



BRACEWELL ENGINEERING, INC.

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December 8, 2023

District Engineer
State Water Resources Control Board-Division of Drinking Water
850 Marina Bay Parkway, Building P, 2nd Floor
Richmond, CA 94804

Re: November 2023 Monthly Report to the Office of Drinking Water
La Honda Water System (County Service Area No. 7), No. CA4100509

Dear District Engineer:

Attached are the Monthly Summary of Distribution System Coliform Monitoring and the Monthly Summary of Monitoring for Surface Water Treatment Regulations for the La Honda Water System.

- The monthly distribution system treated water bacteriological sample showed an absence of total coliforms and E. coli.
- Chlorine residuals were maintained as required.
- The minimum Disinfection CT ratio was 2.8 for a DDW required 1- log removal for Giardia.

Please do not hesitate to contact me if you have any questions.

Respectfully submitted,
BRACEWELL ENGINEERING, INC.

Lloyd W. Bracewell, PhD., RCE
Water System Engineer

cc: San Mateo County, CSA #7
BEI Office

La Honda Water System (CSA No. 7)
 555 County Center, 5th Floor
 Redwood City, CA 94063
 System No. CA4100509

WATER SYSTEM MONITORING REPORT

Water Resources Control Board
 Division of Drinking Water
 850 Marina Bay Parkway, Bldg P
 Richmond, CA 98804

Location			Plant On	Raw Water	Raw Water	Treated Water	Backwash
Parameter			SW Plant	Tank	Flow	Average Flow	Flow
frequency			daily	daily	calculation	calculation	calculation
Units			Y/N	ft	gal/d	gal/d	gal/d
Type				level	flow		flow
High Limit							
Low Limit							
Date	Initials	Time					
11/1/2023			Y		58,588	49,400	4,600
11/2/2023	KB	1000	Y	14.47	58,588	49,400	4,600
11/3/2023			Y		17,579	44,800	1,867
11/4/2023			N		17,579	-	1,867
11/5/2023			N		17,579	-	1,867
11/6/2023			N		17,579	-	1,867
11/7/2023			N		17,579	-	1,867
11/8/2023	KB	1030	Y	13.33	17,579	44,800	1,867
11/9/2023			Y		17,679	37,880	1,642
11/10/2023			Y		17,679	37,880	1,642
11/11/2023			Y		17,679	37,880	1,642
11/12/2023			Y		17,679	37,880	1,642
11/13/2023			N		17,679	-	1,642
11/14/2023			N		17,679	-	1,642
11/15/2023			N		17,679	-	1,642
11/16/2023			N		17,679	-	1,642
11/17/2023			N		17,679	-	1,642
11/18/2023			N		17,679	-	1,642
11/19/2023			N		17,679	-	1,642
11/20/2023	KB	1000	Y	13.62	17,679	37,880	1,642
11/21/2023			Y		5,994	29,200	525
11/22/2023			Y		5,994	29,200	525
11/23/2023			N		5,994	-	525
11/24/2023			N		5,994	-	525
11/25/2023			N		5,994	-	525
11/26/2023			N		5,994	-	525
11/27/2023			N		5,994	-	525
11/28/2023			N		5,994	-	525
11/29/2023			N		5,994	-	525
11/30/2023			N		5,994	-	525

Min	-	1000	-	13.33	5,994	-	525
Max	-	1030	-	14.47	58,588	49,400	4,600
Average				13.81	16,491	14,540	1,512
Total					494,735	436,200	45,350

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Location	Contact Pipe	Contact Pipe	Contact Pipe	Contact Pipe	Contact Pipe	Contact Pipe	Contact Pipe
Parameter	turbidity	Max Turbidity	Min Temp	Min CL2	pH	Turbidity	Temp
frequency	daily	daily	daily	daily	weekly	weekly	weekly
Units	units	ntu	C	mg/L	units	ntu	C
Type	Analyzer	Analyzer	Analyzer	Analyzer	Grab	Grab	Grab
High Limit							
Low Limit							
Date							
11/1/2023							
11/2/2023	7.6	0.051	14.8	2.56			
11/3/2023							
11/4/2023							
11/5/2023							
11/6/2023							
11/7/2023							
11/8/2023	7.7	0.074	17.5	2.2	7.71	0.2	15.7
11/9/2023							
11/10/2023							
11/11/2023							
11/12/2023							
11/13/2023							
11/14/2023							
11/15/2023							
11/16/2023							
11/17/2023							
11/18/2023							
11/19/2023							
11/20/2023	7.7	0.13	14.1	1.58	7.74	0.12	14.6
11/21/2023							
11/22/2023							
11/23/2023							
11/24/2023							
11/25/2023							
11/26/2023							
11/27/2023							
11/28/2023							
11/29/2023							
11/30/2023							

