

CITY OF LOMITA



Cypress Water Production Facility Monthly Status Report

MARCH 2016

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CITY COUNCIL

JIM GAZELEY
MARK WARONEK
HENRY SANCHEZ, JR
MICHAEL G. SAVIDAN
BEN TRAINA



CITY OF LOMITA

ADMINISTRATION

RYAN SMOOT
CITY MANAGER

April 11, 2016

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 March 1 through March 31, 2016.

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 March 2016.

If you should have any questions or concerns, please contact me at 310-325-7110 x124.

Sincerely,

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 AND OPERATIONS

For the month of March 2016, the CWPF operated on a fill and draw cycle providing blended water with the reservoir level fluctuating with system demand. The Cypress Reservoir operated as follows: filled for 10 days, drew down for 17 days, and was isolated for 4 days.

The total production from Well No. 5 for the month was approximately 52.39 ac-ft (17,070,026 gallons) with a daily production of approximately 5.24 ac-ft. The total combined production from both MWD import water and Well No. 5 was approximately 89.61 ac-ft (29,196,018 gallons) for the month with a combined daily production of approximately 8.96 ac-ft.

The daily average flow from Well No. 5 was 1,108 gpm. The average flow from the Well was determined by taking an average of the daily reads provided on the Daily Monitoring logs used onsite. The blend ratio for this month was on average 58% Well water and 42% MWD water.

C. OPERATIONAL INTERRUPTIONS

The Cypress Reservoir was isolated for four days to allow for stabilization within the reservoir and in preparation to supply Zone I with chloramines. During the isolation period, MWD was utilized to supply Zone I. Two Hach analyzers have been installed to properly enhance chloramine dosing and ratios. These new analyzers are anticipated to be online by the end of April 2016. Routine and preventive maintenance was performed on various pieces of equipment as-needed.

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 1 below for a summary of the results for the compliance monitoring at the three sample locations SP1 through SP3. Color and Iron in the raw water (SP1) for the month were below the MCL. Manganese concentrations in the raw water (SP1) were above the MCL. Iron and Manganese levels entering the reservoir (SP3) show non-detect, indicating the greensand filtration system remains highly effective. Other additional bacteriological laboratory samples collected included Total Coliform and Heterotrophic Plate Count (HPC) levels on the effluent side of the greensand filter (SP2) showing absent for both.

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 2 below for a weekly summary of results. **Free chlorine data is only available for the first three weeks of the March 2016, due to Zone 1 being supplied exclusively with free chlorinated water.**

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

See Table 3 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 685 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 740 mg/L and 400 mg/L, respectively.

E3-2 HARDNESS

The sampling results for the month indicate the hardness levels of the blended water to be on average 316 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 1.12 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 March 2016 in Appendix B.

E4. NITRIFICATION MONITORING

Weekly Nitrification sampling was performed during the month of March 2016, see Appendix C.

F. TABLES

Table 1. Monitoring Results for SP1, SP2, and SP3 Sample Locations.

Date, week of	SP1, Well Raw Water Discharge							SP2, Combined Pressure Filter Effluent			SP3, After chloramination static mixer; reservoir entry					
	Iron, ug/L	*MCL = 300 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
3/2/2016	180	300	120	50	10	15	A	A	A	500	ND	300	ND	50	ND	15
3/9/2016											**	300	**	50	**	15
3/16/2016											ND	300	ND	50	7.5	15
3/23/2016												300		50		15
3/30/2016											ND	300	ND	50	ND	15

Notes: Monthly- Orange Weekly- Yellow
A – Absent
ND – Non Detect
*Per the SWRCB Drinking Water “Chemicals and Contaminants in Drinking Water” Regulations
**CWPF was offline

Table 2. 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
*3/2/2016	5.44	4.50	-	-	3.30	-	-	1.23	-	-
*3/9/2016	4.82	4.17	-	-	3.04	-	-	1.27	-	-
3/16/2016	-	-	-	-	-	-	-	0.97	1.42	0.25
3/23/2016	3.11	0.88	3.56	0.67	0.29	3.00	0.60	0.17	1.94	0.50
3/30/2016	5.01	0.34	4.27	0.51	0.15	3.22	0.56	0.07	2.52	0.60

*Free chlorinated water supplied Zone 1 of the City's distribution system.

