CITY OF LOMITA

Cypress Water Production Facility Monthly Status Report

January 2017

TABLE OF CONTENTS

CITY OF LOMITA

February 9, 2017

Mr. Paul Williams, P.E.
District Engineer – Hollywood District
State Water Resources Control Board – Division of Drinking Water
500 North Central Avenue, Suite 500
Glendale, CA 91203

Subject: System No. 1910073 - Monthly Report for the Cypress Water Production Facility (CWPF) for the period of January 1 through January 31, 2017.

Dear Mr. Williams,

In accordance with the Department of Public Health temporary approval letter dated March 15, 2013 and Permit Amendment No. 1910073, I am submitting the following report for the Cypress Water Production Facility operations for the month of January 2017.

If you should have any questions or concerns, please contact me at 310-325-7110 Ext. 124.

Sincerely,

For Mark A. McAvoy, P.E.
Public Works Director/City Engineer

A. BACKGROUND

On March 15, 2013, the City of Lomita received conditional approval from the Department of Public Health (DPH) to distribute blended water from the Cypress Water Production Facility (CWPF) Well No. 5 to the City's customers.

The CWPF is an iron-manganese greensand filtration treatment system designed to remove primarily iron, manganese, and color. The CWPF was recently modified to enable aeration and blending with Metropolitan Water District (MWD) imported water to address the aesthetic secondary issues of Total Dissolved Solids (TDS), Hardness (as Calcium Carbonate), and Taste/Odor.

The CWPF came online on April 1, 2013. The first week of operations from April 1 to April 5, 2013 was utilized for conducting routine startup activities. The distribution of blended water to the City's residents began on April 5, 2013.

B. WELL PRODUCTION

The CWPF was offline during the first three weeks of January 2017 due to annual maintenance of equipment and disinfection of the reservoir. The CWPF was placed back online on January 19, 2017. The average flow from Well No. 5 was 408 gpm and 602 gpm from MWD. The blend ratio for month was 41% Well water and 59% MWD water. See Table 1 below for production totals for the month of January 2017.

Table 1. Monthly Production Totals.

	Production for January 2017		
Well No. 5	14.97	ac-ft	(4,878,531 gallons)
MWD	21.20	ac-ft	(6,907,000 gallons)
Combined Total	36.17	ac-ft	(11,785,527 gallons)
Daily	3.01	ac-ft/day	(1,683,647 gallons/day)

C. OPERATIONAL INTERRUPTIONS

The CWPF was offline during the first three weeks of January 2017 due to annual maintenance of equipment and disinfection of the reservoir. The CWPF was placed back online on January 19, 2017. No major planned operational interruptions are anticipated for the following month.

D. SAMPLE LOCATIONS

Compliance monitoring is performed at the following sample locations: SP1, SP2, SP3, SP5, and SP6. The SP1 sample location is the raw well water sample location. The SP2 sample location is on the effluent side of the greensand filter (before ammonia injection or full chloramination). The SP3 sample location is downstream of the greensand filter after full chloramination and the static mixer before entering the reservoir. The SP5 sample location is the reservoir effluent sample location before entering the distribution system. The SP6 sample location is the MWD source sample location before blending occurs.

E. WATER QUALITY MONITORING

All water quality monitoring analyses were performed by laboratories certified by the Department of Health's Environmental Laboratory Accreditation Branch (ELAB). The CWPF has been continuously monitored, maintained and inspected, per the CWPF Operations Monitoring and Maintenance Plan. A brief discussion of the laboratory and/or monitoring results is provided below. Refer to Appendix A for laboratory results.

E1. IRON, MANGANESE AND COLOR

See Table 2 below for a summary of the results for the compliance monitoring at the three sample locations SP1 through SP3. Color for raw water (SP1) was below the MCL. Iron and Manganese in the raw water (SP1) for the month were below and above the MCL, respectively. Iron and Manganese levels before entering the reservoir (SP3) show non-detect, indicating the greensand filtration system remains highly effective.

E2. FREE AND TOTAL CHLORINE RESIDUALS

Daily free chlorine residuals were monitored at SP2, SP3, SP4 and SP5. Daily total chlorine residuals were monitored at SP3, SP4 and SP5. Free chlorine and total chlorine residuals, at all respective sample points, were monitored using a combination of continuous chlorine analyzers and SCADA. See Table 3 below for a weekly summary of results.

