP & IC - salt water intrusion Pricing: STD)

East Bay Municipal Utility District
Laboratory Services Chain of Custody Record

Prelog or Login No.: L187280
Project Title: BAYSIDE GROUND WATER PROJECT
Account or Project: B455-0706-1

Client PM: DEREK LEE
Tel No.: (510) 287-1086
Lab PM: JACK C. LIM

Sampled by: S. Penman/ESS
Rcvd: 19-DEC-13 07:48
Sample Date: 18-DEC-13

Lab No.	Sample Type	Time	Site	Locator	Sample Matrix	Tests Required	Container Barcode	Chemical Preservative	Date	DueDate	Initials
L187280-3	GRAB	16:40	GW BAYSIDE	BAY1-MW2I	GroundH2O	*300 IC ANIONS (1-3); CHLORIDE: IC; NITRATE: IC;	1206117	PLSTM		09-JAN-14	
					GroundH2O	SULFATE: IC					
					RawH2O	*ICP EPA 200.7; CA EPA 200.7; FE EPA 200.7; K EPA	1206118	PLSTL Y			
					RawH2O	200.7; MG EPA 200.7; MN EPA 200.7; NA EPA 200.7					
					GroundH2O	ALKALINITY: CO3; ALKALINITY: HCO3; ALKALINITY: OH;	1206119	PLSTL			
					GroundH2O	ALKALINITY: TOTAL; HARDNESS: TOTAL; TDS: GRAVIMETRIC					
					GroundH2O	552	1206120	A125N Y			
					GroundH2O	552	1206121	A125N Y			
					GroundH2O	8260--THMS	1206122	VOC4T Y			
					GroundH2O	8260--THMS	1206123	VOC4T Y			
					GroundH2O	8260--THMS	1206124	VOC4T Y			
					GroundH2O	AMMONIA: TITR	1206125	PLSTL Y			
					GroundH2O	OXYGEN 18	1206154	PLSTS			
					GroundH2O	+FLD DATA; +REPORT					

ClientID: MW-2I

Sample Comments: MW-2I; +FLD DATA: pH = 7.83; CL2R = 0.01 mg/L; Depth to GW = 11.28 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. Pricing: STD

L187280-4	GRAB	10:42	GW BAYSIDE	BAY1-MW4	GroundH2O	*300 IC ANIONS (1-3); CHLORIDE: IC; NITRATE: IC;	1206135	PLSTM		09-JAN-14	
					GroundH2O	SULFATE: IC					
					RawH2O	*ICP EPA 200.7; CA EPA 200.7; FE EPA 200.7; K EPA	1206136	PLSTL Y			
					RawH2O	200.7; MG EPA 200.7; MN EPA 200.7; NA EPA 200.7					
					GroundH2O	ALKALINITY: CO3; ALKALINITY: HCO3; ALKALINITY: OH;	1206137	PLSTL			
					GroundH2O	ALKALINITY: TOTAL; HARDNESS: TOTAL; TDS: GRAVIMETRIC					
					GroundH2O	552	1206138	A125N Y			
					GroundH2O	552	1206139	A125N Y			
					GroundH2O	8260--THMS	1206140	VOC4T Y			
					GroundH2O	8260--THMS	1206141	VOC4T Y			
					GroundH2O	8260--THMS	1206142	VOC4T Y			
					GroundH2O	AMMONIA: TITR	1206143	PLSTL Y			
					GroundH2O	OXYGEN 18	1206155	PLSTS			
					RawH2O	UCMR--CHROMIUM +6: IC					
					RawH2O	+FLD DATA; +REPORT	1206423	CLAB Y			

East Bay Municipal Utility District
Laboratory Services Chain of Custody Record

Prelog or Login No.: L187280
Project Title
BAYSIDE GROUND WATER PROJECT
Account or Project: B455-0706-1

Client PM: DEREK LEE
Tel No.: (510) 287-1086
Lab PM: JACK C. LIM

Sampled by: S. Penman/ESS
Rcvd: 19-DEC-13 07:48
Sample Date: 18-DEC-13

Lab No.	Sample Type	Time	Site	Locator	Sample Matrix	Tests Required	Container Barcode	Chemical Preservative	Date	DueDate	Initials
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ClientID: MW-4
Sample Comments: MW-4; +FLD DATA: pH = 7.78; Cl2R = 0.03mg/L; Depth to GW =15.66 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. Pricing: STD

L187280-5	GRAB	14:40	GW BAYSIDE	BAY1-MW6	GroundH2O	*300 IC ANIONS (1-3); CHLORIDE: IC; NITRATE: IC; SULFATE: IC	1206144	PLSTM		09-JAN-14	
					RawH2O	*ICP EPA 200.7; CA EPA 200.7; PE EPA 200.7; K EPA 200.7; MG EPA 200.7; MN EPA 200.7; NA EPA 200.7	1206145	PLSTL Y			
					GroundH2O	ALKALINITY: CO3; ALKALINITY: HCO3; ALKALINITY: OH; ALKALINITY: TOTAL; HARDNESS: TOTAL; TDS: GRAVIMETRIC	1206146	PLSTL			
					GroundH2O	552	1206147	A125N Y			
					GroundH2O	552	1206148	A125N Y			
					GroundH2O	8260-THMS	1206149	VOC4T Y			
					GroundH2O	8260-THMS	1206150	VOC4T Y			
					GroundH2O	8260-THMS	1206151	VOC4T Y			
					GroundH2O	AMMONIA: TITR	1206152	PLSTL Y			
					GroundH2O	OXYGEN 18	1206156	PLSTS			
					RawH2O	UCMR-CHROMIUM +6: IC	1206424	CLAB Y			
					RawH2O	+FLD DATA,+REPORT					