Table 3. 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	SP5 - Reservoir Effluent	Goal= 180 - 250 mg/L	SP1 - Raw Well Water	SP5 - Reservoir Effluent
3/2/2016	740	400	660	500-750	1	3			6.1	1.30
3/9/2016			640	500-750			280	180-250		0.78
3/16/2016			710	500-750			320	180-250		1.00
3/23/2016				500-750						
3/30/2016			730	500-750			350	180-250		1.40
Average			685	500-750			316	180-250		1.12

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

Cypress Water Production Facility
City of Lomita; System No. 1910073

Sample Locations and Parameters	Frequency	MCL/ Goal	3/2 1stWk or Mo. Result (date)	3/9 2 nd Wk	3/16 3rdWk	3/23 4 th Wk	3/30 5 th Wk	Comments and/or Other Info.
SP1 --- Also called Well 5 Raw Water or Site#1.								
TDS, ppm	Monthly	See SP5	740 (3/2)	Operations Data/Information: CWPF operation days – 31 days (10 fill days; 17 draw days; 4 isolation days) On Well 5: Daily average flow - 1108 gpm; MARCH 2016 total prod. – 52.39 AF; Daily prod.. – 5.24 AF Combined Well 5/MWD data: Average Well 5: MWD blend Ratio – 58%:42%; MARCH 2016 total prod.- 89.61 AF; Combined Daily prod.– 8.96 AF Chlorine Dosage: N/A*				Mar 2016- Reservoir isolated 4 days to allow for stabilization in preparation to switch back to chloramines. Free chlorinated water supplied Zone I during the first half of the month. *Chlorine injected after SP1, before entering the greensand filter.
Hardness	Monthly	See SP5	N/A					
CH4, ppm	Monthly	See SP5	6.1 (3/2)					
Iron, ppb	Monthly	See SP3	180 (3/2)					
Manganese, ppb	Monthly	See SP3	120 (3/2)					
Color, units	Monthly	See SP3	10 (3/2)					
Total Coliform, P or A	Monthly	A	A (3/2)					
SP2 --- Also called Filter Effluent or Site#3.								
Total Coliform, P or A	Monthly	A	A (3/2)	Ammonia Dosage: N/A*				*Ammonia added after filter effluent
HPC,MPN/100 ml	Monthly	500	A (3/2)					
Free Cl Res, ppm	Continuous	Average: 4.60; Range: 3.11 – 5.44						
SP3 --- Also called the Site After Chloramination & Before MWD Blending or Site#4.								
Iron, ppb	Weekly	300	ND	*	ND		ND	*CWPF was offline. No iron, mangase, color samples taken.
Manganese, ppb	Weekly	50	ND	*	ND		ND	
Color	Weekly	15	ND	*	ND		ND	
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 2.47; Range: 4.5 – 0.34 Total Cl: Average: 3.92; Range: 3.56 – 4.27 Ammonia: Average: 0.59; Range: 0.51 – 0.67						
SP4 --- Also called Reservoir Influent or the Site Well 5/MWD Water Blend Point/Phosphate Injection.								
Phosphate Injection		Phosphate Dosage: 2.0 mg/L						
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 1.70; Range: 3.3 – 0.15 Total Cl: Average: 3.11; Range: 3.22 – 3.00 Ammonia: Average: 0.58; Range: 0.56 – 0.60						Cl/NH3 Ratio: 5.36/0.19, chloramintaed water into the Reservoir
SP5 --- Also called Reservoir Effluent or Site#5. SP5 discharges into Zone 1 of the distribution system.								
TDS, ppm	Weekly	SI Goal: 500-750ppm	660	640	710		730	% CH4 Removal: 82%
Hardness	Monthly	SI Goal: 180-250ppm		280	320		350	
CH4, ppm	Weekly	Goal: from PA	1.30	0.78	1.00		1.40	
Odor, units	Monthly	1						
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.74; Range: 0.07 – 1.27 Total Cl: Average: 1.96; Range: 1.42 – 2.52 Ammonia: Average: 0.45; Range: 0.25 – 0.60						Cl/NH3 Ratio: 4.36/0.23, chloraminated water supplied Zone I
Headspace of the Cypress Reservoir.								
¹ CH4 ppmv; using Portable Device	Daily (from log)	Goal - LEL	CH4 Average: 1% CH4 Range: 0% - 3%					
SP 6 --- MWD Source Feeding CWPF. Also called Zone 2 of the distribution system or Site #6.								
TDS, ppm	Monthly	-----		400			None	
Hardness	Monthly	-----					None	
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 10 th of the following month.								