Min	7.60	0.05	14.10	1.58	7.71	0.12	14.60
Max	7.70	0.13	17.50	2.56	7.74	0.20	15.70
Average	7.67	0.09	15.47	2.11	7.73	0.16	15.15
Total							

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Location		TW Storage Tank	TW Storage Tank	TW Storage Tank	TW Storage Tank
Parameter		Level	Temp	pH	cl2 residual
frequency		weekly	weekly	weekly	weekly
units		ft	C	Units	ppm
Type		Visual			
High Limit			17.0	8.50	2.00
Low Limit			6.5	7.50	0.30
Date	Oper. Initials				
11/1/2023					
11/2/2023	KB	20.4	16.2	8.31	0.97
11/3/2023					
11/4/2023					
11/5/2023					
11/6/2023					
11/7/2023					
11/8/2023					
11/9/2023	KB	24.1	14	8.44	0.61
11/10/2023					
11/11/2023					
11/12/2023					
11/13/2023					
11/14/2023					
11/15/2023					
11/16/2023					
11/17/2023	KB	27.9	18.4	8.38	0.47
11/18/2023					
11/19/2023					
11/20/2023					
11/21/2023	KB	28.8	14.8	7.94	1.93
11/22/2023					
11/23/2023					
11/24/2023					
11/25/2023					
11/26/2023					
11/27/2023					
11/28/2023	KB	27.3	13.7	8.04	1.22
11/29/2023					
11/30/2023					

Min	-	20.4	13.7	7.94	0.47
Max	-	28.8	18.4	8.44	1.93
Average		25.7	15.4	8.22	1.04
Total					

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Location		Routine Sample Site
Parameter		Cl2 Residual
frequency		as needed
units		mg/L
Type		grab
High Limit		
Low Limit		
Date	Oper. Initials	
11/1/2023	KB	1.53
11/2/2023		
11/3/2023		
11/4/2023		
11/5/2023		
11/6/2023		
11/7/2023		
11/8/2023		
11/9/2023	KB	1.21
11/10/2023		
11/11/2023		
11/12/2023		
11/13/2023		
11/14/2023	KB	0.56
11/15/2023		
11/16/2023		
11/17/2023		
11/18/2023		
11/19/2023		
11/20/2023		
11/21/2023	KB	1.31
11/22/2023		
11/23/2023		
11/24/2023		
11/25/2023		
11/26/2023		
11/27/2023		
11/28/2023	KB	0.88
11/29/2023		
11/30/2023		

Min	-	0.56
Max	-	1.53
Average		1.10
Total		

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Row Labels	Raw Water - Flow (gal/d): calculation	Treated Water - Average Flow (gal/d): calculation	Backwash - Flow (gal/d): calculation
2022	291,637	19,843	3,443
Jan	30,036	27,571	4,179
Feb	3,526,066	18,586	2,911
Mar	17,774	14,952	2,179
Apr	20,752	17,809	2,742
May	18,380	16,865	2,728
Jun	16,072	18,541	2,826
Jul	16,543	19,370	3,465
Aug	16,569	19,313	4,046
Sep	23,330	23,743	4,477
Oct	21,121	23,098	4,773
Nov	26,008	22,087	3,851
Dec	19,834	16,895	3,160
2023	13,248	11,576	1,603
Jan	5,776	4,419	887
Feb	3,481	6,396	1,489
Mar	0	3,389	991
Apr	22,903	22,033	3,360
May	9,422	8,961	1,534
Jun	20,446	21,659	1,993
Jul	11,519	9,875	1,246
Aug	24,440	21,556	2,158
Sep	30,522	17,247	1,807
Oct	9,636	8,906	926
Nov	16,491	14,540	1,512
Dec	5,994	0	525
Average	159,513	15,698	2,552