ClientID: MW-6
Sample Comments: MW-6; +FLD DATA: pH =7.41 ; Cl2R =0.07 mg/L; Depth to GW = 15.75 feet; GW Elevation = not reported feet; Labelled as RAW WATER for the program. Pricing: STD

L187280-6	QCFB	15:45	FIELD QC	COLLECTION QC	GroundH2O	8260-THMS	1206157	VOC4T Y		09-JAN-14	
					GroundH2O	8260-THMS	1206158	VOC4T Y			
					GroundH2O	+HOLD	1206159	A250Z			

ClientID:
Sample Comments: QCFB for L187280-1; Prep'd on 12DEC13 by JA Pricing: STD

Total containers received: 55

East Bay Municipal Utility District
Laboratory Services Chain of Custody Record

Prelog or
Login No.: L187280

Project Title
BAYSIDE GROUND WATER PROJECT
Account or Project: B455-0706-1

Client PM: DEREK LEE
Tel No.: (510) 287-1086
Lab PM: JACK C. LIM

Sampled by: S. Penman/ESS
Rcvd: 19-DEC-13 07:48
Sample Date: 18-DEC-13

Signature	Print Name	Time	Date
Relinquished by _____			
Received by _____			
Relinquished by _____			
Received by _____			
Relinquished by _____			
Received by _____	Brian P Bellefeuille	07:48	19-DEC-13

Sample Type Descriptions:
GRAB - Instantaneous Grab
QCFB - Field Blank Grab

Container Type Descriptions:
CLAB - Contract lab supplied container, see COC,
PLSTS - Plastic, NM, 125 mL
VOC4T - Glass, clear, septa top, 10 mg Na2S2O3, 40 mL
A250Z - Glass, amber, NM, septa top, ZHS, 250 mL
PLSTM - Plastic, WM, 500 mL
A125N - Glass, amber, NM, septa top, NH4Cl, 125 mL
PLSTL - Plastic, WM, 1000 mL

Samples will be retained beyond the approval process only if requested by the client.

EBMUD LABORATORY COOLER RECEIPT FORM

Login Number: L187280 Received: 19-Dec-2013 07:48
 Converted from P193782

Cooler ID: 225364

Cooler ID: 225364	225367				
1. Did cooler come with a shipping slip? Tracking number:	No	No			
PACKAGING AND PRESERVATION					
1. Ice present?	Yes	Yes			
2. Type of cooler packing:	None	None			
3. Temperature of a representative sample. Measured temp: Corrected temperature:	1.5 .8	.9 .2			
4. SWBCT cont. > 10 C received >= 2 hrs. after collection:	PLSTL No	PLSTL No			
LOGIN PHASE					
1. Containers intact?	Yes	Yes			
2. Preservation correct?	Yes	Yes			
3. Correct sample containers?	Yes	Yes			
4. Sufficient sample volume?	Yes	Yes			
5. Labels legible?	Yes	Yes			
6. Label info agrees with COC?	Yes	Yes			
7. Label information complete?	Yes	Yes			
8. Bubbles present in VOA-type containers? Container IDs w/ bubbles:	No	No			
9. Senior Chemist notified of anomalies? Senior Chemist called Who called?	No	No			
CHAIN OF CUSTODY DOCUMENTATION					
1. COC signed by Lab?	Yes	Yes			
2. Project identified on COC?	Yes	Yes			
3. COC info complete?	Yes	Yes			

SHIPPING INFORMATION

- Did cooler come with a shipping slip?
Tracking number:

PACKAGING AND PRESERVATION

- Ice present?
- Type of cooler packing:
- Temperature of a representative sample. Measured temp:
Corrected temperature:
- SWBCT cont. > 10 C received >= 2 hrs. after collection:

LOGIN PHASE

- Containers intact?
- Preservation correct?
- Correct sample containers?
- Sufficient sample volume?
- Labels legible?
- Label info agrees with COC?
- Label information complete?
- Bubbles present in VOA-type containers?
Container IDs w/ bubbles:
- Senior Chemist notified of anomalies?
Senior Chemist called
Who called?

CHAIN OF CUSTODY DOCUMENTATION

- COC signed by Lab?
- Project identified on COC?
- COC info complete?

Comments:

Site / locator: FIELD QC/COLLECTION QC
 Site / locator: GW BAYSIDE/BAY1-MW2I MW-2I
 Site / locator: GW BAYSIDE/BAY1-MW2S MW-2S
 Site / locator: GW BAYSIDE/BAY1-MW6 MW-6
 Site / locator: WTP BAYSIDE/BAY WELL HEAD Bayside well
 Site / locator: GW BAYSIDE/BAY1-MW4 MW-4