APPENDIX A

LABORATORY RESULTS

Clinical Laboratory of San Bernardino, Inc.



16 March 2016

Clinical Lab No.: 16C0330

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

Project Name: Standard Analysis
Sub Project: Monthly Compliance

Enclosed are the results of the analyses for samples received at the laboratory on 03/02/16 . 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,

A handwritten signature in black ink, appearing to read 'Stu Styles', with a stylized flourish at the end.

Stu Styles

Client Services Manager

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: Monthly Compliance
Project Manager: Mark Andersen

Work Order: 16C0330
Received: 03/02/16 15:30
Reported: 03/16/16

Raw Water Site #1

16C0330-01 (Water)

Sample Date: 03/02/16 7:45 Sampler: D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Microbiology Analyses

Total Coliform	SM 9223	A		N/A	P/A	03/02/16	03/03/16	1610450	
E. Coli	SM 9223	A		N/A	P/A	03/02/16	03/03/16	1610450	

General Physical Analyses

Apparent Color	SM 2120B	10.0	3.0	15	Color Units	03/02/16	03/02/16	1610456	
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General Chemical Analyses

Total Filterable Residue/TDS	SM 2540C	740	5.0	1000	mg/L	03/04/16	03/07/16	1610526	
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Metals

Iron (Fe)	EPA 200.7	180	100	300	ug/L	03/10/16	03/10/16	1611025	
Manganese (Mn)	EPA 200.7	120	20	50	ug/L	03/10/16	03/10/16	1611025	

Filter Effluent (Free Chlorine) Site #2

16C0330-02 (Water)

Sample Date: 03/02/16 6:47 Sampler: D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Field Analyses

Cl Res Free (Field)	Field	4.44		N/A	mg/L	03/02/16	03/02/16	1610460	
pH (Field)	Field	7.9		N/A	pH Units	03/02/16	03/02/16	1610462	
Temperature (Field)	Field	17		N/A	°C	03/02/16	03/02/16	1610463	

Microbiology Analyses

Total Coliform	SM 9223	A		N/A	P/A	03/02/16	03/03/16	1610450	
E. Coli	SM 9223	A		N/A	P/A	03/02/16	03/03/16	1610450	
Plate Count	SM9215B	ND	1	500	CFU/ml	03/02/16	03/04/16	1610542	HT-08

Filter Effluent (Total Chlorine) Site #3

16C0330-03 (Water)

Sample Date: 03/02/16 6:38 Sampler: D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Field Analyses

Cl Res Free (Field)	Field	3.63		N/A	mg/L	03/02/16	03/02/16	1610460	
pH (Field)	Field	7.9		N/A	pH Units	03/02/16	03/02/16	1610462	
Temperature (Field)	Field	18.1		N/A	°C	03/02/16	03/02/16	1610463	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	03/02/16	03/02/16	1610456	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	03/07/16	03/07/16	1611019	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	03/07/16	03/07/16	1611019	

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: Monthly Compliance
Project Manager: Mark Andersen

Work Order: 16C0330
Received: 03/02/16 15:30
Reported: 03/16/16

Zone #2 Site #6

16C0330-04 (Water)

Sample Date: 03/02/16 6:50

Sampler: D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Field Analyses

Cl Res Total (Field)	Field	1.9		N/A	mg/L	03/02/16	03/02/16	1610461	
pH (Field)	Field	7.9		N/A	pH Units	03/02/16	03/02/16	1610462	
Temperature (Field)	Field	18.9		N/A	°C	03/02/16	03/02/16	1610463	