E3. TOTAL DISSOLVED SOLIDS (TDS), ODOR, HARDNESS AND METHANE

See Table 4 below for a summary of the results for the monitoring of Total Dissolved Solids (TDS), Odor (as measured by the Threshold Odor No. - T.O.N.), Total Hardness as Calcium Carbonate, and Methane levels in water at three sample locations SP1, SP5 and SP6.

E3-1 TOTAL DISSOLVED SOLIDS (TDS)

The sampling results indicate the TDS levels of the effluent blended water to be on average 720 mg/L. The TDS level of the effluent water meets the City's Water Quality Objective/Goal of 500 to 750 mg/L. The sampling results indicate the TDS levels in the raw water and MWD water source to be 780 mg/L and 670 mg/L, respectively.

E3-2 HARDNESS

The sampling results for the month indicate the hardness levels of the blended water to be on average 330 mg/L. Although, this hardness level is in the upper range of the City's Water Quality Objective/Goal of 180 to 250 mg/L; staff continues to monitor hardness levels at the CWPF effluent (SP5) and within the

water distribution system. The City has maintained a consistent blend ratio to ensure acceptable hardness levels are met.

Staff continues to use an orthophosphate/polyphosphate additive to sequester calcium hardness. Orthophosphate/Polyphosphate is a food grade National Sanitation Foundation (NSF 60) approved additive which decreases iron tuberculation, diminishes calcium scale deposits, minimizes corrosion, reduces discoloration, reduces staining and mineral build-up resulting in fewer customer complaints.

E3-3 DISSOLVED METHANE (IN WATER)

The methane levels in the CWPF effluent after aeration treatment remain negligible averaging 0.42 mg/L.

E3-4 METHANE (IN AIR)

The methane levels in the reservoir headspace are monitored daily by staff using a handheld device. These readings have consistently read non-detect to low concentrations for methane in air. Available methane hand held monitoring instruments can only detect levels of 1% Lower Explosive Limit (LEL) or greater. The handheld methane readings during the month were below the 50,000 ppm LEL. See attached methane log for the month of January 2017 in Appendix B.

E3-5 ODOR

The odor levels at the CWPF effluent averaged 1.0 unit for the month.

E4. NITRIFICATION MONITORING

Weekly Nitrification sampling was performed during the month of January 2017, see Appendix C.

F. TABLES

Date, week of	SP1, Well Raw Water Discharge							SP2, Combined Pressure Filter Effluent			SP3, After chloramination static mixer; reservoir entry					
	Iron, ug/L	*MCL = 3 00 ug/L	Manganese, ug/L	*MCL = 50 ug/L	Color	*MCL=15	Total Coliform	Total Coliform	HPC, MPN/100mL	MCL=500	Iron, mg/L	*MCL = 300 ug/L	Manganese, mg/L	*MCL = 50 ug/L	Color	*MCL=15
1/4/2017	OFFLINE															
1/11/2017	OFFLINE															
1/18/2017	OFFLINE															
1/26/2017	220	300	120	50	7.5	15	A	A	A	500	ND	300	ND	50	ND	15

Table 2. Monitoring Results for SP1, SP2, and SP3 Sample Locations.

Notes:
Monthly- Orange; Weekly- Yellow
A – Absent
ND – Non Detect
*Per the SWRCB Drinking Water "Chemicals and Contaminants in Drinking Water" Regulations

Table 3. Monitoring Results for Free and Total Chlorine at SP2, SP3, SP4 and SP5 Sample Locations.

Date, week of	SP2	SP3			SP4			SP5		
	Free Cl	Free Cl	Total Cl	Total NH_3	Free Cl	Total Cl	Total NH_3	Free Cl	Total Cl	Total NH_3
1/4/2017	OFFLINE									
1/11/2017	OFFLINE									
1/18/2017	OFFLINE									
1/25/2017	6.46	0.39	5.11	1.14	0.29	3.94	0.90	0.10	3.56	0.80

Table 4. Monitoring Requirements and Frequencies for SP1, SP5, and SP6.