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Row Labels	TW Storage Tank - Level (ft): weekly	TW Storage Tank - Temp (C): weekly	TW Storage Tank - cl2 residual (ppm): weekly
2022	26	15	1.00
Jan	22	13	0.56
Feb	26	10	0.80
Mar	29	11	0.99
Apr	27	12	0.74
May	29	15	1.17
Jun	27	17	0.88
Jul	24	18	1.09
Aug	25	17	1.17
Sep	28	19	1.28
Oct	27	18	0.98
Nov	22	13	1.50
Dec	25	12	0.77
2023	21	15	0.73
Jan	16	11	0.49
Feb	26	11	0.52
Mar	13	12	0.24
Apr	18	14	1.19
May	26	15	0.72
Jun	20	17	0.78
Jul	26	18	0.68
Aug	22	19	0.93
Sep	23	18	0.93
Oct	22	18	0.65
Nov	25	16	1.00
Dec			
Average	24	15	0.87

LHW

November

La Honda Water System (W4100509)

CHLORINE RESIDUAL	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	90 Memory Ln	AA06164	11/2/23	0.7	mg/L		SM 4500-CI G		0.02	
		AA06137	11/1/23	1.5	mg/L		SM 4500-CI G		0.02	
			HIGH 1.50	AVG 1.10	LOW 0.70					
	Old Chlorination Station	AA06093	11/14/23	0.6	mg/L		SM 4500-CI G	0.02	0.02	
COLIFORM MPN	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	ALPINE CREEK - RAW	AA06092	11/14/23	152.9	MPN/100mL		SM9223B-18	1.0	1.0	
COLIFORM PA	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	90 Memory Ln	AA06164	11/2/23	A	P/A		SM9223B-18			
		AA06137	11/1/23	A	P/A		SM9223B-18			
			HIGH	AVG	LOW					
	Old Chlorination Station	AA06093	11/14/23	A	P/A		SM9223B-18			
E COLI MPN	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	ALPINE CREEK - RAW	AA06092	11/14/23	34.1	MPN/100mL		SM9223B-18	1.0	1.0	
E COLI PA	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	90 Memory Ln	AA06164	11/2/23	A	P/A		SM9223B-18			
		AA06137	11/1/23	A	P/A		SM9223B-18			
			HIGH	AVG	LOW					
	Old Chlorination Station	AA06093	11/14/23	A	P/A		SM9223B-18			
UV254	SAMPLE POINT	SAMPLE ID	DATE	RESULT	UNIT	LIMIT	METHOD	DL	RL	TYPE
	ALPINE CREEK - RAW	AA06022	11/1/23	0.072	Abs/Tran		SM 5910B			
	Alpine Creek - Raw Water	AA06153	11/9/23	0.019	Abs/Tran		SM 5910B			
	Alpine Creek - Raw Water	AA06187	11/14/23	0.044	Abs/Tran		SM 5910B			
	Alpine Creek - Raw Water	AA06223	11/21/23	0.037	Abs/Tran		SM 5910B			
	Alpine Creek - Raw Water	AA06247	11/29/23	77.0	Abs/Tran		SM 5910B			
			HIGH 77.00	AVG 15.43	LOW 0.02					
	TREATMENT PLANT - TREATED	AA06023	11/1/23	0.059	Abs/Tran		SM 5910B			
	Treated Water	AA06154	11/9/23	0.067	Abs/Tran		SM 5910B			
	Treated Water	AA06188	11/14/23	0.005	Abs/Tran		SM 5910B			
	Treated Water	AA06224	11/21/23	0.028	Abs/Tran		SM 5910B			
	Treated Water	AA06248	11/29/23	91.9	Abs/Tran		SM 5910B			
			HIGH 91.90	AVG 18.41	LOW 0.01					

Monthly Summary of Monitoring
For Surface Water Treatment Regulations

System Name: La Honda Water System (CSA #7)

System Number: 4100509

Treatment Plant Name: La Honda Water System (CSA #7)

Month: November Year: 2023

Treated Water Turbidities Every Four Hours (NTU)*

Date	Peak Raw Water Turbidity	Peak Settled Water Turbidity	Midnight to 0400	0400 to 0800	0800 to Noon	Noon to 1600	1600 to 2000	2000 to Midnight	Average Treated Water	Minimum Ct. Ratio
1	0.63			0.05	0.05	0.04	0.05	0.05	0.05	3.9
2	0.64		0.04	0.05	0.05	0.05	0.05	0.05	0.05	4.1
3	0.67		0.05	0.05	0.05	0.05	0.05	0.05	0.05	4.2
4										
5										
6										
7										
8	0.69					0.05	0.05	0.05	0.05	3.0
9	0.64		0.05	0.05	0.05	0.05	0.05	0.05	0.05	2.8
10	0.72		0.05	0.05	0.05	0.06	0.05	0.05	0.05	2.9
11	1.05		0.05	0.05	0.05	0.06	0.05	0.05	0.05	2.9
12	0.57		0.06						0.06	2.9
13										
14										
15										
16										
17										
18										
19										
20	0.82					0.05	0.05	0.16	0.09	3.3
21	0.92		0.06	0.05	0.24	0.06	0.05		0.09	2.9
22	0.52		0.05						0.05	2.8
23										
24										
25										
26										
27										
28										
29										
30										
31										
Ave.	0.72								0.06	2.8