General Chemical Analyses

Total Filterable Residue/TDS	SM 2540C	400	5.0	1000	mg/L	03/07/16	03/08/16	1611055	
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Reservoir Effluent Site #5

16C0330-05 (Water)

Sample Date: 03/02/16 6:30

Sampler: D G M

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Field Analyses

Cl Res Free (Field)	Field	1.32		N/A	mg/L	03/02/16	03/02/16	1610460	
pH (Field)	Field	7.5		N/A	pH Units	03/02/16	03/02/16	1610462	
Temperature (Field)	Field	19		N/A	°C	03/02/16	03/02/16	1610463	

General Physical Analyses

Odor Threshold	EPA 140.1M	1	1	3	TON	03/02/16	03/02/16	1610456	
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General Chemical Analyses

Total Filterable Residue/TDS	SM 2540C	660	5.0	1000	mg/L	03/07/16	03/08/16	1611055	
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HT-08 Analysis performed outside of recommended 8 hour hold time but within required 24 hour hold time.

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16C0330

Report Date: 03/16/2016

Analyzing Lab: Clinical Laboratory of San Bernardino, Inc. ELAP 1088

Page 1 of 1

LOMITA-CITY, WATER DEPT.

User ID: 4TH

System: 1910073

WELL 05	Station No.: 1910073-003			Sampled: 160302 07:45	
COLOR	Result: 10.0	Units: UNITS	Entry No.: 00081	Analyzed: 160302	
IRON	Result: 180	Units: UG/L	Entry No.: 01045	Analyzed: 160310	
MANGANESE	Result: 120	Units: UG/L	Entry No.: 01055	Analyzed: 160310	
TOTAL DISSOLVED SOLIDS	Result: 740	Units: MG/L	Entry No.: 70300	Analyzed: 160307	

WELL 05 TREATMENT PLANT EFFLUENT	Station No.: 1910073-006			Sampled: 160302 06:38	
COLOR	Result: ND	Units: UNITS	Entry No.: 00081	Analyzed: 160302	
IRON	Result: ND	Units: UG/L	Entry No.: 01045	Analyzed: 160307	
MANGANESE	Result: ND	Units: UG/L	Entry No.: 01055	Analyzed: 160307	



Certificate of Analysis

Project: 16C0330

Report Date: 04/11/16 09:43

Received Date: 03/04/16 10:55

Turnaround Time: 5 workdays

Phones: (909) 825-7693

Fax: (909) 825-7696

P.O. #:

Attn: John Styles

Client: Clinical Laboratory of San Bernardino, Inc.
21881 Barton Road
Grand Terrace, CA 92313

Dear John Styles :

Enclosed are the results of analyses for samples received 3/4/2016 with the Chain of Custody document. The samples were received in good condition, at 1.0 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6C04005-01 Sample ID: Raw Water Site #1/ 16C0330-01 Matrix: Water
Sampled by: Client Sampled: 03/02/16 07:45

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	6.1	0.0060	0.050	mg/l	5	RSK-175	3/9/16	3/9/16 15:54	W6C0573	

Lab ID: 6C04005-02 Sample ID: Reservoir Effluent Site #5 / 16C0330-05 Matrix: Water
Sampled by: Client Sampled: 03/02/16 06:30

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	1.3	0.0012	0.010	mg/l	1	RSK-175	3/9/16	3/9/16 16:14	W6C0573	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6C0573 - RSK-175

Blank (W6C0573-BLK1)					Prepared: 03/09/16		Analyzed: 03/09/16 14:55		
Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		ND		mg/l					
LCS (W6C0573-BS1)					Prepared: 03/09/16		Analyzed: 03/09/16 14:35		
Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.188		mg/l	0.198	95	85-115		
Duplicate (W6C0573-DUP1)					Prepared: 03/09/16		Analyzed: 03/09/16 16:34		
Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	1.27	0.992	A-01	mg/l				24	20

**Certificate of Analysis****Case Narrative:**

SUPP report generated to report switched data between samples 6C04005-01 and 6C04006-01 due to client labeling error.
BG 4/11/16

Notes:

The Chain of Custody document is part of the analytical report.

Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.

The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).

For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature

Contact: Brandon Gee
(Project Manager)



ELAP # 1132
LACSD # 10143
NELAC #4047-002 ORELAP

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

A-01	Low recovery due to possible evaporation of target analyte.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

SUBCONTRACT ORDER
Clinical Laboratory of San Bernardino
16C0330

604005

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:

Weck Lab, Analytical & Environmental
Analytical & Environmental Svc 14859 E Clark Ave
Industry, CA 91745
Phone : (626) 336-2139
Fax: (626) 336-2634

Please email results to Project Manager: Stu Styles

[] glaubig@clinical-lab.com [] ybarra@clinical-lab.com [x] styles@clinical-lab.com [] nelson@clinical-lab.com

California EDT transfer those samples with PS codes provided [] Yes [x] No
Transfer File requested; log in with Element ID only [] Yes [x] No

Turn Around Time [] 10 Days [x] 5 Days [] Other ___ Days

Subcontract Comments:

Analysis

Comments

Sample ID: Raw Water Site #1 / 16C0330-01

Sampled: 03/02/16 07:45 PS Code:
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40mL Amber Vial w/ Na2S2O3 (B)

40mL Amber Vial w/ Na2S2O3 (C)

Sample ID: Reservoir Effluent Site #5 / 16C0330-05

Sampled: 03/02/16 06:30 PS Code:
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40mL Amber Vial HCl (B)

40mL Amber Vial HCl (C)

<i>Bd dy</i>	<i>03/03/16 14:30</i>	<i>m cl</i>	<i>3/4/16 9:00</i>
Released By	Date / Time	Received By	Date / Time
<i>m cl</i>	<i>3/4/16 10:55</i>	<i>[Signature]</i>	<i>3.4.16 1055</i>
Released By	Date / Time	Received By	Date / Time

Client		City of Lomita		System Number		Analysis Requested										
Address		24373 Walnut Avenue		1910073												
Phone #		(310) 325-9830		Destination Laboratory												
Fax #		(310) 325-3627		[X] Clinical Laboratory												
Project		Standard Analysis		RWQCB Compliance												
Sub Project		Monthly Compliance		YES												
Comments		Plant operating on Free CL2		ELAP #												
Sampled by		DGM		1088												
Date	Time	Sample Identification	Matrix	Type	Preserv	Free Chlorine	Total Dissolved Solids	Iron & Manganese	E. Coli	Total Coliform	Heterotrophic Plate Count	Color	Odor	Methane (WATER) (RSK175)	Comments / P.S. Codes	
3/2/2016	0745	Raw Water Site #1	GW	IW	N/A	N/A		X				X				
3/2/2016	0745	Raw Water Site #1	GW	IW	2,7	N/A								X		
3/2/2016	0645	Raw Water Site #1	GW	IW	1,7	N/A			X	X						
3/2/2016	0647	Filter Effluent (Free Chlorine) Site#2	DW	IW	1,7	4.44				X	X				PH 7.9 TEMP 17	
3/2/2016	0638	Filter Effluent (Total Chlorine) Site#3	DW	IW	N/A	3.63		X				X			PH 7.9 TEMP 18.1	
3/2/2016	0650	Zone #2 Site #6	DW	ID	N/A	1.9	X								PH 7.9 TEMP 18.7	
3/2/2016	0630	Reservoir Effluent Site #5	DW	ID	N/A	1.32	X					X			PH 7.5 TEMP 19	
3/2/2016	0630	Reservoir Effluent Site #5	DW	ID	2,7	1.32								X		
Preservatives: (1) Na ₂ S ₂ O ₃ (2) HCl (3) HNO ₃ (4) NH ₄ Cl (5) H ₂ SO ₄ (6) Na ₂ SO ₃ (7) Cold (8) Other:		Matrix: DW-Drinking Water, WW-Waste Water, SW-Storm Water, GW-Ground Water, A-Air														
Relinquished By (Sign)		Print Name / Company		Date / Time		Received By (Sign)		Print Name / Company								
Daniel Matek		City of Lomita, CA		3/2/2016 / 12:45		[Signature]		J. Lucero / CLSB								
[Signature]		J. Lucero / CLSB		3-2-16 / 1530		[Signature]		J. Lucero / CLSB								
Comments:		Samples received: (X) On ice () Intact () Custody seals Temp () F (X) C														
Shipped Via		Fed X		Golden State		UPS		Client		Other		Page 1 of 1				

Clinical Laboratory of San Bernardino, Inc.