Date, week of	TDS, mg/L				T.O.N.		Hardness, mg/L				Methane (Water), mg/L	
	SP1 - Raw Well Water	SP6 - MWD Water	SP5 - Reservoir Effluent	Goal= 500 - 750 mg/L	SP5 - Reservoir Effluent	MCL= 3	SP1 - Raw Well Water	SP6 - MWD Water	SP5 - Reservoir Effluent	Goal= 180 - 250 mg/L	SP1 - Raw Well Water	SP5 - Reservoir Effluent
1/4/2017	OFFLINE											
1/11/2017	OFFLINE											
1/18/2017	OFFLINE											
1/26/2017	780	670	720	500-750	1	3	350	310	330	180-250	3.1	0.42
Average	**780**		**720**	500-750	**1.0**	3	**350**		**330**	180-250	**3.1**	**0.42**

Notes:
Monthly- Orange; Weekly- Yellow
ppm – parts per million
mg/L – milligram per liter
T.O.N. - Threshold Odor Number
TDS - Total Dissolved Solids
Hardness - As total CaCO3
Methane (Water) - Methane dissolved in water

Monthly CWPF Monitoring Report – January 2017
Cypress Water Production Facility
City of Lomita; System No. 1910073

Sample Locations and Parameters	Frequency	MCL/ Goal	1/4 1stWk or Mo. Result (date)	1/11 2nd Wk	1/18 3rd Wk	1/26 4th Wk	5th Wk	Comments and/or Other Info.
SP1 --- Also called Well 5 Raw Water or Site#1.								
TDS, ppm	Monthly	See SP5	780 1/26/17	**Operations Data/Information:**				*Chlorine injected after SP1, before entering the greensand filter.
Hardness	Monthly	See SP5	350 1/26/17	**CWPF operation days**				
CH4, ppm	Monthly	See SP5	3.1 1/26/17	**On Well 5:** Daily average flow - 408 gpm; total prod. – 14.97 AF				
Iron, ppb	Monthly	See SP3	220 1/26/17	**Combined Well 5/MWD data:** Average Well 5: MWD blend Ratio – 41% WELL:59% MWD; total prod.- 36.17 AF				
Manganese, ppb	Monthly	See SP3	120 1/26/17	Chlorine Dosage: N/A*				
Color, units	Monthly	See SP3	7.5 1/26/17					
Total Coliform, P or A	Monthly	A	A 1/26/17					
SP2 --- Also called Filter Effluent or Site#3.								
Total Coliform, P or A	Monthly	A	A	Ammonia Dosage: N/A*				*Ammonia added after filter effluent
HPC,MPN/100 ml	Monthly	500	A					
Free Cl Res, ppm	Continuous	Average: 6.46; Range: 5.87 – 7.20						
SP3 --- Also called the Site After Chloramination & Before MWD Blending or Site#4.								
Iron, ppb	Weekly	300				ND		
Manganese, ppb	Weekly	50				ND		
Color	Weekly	15				ND		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.39; Range: 0.26 – 0.51 Total Cl: Average: 5.11; Range: 5.02 – 5.20 Ammonia: Average: 1.14; Range: 0.90 – 1.37						
SP4 --- Also called Reservoir Influent or the Site Well 5/MWD Water Blend Point/Phosphate Injection.								
Phosphate Injection		Phosphate Dosage: 1.20 mg/L						
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.29; Range: 0.25 – 0.36 Total Cl: Average: 3.94; Range: 3.65 – 4.20 Ammonia: Average: 0.90; Range: 0.88 – 0.92						Cl/NH3 Ratio: 4.38
SP5 --- Also called Reservoir Effluent or Site#5. SP5 discharges into Zone 1 of the distribution system.								
TDS, ppm	Weekly	SI Goal: 500-750ppm				720		
Hardness	Monthly	SI Goal: 180-250ppm				330		
CH4, ppm	Weekly	Goal: from PA				0.42		% CH4 Removal: 86%
Odor, units	Monthly	1				1		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.10; Range: 0.06 – 0.18 Total Cl: Average: 3.56; Range: 3.50 – 3.70 Ammonia: Average: 0.80; Range: 0.78 – 0.85						Cl/NH3 Ratio: 4.46
Headspace of the Cypress Reservoir.								
[1]CH4 ppmv; using Portable Device	Daily (from log)	Goal - LEL	CH4 Average: 0.38% CH4 Range: 0% - 2%					
SP 6 --- MWD Source Feeding CWPF. Also called Zone 2 of the distribution system or Site #6.								
TDS, ppm	Monthly	-----				670		
Hardness	Monthly	------				310		

Notes: [1]Self-Imposed (SI) Goals: TDS Goal-500-750 ppm; Hardness as CaCO3 Goal-180-250 ppm.