*If a continuous monitoring turbidimeter is used, determine discrete turbidity value for the same times during each 24-hour period

Total No. of Samples: 48 No. of Readings ≤ 0.3 NTU: 48 x

% Readings ≤ 0.3 NTU = [(No. Readings ≤ 0.3 NTU) / (Total No. Samples)] x 100 = 100%

Meets Standard (i.e. more than 95% of readings are ≤ 0.3 NTU) (Y/N)? Y

Percent reduction during the month = [(Average Raw NTU - Average Effluent NTU) / (Average Raw NTU)] x 100 = 92%

Meets Standard (i.e. reduction is greater than 80%) (Y/N)? Y

95th Percentile Value of all turbidity readings (95% of all turbidity readings are less than this value) 0.060

Incidents of turbidity greater than 1.0 NTU

Date of Incident				
Value				
Duration				

Total Number of incidents where turbidity is > 1.0 NTU: 0
 Total Number of incidents where turbidity is > 5.0 NTU: 0
 Meets Standards (i.e. NTU is not > 1.0 for more than eight consecutive hours) (Y/N)? Y

After placing a filter back into service after any interruption (e.g. backwashing), did the filter effluent comply with the following criteria:

a. < 2.0 NTU after all events (Y/N)? Y
 b. < 1.0 NTU after 90% of events (Y/N)? Y
 c. < 0.5 NTU after 4 hours (Y/N)? Y

Indicate the date that the turbidimeters that are used for regulatory monitoring purposes were calibrated

Date	Which Turbidimeter	Standard used (primary/secondary)	Date	Which Turbidimeter	Standard Used (primary/secondary)
1/28/2022	Hach, raw wtr	0/20 Formazin	1/28/2022	Hach, treated	0/20 Formazin
4/28/2022	Hach, raw wtr	0/20 Formazin	4/28/2022	Hach, treated	0/20 Formazin
7/22/2022	Hach, raw wtr	0/20 Formazin	7/22/2022	Hach, treated	0/20 Formazin
10/26/2022	Hach, raw wtr	0/20 Formazin	10/26/2022	Hach, treated	0/20 Formazin
1/27/2023	Hach, raw wtr	0/20 Formazin	1/27/2023	Hach, treated	0/20 Formazin
6/2/2023	Hach, raw wtr	0/20 Formazin	6/2/2023	Hach, treated	0/20 Formazin
9/27/2023	Hach, raw wtr	0/20 Formazin	9/27/2023	Hach, treated	0/20 Formazin

Disinfection Process Data

Disinfectant residual type: free chlorine: X combined chlorine: _____ other (specify) _____

Incidents of chlorine residuals less than 0.2 ppm at the plant effluent:

Date of Incident			
Duration			
Date Dept. Notified			

Total number of incidents where residual is < 0.2 ppm: 0
 Meets standard (i.e. not less than 0.2 ppm for more than four hours) (Y/N)? Y

No. of distribution system residual samples collected:	1
No of distribution system samples for HPC only:	
Total No. residual and/or HPC samples collected:	1
No. of samples with no detectable residual and HPC is not measured:	0
No. of samples with no residual and HPC > 500 CFU/ml:	
No. of samples for HPC only and HPC > 500 CFU/ml:	
Total No. Samples with no residual and/or HPC > 500 CFU/ml:	0

Compute V where $V = [1 - (\text{Total number of samples with no residual and/or HPC} > 500) / (\text{Total number of residual and/or HPC samples collected})] \times 100 =$ 100%

Meets Standard (i.e V > 95%) (Y/N) Y

Summary of Water Quality Complaints

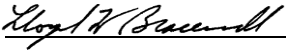
General Complaints

Type of Complaint	Number	Corrective Actions Taken
Taste/Odor	0	
Color	0	
Turbidity	0	
Suspended Solids	0	
Other (describe)	0	

Reports of Gastrointestinal Illness (Attach additional sheets if necessary):

Person Reporting	Date	Corrective Actions Taken

Attach explanation of any failure of the performance standards or operating criteria and corrective action taken or planned

Signature: 

Date: 12/8/2023