23 March 2016

Clinical Lab No.: 16C0932

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

Project Name: Standard Analysis
Sub Project: CWPF Weekly Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 03/09/16 . 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,

A handwritten signature in black ink, appearing to read 'Stu Styles', with a stylized flourish at the end.

Stu Styles
Client Services Manager

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWP Weekly Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16C0932
Received: 03/09/16 16:20
Reported: 03/23/16

Reservoir Effluent Site #5 **16C0932-01 (Water)** **Sample Date:** 03/09/16 0:00 **Sampler:** DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
---------	--------	--------	------------	-----	-------	----------	----------	-------	-----------

Field Analyses

pH (Field)	Field	7.5		N/A	pH Units	03/09/16	03/09/16	1611526	
Temperature (Field)	Field	19.1		N/A	°C	03/09/16	03/09/16	1611527	

General Chemical Analyses

Hardness, Total (as CaCO₃)	Calculated	280	6.6	N/A	mg/L	03/15/16	03/15/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	640	5.0	1000	mg/L	03/11/16	03/14/16	1611614	

Metals

Calcium (Ca)	EPA 200.7	74	1.0	N/A	mg/L	03/15/16	03/15/16	1611034	
Magnesium (Mg)	EPA 200.7	24	1.0	N/A	mg/L	03/15/16	03/15/16	1611034	

ND Analyte NOT DETECTED at or above the reporting limit



Certificate of Analysis

Project: 16C0932

Report Date: 03/16/16 12:05

Received Date: 03/11/16 10:00

Turnaround Time: 5 workdays

Phones: (909) 825-7693

Fax: (909) 825-7696

P.O. #:

Attn: John Styles

Client: Clinical Laboratory of San Bernardino, Inc.
21881 Barton Road
Grand Terrace, CA 92313

Dear John Styles :

Enclosed are the results of analyses for samples received 3/11/2016 with the Chain of Custody document. The samples were received in good condition, at 2.9 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6C11022-01

Sample ID: Reservoir Effluent Site #5 / 16C0932

Matrix: Water

Sampled by: Client

Sampled: 03/09/16 10:00

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	0.78	0.0012	0.010	mg/l	1	RSK-175	3/15/16	3/15/16 16:06	W6C0932	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6C0932 - RSK-175

Blank (W6C0932-BLK1)

Prepared: 03/15/16 Analyzed: 03/15/16 15:06

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		ND		mg/l					

LCS (W6C0932-BS1)

Prepared: 03/15/16 Analyzed: 03/15/16 15:46

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.224		mg/l	0.198	113	85-115		

Duplicate (W6C0932-DUP1)

Source: 6C11022-01

Prepared: 03/15/16 Analyzed: 03/15/16 16:26

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	0.784	0.662		mg/l				17	20



Certificate of Analysis

Notes:

The Chain of Custody document is part of the analytical report.

Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.

The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).

For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature

Contact: Brandon Gee
(Project Manager)



ELAP # 1132
LACSD # 10143
NELAC #4047-002 ORELAP

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

SUBCONTRACT ORDER
Clinical Laboratory of San Bernardino
16C0932

6011022

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:

Weck Lab, Analytical & Environmental
Analytical & Environmental Svc 14859 E Clark Ave
Industry, CA 91745
Phone: (626) 336-2139
Fax: (626) 336-2634

Please email results to Project Manager: Stu Styles

[] glaubig@clinical-lab.com [] ybarra@clinical-lab.com [x] styles@clinical-lab.com [] nelson@clinical-lab.com