***This Report is due to DDW by the 10th of the following month.

Other Notes/Comments: (1) See comments on the last column

APPENDIX A

LABORATORY RESULTS

Clinical Laboratory of San Bernardino, Inc.

03 February 2017 Clinical Lab No.: 17A2156

Mark Andersen
Lomita, City of
24373 Walnut Avenue
Lomita, CA 91717

Project Name: Standard Analysis
Sub Project: Monthly Compliance / Monthly 1st Week Jan

Enclosed are the results of the analyses for samples received at the laboratory on 01/26/17 . Samples were received within temperature range, in correct containers and preservation.

Analyses were performed pursuant to client's chain of custody, within hold times, utilizing EPA or other ELAP approved methodologies.

I certify that the results are within compliance both technically and for completeness. Analytical results are attached to this letter. Please call if any additional information and or assistance are needed.

Thank you for choosing Clinical Laboratory of San Bernardino for your analytical needs.

Sincerely,

Stu Styles
Client Services Manager

Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: Monthly Compliance / Monthly 1st Week Jan
Project Manager: Mark Andersen

Work Order: 17A2156
Received: 01/26/17 15:50
Reported: 02/03/17

Raw Water Site #1 **17A2156-01 (Water)** **Sample Date:** 01/26/17 9:00 **Sampler:** DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
pH (Field)	Field	**7.61**		N/A	pH Units	01/26/17	01/26/17	1705017	
Temperature (Field)	Field	**21.2**		N/A	°C	01/26/17	01/26/17	1705017	
Microbiology Analyses									
Total Coliform	SM 9223	A		N/A	P/A	01/26/17	01/27/17	1704188	
E. Coli	SM 9223	A		N/A	P/A	01/26/17	01/27/17	1704188	
Plate Count	SM9215B	**500**	1	500	CFU/ml	01/26/17	01/28/17	1704206	Note
General Physical Analyses									
Apparent Color	SM 2120B-M	**7.5**	3.0	15	Color Units	01/26/17	01/26/17	1704207	
General Chemical Analyses									
Hardness, Total (as CaCO3)	Calculated	**350**	6.6	N/A	mg/L	01/30/17	02/01/17	[CALC]	
Total Filterable Residue/TDS	SM 2540C	**780**	5.0	1000	mg/L	01/31/17	02/02/17	1705052	
Metals									
Calcium (Ca)	EPA 200.7	**93**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	
Iron (Fe)	EPA 200.7	**220**	100	300	ug/L	01/30/17	01/30/17	1705021	
Magnesium (Mg)	EPA 200.7	**29**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	
Manganese (Mn)	EPA 200.7	**120**	20	50	ug/L	01/30/17	01/30/17	1705021	

Filter Effluent (Free Chlorine) Site #2 **17A2156-02 (Water)** **Sample Date:** 01/26/17 9:10 **Sampler:** D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	**7.1**		N/A	mg/L	01/26/17	01/26/17	1705017	
pH (Field)	Field	**7.66**		N/A	pH Units	01/26/17	01/26/17	1705017	
Temperature (Field)	Field	**20.3**		N/A	°C	01/26/17	01/26/17	1705017	
Microbiology Analyses									
Total Coliform	SM 9223	A		N/A	P/A	01/26/17	01/27/17	1704188	
E. Coli	SM 9223	A		N/A	P/A	01/26/17	01/27/17	1704188	
Plate Count	SM9215B	ND	1	500	CFU/ml	01/26/17	01/28/17	1704206	

Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: Monthly Compliance / Monthly 1st Week Jan
Project Manager: Mark Andersen

Work Order: 17A2156
Received: 01/26/17 15:50
Reported: 02/03/17

Filter Effluent (Total Chlorine) Site #3 **17A2156-03 (Water)** **Sample Date:** 01/26/17 9:15 **Sampler:** D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	**5.29**		N/A	mg/L	01/26/17	01/26/17	1705017	
pH (Field)	Field	**7.84**		N/A	pH Units	01/26/17	01/26/17	1705017	
Temperature (Field)	Field	**17.3**		N/A	°C	01/26/17	01/26/17	1705017	
General Physical Analyses									
Apparent Color	SM 2120B-M	ND	3.0	15	Color Units	01/26/17	01/26/17	1704207	
Metals									
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	01/30/17	01/30/17	1705021	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	01/30/17	01/30/17	1705021	

Zone #2 Site #6 **17A2156-04 (Water)** **Sample Date:** 01/26/17 9:20 **Sampler:** DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	**2.1**		N/A	mg/L	01/26/17	01/26/17	1705017	
pH (Field)	Field	**8.17**		N/A	pH Units	01/26/17	01/26/17	1705017	
Temperature (Field)	Field	**14.9**		N/A	°C	01/26/17	01/26/17	1705017	
General Chemical Analyses									
Hardness, Total (as CaCO3)	Calculated	**310**	6.6	N/A	mg/L	01/30/17	02/01/17	[CALC]	
Total Filterable Residue/TDS	SM 2540C	**670**	5.0	1000	mg/L	01/31/17	02/02/17	1705052	
Metals									
Calcium (Ca)	EPA 200.7	**79**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	
Magnesium (Mg)	EPA 200.7	**27**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	

Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: Monthly Compliance / Monthly 1st Week Jan
Project Manager: Mark Andersen

Work Order: 17A2156
Received: 01/26/17 15:50
Reported: 02/03/17

Reservoir Effluent Site #5 **17A2156-05 (Water)** **Sample Date:** 01/26/17 9:30 **Sampler:** DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	**3.39**		N/A	mg/L	01/26/17	01/26/17	1705017	
pH (Field)	Field	**7.97**		N/A	pH Units	01/26/17	01/26/17	1705017	
Temperature (Field)	Field	**17**		N/A	°C	01/26/17	01/26/17	1705017	
General Physical Analyses									
Odor Threshold	EPA 140.1-M	**1**	1	3	TON	01/26/17	01/26/17	1704207	
General Chemical Analyses									
Hardness, Total (as CaCO3)	Calculated	**330**	6.6	N/A	mg/L	01/30/17	02/01/17	[CALC]	
Total Filterable Residue/TDS	SM 2540C	**720**	5.0	1000	mg/L	01/31/17	02/02/17	1705052	
Metals									
Calcium (Ca)	EPA 200.7	**85**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	
Magnesium (Mg)	EPA 200.7	**28**	1.0	N/A	mg/L	01/30/17	02/01/17	1705044	

Note Notified Mark Andersen 1/28/17, 1617

ND Analyte NOT DETECTED at or above the reporting limit

Air TECHNOLOGY Laboratories, Inc.

February 3, 2017

ADE-1461
EPA Methods TO3, TO14A, TO15 SIM & SCAN
ASTM D1946

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

Clinical Laboratory of San Bernardino
ATTN: Stu Styles
21881 Barton Rd.
Grand Terrace, CA 92313

LABORATORY TEST RESULTS

Project Reference: 17A2156
Lab Number: I012701-01

Enclosed are results for sample(s) received 1/27/17 by Air Technology Laboratories. Samples were received intact and properly chilled. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

I012701-01/02

SUBCONTRACT ORDER

Clinical Laboratory of San Bernardino

17A2156

SENDING LABORATORY:

Clinical Laboratory of San Bernardino
21881 Barton Road
Grand Terrace, CA 92313
Phone: 909.825.7693
Fax: 909.825.7696
Project Manager: Stu Styles

RECEIVING LABORATORY:

Air Technology Labs
18501 East Gale Avenue Suite 130
City of Industry, CA 91748
Phone :(626) 964-4032
Fax:

Please email results to Project Manager: Stu Styles
[ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab.com [✓] styles@clinical-lab.com [ ] nelson@clinical-lab.com

California EDT transfer those samples with PS codes provided [ ] Yes [✓] No
Water Trax Upload Client: _____ [ ] Yes [✓] No

Turn Around Time [ ] 10 Days [✓] 5 Days [ ] Other __ Days
Subcontract Comments:

Analysis	Comments
-01 Sample ID: Raw Water Site #1 / 17A2156-01	**Sampled: 01/26/17 09:00 PS Code: Water WTX ID:**
Methane RSK175	Report in mg/L
Containers Supplied:	
-02 Sample ID: Reservoir Effluent Site #5 / 17A2156-05	**Sampled: 01/26/17 09:30 PS Code: Water WTX ID:**
Methane RSK175	Report in mg/L
Containers Supplied:	

5°C @ 1/27/17

Released By	Date / Time	Received By	Date / Time
BJ Oh	01/27/17 07:45		1/27/17 8:00
	1/27/17 09:47		1/27/17 09:47

Client: Clinical Laboratory
Attn: Stu Styles
Project Name: NA
Project No.: 17A2156
Date Received: 01/27/17
Matrix: Water
Reporting Units: mg/L

RSK175

Lab No.:	I012701-01		I012701-02					
Client Sample I.D.:	Raw Water Site #1 / 17A2156-01		Reservoir Effluent Site #5 / 17A2156-05					
Date/Time Sampled:	1/26/17 9:00		1/26/17 9:30					
Date/Time Analyzed:	2/1/17 10:55		2/1/17 11:08					
QC Batch No.:	170201GC8A1		170201GC8A1					
Analyst Initials:	AS		AS					
Dilution Factor:	1.0		1.0					
ANALYTE	Result mg/L	RL mg/L	Result mg/L	RL mg/L				
Methane	3.1	0.0010	0.42	0.0010				

ND = Not Detected (below RL)
RL = Reporting Limit

Reviewed/Approved By: _____ Date 2-3-17

Mark Johnson
Operations Manager

The cover letter is an integral part of this analytical report

AirTECHNOLOGY Laboratories, Inc.
18501 E. Gale Avenue, Suite 130 ♦ City of Industry, CA 91748 ♦ Ph: (626) 964-4032 ♦ Fx: (626) 964-5832

QC Batch No.: 170201GC8A1
Matrix: Water
Units: mg/L

QC for Dissolved Gases by EPA Procedure RSKSOP-175

Lab No.:		Method Blank		LCS		LCSD			
Date/Time Analyzed:		2/1/17 10:02		2/1/17 9:31		2/1/17 9:48			
Analyst Initials:		AS		AS		AS			
Datafile:		01feb005		01feb003		01feb004			
Dilution Factor:		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	ND	103	70-130%	107	70-130%	4.3	<30

PQL = Practical Quantitation Limit
ND = Not Detected (Below RL).
RL = PQL X Dilution Factor

Reviewed/Approved By: _____ Date: 2-3-17
Mark J. Johnson
Operations Manager

The cover letter is an integral part of this analytical report.

Clinical Laboratory of San Bernardino, Inc.

17A2156

Chain of Custody

Client	*City of Lomita*	System Number	Analysis Requested
Address	24373 Walnut Avenue	**1910073**	
	Lomita, CA 91717		
Phone #	(310) 325-9830	*Destination Laboratory*	
Fax #	(310) 325-3627	[X] Clinical Laboratory	
Project	*Standard Analysis*	*RWQCB Compliance*	
Sub Project	*Monthly Compliance/ Monthly 1st week JAN*	*YES*	
		ELAP #	
Comments		**1088**	
Sampled by	*DGM*		

Date	Time	Sample Idenitification	Matrix	Type	Preserv	Total Chlorine	Total Dissolved Solids	Iron & Manganese	E. Coli	Total Coliform	Hetetrophic Plate Count	Color	Odor	Methane (WATER) (RSK175)	Hardness	
1/26/2017	0900	Raw Water Site #1	GW	1W	N/A	N/A	X	X				X				PH 7.61 TEMP 21.2
1/26/2017	"	Raw Water Site #1	GW	1W	2,7	N/A			X	X	X			X	X	
	"	Raw Water Site #1	GW	1W	1,7	N/A										
1/26/2017	0910	Filter Effluent (Free Chlorine) Site#2	DW	1W	1,7	1.00			X	X	X					PH 7.66 TEMP 20.3
1/26/2017	0915	Filter Effluent (Total Chlorine) Site#3	DW	1W	N/A	5.29		X				X				PH 7.84 TEMP 17.3
1/26/2017	0920	Zone #2 Site #6	DW	1D	N/A	2.1	X								X	PH 8.17 TEMP 14.9
1/26/2017	0930	Reservoir Effluent Site #5	DW	1D	N/A	3.39	X						X		X	PH 7.97 TEMP 17.0
1/26/2017	"	Reservoir Effluent Site #5	DW	1D	2,7	"								X		

Preservatives: (1) $Na_2S_2O_3$ (2) HCl (3) HNO_3 (4) NH_4Cl
(5) H_2SO_4 (6) Na_2SO_3 (7) Cold (8) Other:_____

Matrix: DW-Drinking Water, WW-Waste Water, SW-Storm Water, GW- Ground Water, A-Air
Type- 1-Routine, 2-Repeat, 3-Replacement, 4-Special W-Well D- Dist.

Relinquished By (Sign)	*Print Name / Company*	*Date / Time*	*Received By (Sign)*		*Print Name / Company*
Daniel Mateik	City of Lomita, CA	1/26/2016 11:50			CLSB
	CLSB	1/26/16 3:50			KHUSH CLSB

Comments:

Samples received: (~~On ice~~ (X) Intact ( ) Custody seals Temp 11 ( ) F (X) C

Shipped Via | | | | | Fed X | | Golden State | | UPS | | Client | | Other _____ *Page _1_ of _1_*

"Your Water and Wastewater Analysis Solution"

APPENDIX B

METHANE MONITORING LOG

CITY OF LOMITA
PUBLIC WORKS DEPARTMENT

CYPRESS WATER PRODUCTION FACILITY
HANDHELD METHANE LOG READINGS

JANUARY 2017				
DATE	**DAY**	**METHANE HANDHELD**		**COMMENTS**
1/1/2017	S			Offline
1/2/2017	M			Offline
1/3/2017	T			Offline
1/4/2017	W			Offline
1/5/2017	TH			Offline
1/6/2017	F			Offline
1/7/2017	SA			Offline
1/8/2017	SU			Offline
1/9/2017	M			Offline
1/10/2017	T			Offline
1/11/2017	W			Offline
1/12/2017	TH			Offline
1/13/2017	F			Offline
1/14/2017	SA			Offline
1/15/2017	SU			Offline
1/16/2017	M			Offline
1/17/2017	T			Offline
1/18/2017	W			Offline
1/19/2017	TH	CH_4- 0%	Oxy- 20.2%	
1/20/2017	F	CH_4- 0%	Oxy- 20.1%	
1/21/2017	SA	CH_4- 2%	Oxy- 19.9%	
1/22/2017	SU	CH_4- 0%	Oxy- 20.1%	
1/23/2017	M	CH_4- 0%	Oxy- 19.9%	
1/24/2017	T	CH_4- 0%	Oxy- 20.2%	
1/25/2017	W	CH_4- 0%	Oxy- 20.1%	
1/26/2017	TH	CH_4- 2%	Oxy- 20.1%	
1/27/2017	F	CH_4- 0%	Oxy- 20.2%	
1/28/2017	SA	CH_4- 1%	Oxy- 19.9%	
1/29/2017	SU	CH_4- 0%	Oxy- 19.9%	
1/30/2017	M	CH_4- 0%	Oxy- 20.2%	
1/31/2017	T	CH_4- 0%	Oxy- 20.1%	

ND- Non Detect
CH_4- Methane
Oxy- Oxygen
Day Off/Holiday- Red

APPENDIX C

NITRIFICATION MONITORING DATA SUMMARY

[1] MONTHLY NITRIFICATION MONITORING SUMMARY REPORT

CITY OF LOMITA, System No. 1910073 --- Month, Year: **January 2017**

#	Code	Sample ID	Location	Sample Date	Temp	pH	Total Chlorine	Free Chlorine	Total Ammonia	Free Ammonia	Nitrite	Nitrate	Coliform[2]	HPC	Zone	Comments
Units/Others →				MM/DD/YYYY	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	P/A	CFU/ml		
1	D	S13-003	1948 W 252nd St	1/4/2017	17.6	7.94	1.86	0.07	0.36	0	0.002	ND	A	ND	1	MWD Only
2	D	S13-004	24632 S Moon Ave	1/4/2017	16.7	7.70	0.67	0.01	0.12	0.02	0.07	ND	A	21	1	MWD Only
3	D	S13-008	25417 Pennsylvania Ave	1/4/2017	16.9	7.42	0.24	0.01	0.09	0.01	0.056	0.62	A	100	1	MWD Only
4	D	A	2052 Dawn St	1/4/2017	16.9	7.91	1.67	0.14	0.36	0.03	0.006	ND	A	ND	1	MWD Only
5	D		Reservoir	1/4/2017	OFFLINE										1	
6	D	S13-001	1912 W 259th Pl	1/4/2017	18.4	7.93	2.02	0.04	0.42	0	0.002	ND	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	1/4/2017	17.6	7.94	1.97	0.13	0.34	0.01	0.002	ND	A	ND	3	MWD Only
8	D	S13-005	2500 PCH	1/4/2017	14.9	7.20	1.63	0.04	0.08	0	0.01	ND	A	ND	2	MWD Only
1	D	S13-003	1948 W 252nd St	1/11/2017	16.4	7.39	2.06	0.15	0.41	0	0.009	ND	A	ND	1	MWD Only
2	D	S13-004	24632 S Moon Ave	1/11/2017	17.4	7.61	0.65	0.12	0.17	0	0.099	ND	A	3	1	MWD Only
3	D	S13-008	25417 Pennsylvania Ave	1/11/2017	18.1	7.66	0.33	0.14	0.05	0	0.071	0.61	A	1900	1	MWD Only
4	D	A	2052 Dawn St	1/11/2017	15.0	7.08	1.83	0.24	0.37	0	0.009	ND	A	ND	1	MWD Only
5	D		Reservoir	1/11/2017	OFFLINE										1	
6	D	S13-001	1912 W 259th Pl	1/11/2017	17.3	7.83	2.11	0.16	0.44	0	0.001	ND	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	1/11/2017	17.4	7.96	2.08	0.09	0.43	0.04	0.006	ND	A	ND	3	MWD Only
8	D	S13-005	2500 PCH	1/11/2017	17.2	7.83	2.05	0.07	0.45	0.04	0.014	ND	A	ND	2	MWD Only
1	D	S13-003	1948 W 252nd St	1/18/2017	13.8	7.80	2.40	0.08	0.43	0	0.005	ND	A	ND	1	MWD Only
2	D	S13-004	24632 S Moon Ave	1/18/2017	14.8	7.95	1.45	0.09	0.25	0	0.014	ND	A	1	1	MWD Only
3	D	S13-008	25417 Pennsylvania Ave	1/18/2017	15.8	7.88	0.43	0.00	0.07	0	0.032	0.55	A	31	1	MWD Only
4	D	A	2052 Dawn St	1/18/2017	13.6	7.95	1.82	0.15	0.37	0	0.006	ND	A	ND	1	MWD Only
5	D		Reservoir	1/18/2017	OFFLINE										1	
6	D	S13-001	1912 W 259th Pl	1/18/2017	16.2	8.03	2.30	0.12	0.46	0.07	0.002	ND	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	1/18/2017	16.3	8.03	2.30	0.06	0.41	0.01	0.012	ND	A	ND	3	MWD Only
8	D	S13-005	2500 PCH	1/18/2017	16.2	7.98	2.20	0.13	0.39	0.02	0.009	ND	A	ND	2	MWD Only
1	D	S13-003	1948 W 252nd St	1/27/2017	14.1	7.96	3.00	0.00	0.51	0	0.002	ND	A	ND	1	Well/MWD Blend
2	D	S13-004	24632 S Moon Ave	1/27/2017	15.2	7.98	2.80	0.12	0.51	0	0.003	ND	A	3	1	Well/MWD Blend
3	D	S13-008	25417 Pennsylvania Ave	1/27/2017	15.2	7.40	3.30	0.27	0.58	0	0.006	ND	A	ND	1	Well/MWD Blend
4	D	A	2052 Dawn St	1/27/2017	15.0	7.91	1.70	0.15	0.38	0	0.004	ND	A	ND	1	Well/MWD Blend
5	D		Reservoir	1/27/2017	15.5	7.97	3.10	0.06	0.59	0.03	0.001	ND	A	ND	1	Well/MWD Blend
6	D	S13-001	1912 W 259th Pl	1/27/2017	15.1	8.20	2.30	0.80	0.42	0.08	0.002	ND	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	1/27/2017	15.8	8.12	2.70	0.00	0.38	0	0.001	ND	A	ND	3	MWD Only
8	D	S13-005	2500 PCH	1/27/2017	14.5	7.88	2.20	0.17	0.43	0.03	0.002	ND	A	ND	2	MWD Only
1	D	S13-003	1948 W 252nd St												1	
2	D	S13-004	24632 S Moon Ave												1	
3	D	S13-008	25417 Pennsylvania Ave												1	
4	D	A	2052 Dawn St												1	
5	D		Reservoir												1	
6	D	S13-001	1912 W 259th Pl												2	
7	D	S13-002	26314 S Monte Vista Ave												3	
8	D	S13-005	2500 PCH												2	

[1]Notes: Report Due to DDW by the 10th of the following month. This Report can be used for the routine weekly monitoring (one Report per month) as well as for daily monitoring when there is actual and potential for nitrification (about four or five Reports per month, in this case).

[2]Coliform results are part of weekly Bacti sampling results.