California EDT transfer those samples with PS codes provided [] Yes [x] No

Transfer File requested; log in with Element ID only [] Yes [x] No

Turn Around Time [] 10 Days [x] 5 Days [] Other ___ Days

Subcontract Comments:

Analysis

Comments

Sample ID: Reservoir Effluent Site #5 / 16C0932-01

Sampled: 03/09/16 10:00 PS Code:
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (B)

40ml Amber Vial (C)

2.9C

Released By	<i>Bo Dy</i>	Date / Time	<i>03/11/16 07:45</i>	Received By	<i>Dez Porano</i>	Date / Time	<i>3/11/16 9:00</i>
Released By	<i>Dez Porano</i>	Date / Time	<i>3/11/16 10:00</i>	Received By	<i>Shanglian</i>	Date / Time	<i>3/11/16 10:00</i>

PLANT OFFLINE *DOM*

Clinical Laboratory of San Bernardino, Inc.



25 March 2016

Clinical Lab No.: 16C1544

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

Project Name: Standard Analysis
Sub Project: CWPF Weekly Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 03/17/16 . 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,

A handwritten signature in black ink, appearing to read 'Stu Styles', with a stylized flourish at the end.

Stu Styles
Client Services Manager

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWP Weekly Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16C1544
Received: 03/17/16 17:05
Reported: 03/25/16

Filter Effluent Site #3

16C1544-01 (Water)

Sample Date: 03/17/16 10:10 Sampler: DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
---------	--------	--------	------------	-----	-------	----------	----------	-------	-----------

Field Analyses

Cl Res Total (Field)	Field	1.46		N/A	mg/L	03/17/16	03/17/16	1612492	
pH (Field)	Field	7.81		N/A	pH Units	03/17/16	03/17/16	1612493	
Temperature (Field)	Field	23.1		N/A	°C	03/17/16	03/18/16	1612494	

General Physical Analyses

Apparent Color	SM 2120B	7.5	3.0	15	Color Units	03/17/16	03/17/16	1612525	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	03/22/16	03/22/16	1613011	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	03/22/16	03/22/16	1613011	

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16C1544

Report Date: 03/25/2016

Analyzing Lab: Clinical Laboratory of San Bernardino, Inc. ELAP 1088

Page 1 of 1

LOMITA-CITY, WATER DEPT.

User ID: 4TH

System: 1910073

WELL 05 TREATMENT PLANT EFFLUENT

Station No.: 1910073-006

Sampled: 160317 10:10

COLOR

Result: 7.5

Units: UNITS

Entry No.: 00081

Analyzed: 160317

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 160322

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 160322

012/1
011/2

"Your Water and Wastewater Analysis Solution"

Clinical Laboratory of San Bernardino, Inc.



01 April 2016

Clinical Lab No.: 16C1480

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

Project Name: Standard Analysis
Sub Project: CWPF Weekly Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 03/16/16 . 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,

A handwritten signature in black ink, appearing to read 'Stu Styles', with a stylized flourish at the end.

Stu Styles
Client Services Manager

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWP Weekly Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16C1480
Received: 03/16/16 15:30
Reported: 04/01/16

Reservoir Effluent Site #5

16C1480-01 (Water)

Sample Date: 03/16/16 0:00

Sampler: DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
---------	--------	--------	------------	-----	-------	----------	----------	-------	-----------

General Chemical Analyses

Hardness, Total (as CaCO ₃)	Calculated	320	6.6	N/A	mg/L	03/21/16	03/21/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	710	5.0	1000	mg/L	03/17/16	03/18/16	1612428	

Metals

Calcium (Ca)	EPA 200.7	84	1.0	N/A	mg/L	03/21/16	03/21/16	1613010	
Magnesium (Mg)	EPA 200.7	27	1.0	N/A	mg/L	03/21/16	03/21/16	1613010	

ND Analyte NOT DETECTED at or above the reporting limit



Certificate of Analysis

Project: 16C1480

Report Date: 03/25/16 14:46

Received Date: 03/18/16 10:25

Turnaround Time: 5 workdays

Phones: (909) 825-7693

Fax: (909) 825-7696

P.O. #:

Attn: John Styles

Client: Clinical Laboratory of San Bernardino, Inc.
21881 Barton Road
Grand Terrace, CA 92313

Dear John Styles :

Enclosed are the results of analyses for samples received 3/18/2016 with the Chain of Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6C18028-01

Sample ID: Reservoir Effluent Site #5/ 16C1480-01

Matrix: Water

Sampled by: Client

Sampled: 03/16/16 00:00

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	1.0		0.010	mg/l	1	RSK-175	3/22/16	3/22/16 17:37	W6C1425	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6C1425 - RSK-175

Blank (W6C1425-BLK1)

Prepared: 03/22/16 Analyzed: 03/22/16 16:37

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		ND		mg/l					

LCS (W6C1425-BS1)

Prepared: 03/22/16 Analyzed: 03/22/16 17:17

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.176		mg/l	0.198	89	85-115		

LCS Dup (W6C1425-BSD1)

Prepared: 03/22/16 Analyzed: 03/22/16 16:17

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.188		mg/l	0.198	95	85-115	6	20

Duplicate (W6C1425-DUP1)

Source: 6C18028-01

Prepared: 03/22/16 Analyzed: 03/22/16 17:56

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	1.05	0.851	QR-03	mg/l				21	20



Certificate of Analysis

Notes:

The Chain of Custody document is part of the analytical report.

Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.

The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).

For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature

Contact: Brandon Gee
(Project Manager)



ELAP # 1132
LACSD # 10143
NELAC #4047-002 ORELAP

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

SUBCONTRACT ORDER
Clinical Laboratory of San Bernardino
16C1480

6C18028

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:

Weck Lab, Analytical & Environmental
Analytical & Environmental Svc 14859 E Clark Ave
Industry, CA 91745
Phone : (626) 336-2139
Fax: (626) 336-2634

Please email results to Project Manager: Stu Styles

[] glaubig@clinical-lab.com [] ybarra@clinical-lab.com [x] styles@clinical-lab.com [] nelson@clinical-lab.com

California EDT transfer those samples with PS codes provided [] Yes [x] No

Transfer File requested; log in with Element ID only [] Yes [x] No

Turn Around Time [] 10 Days [x] 5 Days [] Other ___ Days

Subcontract Comments:

Analysis

Comments

Sample ID: Reservoir Effluent Site #5 / 16C1480-01

Sampled: 03/16/16 00:00 PS Code:
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (B)

40ml Amber Vial (C)

Released By <i>Bo Zhu</i>	Date / Time <i>03/18/16 08:00</i>	Received By <i>Dezhaqano</i>	Date / Time <i>3/18/16</i>
Released By <i>Dezhaqano</i>	Date / Time <i>3/18/16 1025</i>	Received By <i>[Signature]</i>	Date / Time <i>3.18.16 1025</i>

2.4/c

[illegible]

Clinical Laboratory of San Bernardino, Inc.



07 April 2016

Clinical Lab No.: 16C2401

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

Project Name: Standard Analysis
Sub Project: CWPF Weekly Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 03/30/16 . 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,

A handwritten signature in black ink, appearing to read 'Stu Styles', with a stylized flourish at the end.

Stu Styles
Client Services Manager

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWP Weekly Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16C2401
Received: 03/30/16 15:30
Reported: 04/07/16

Filter Effluent Site #3

16C2401-01 (Water)

Sample Date: 03/30/16 10:10 Sampler: DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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Field Analyses

Cl Res Total (Field)	Field	3.1		N/A	mg/L	03/30/16	03/30/16	1614375	
pH (Field)	Field	7		N/A	pH Units	03/30/16	03/30/16	1614376	
Temperature (Field)	Field	19.3		N/A	°C	03/30/16	03/30/16	1614378	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	03/30/16	03/30/16	1614342	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	04/01/16	04/01/16	1614411	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	04/01/16	04/01/16	1614411	

Reservoir Effluent Site #5

16C2401-02 (Water)

Sample Date: 03/30/16 10:15 Sampler: DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
---------	--------	--------	------------	-----	-------	----------	----------	-------	-----------

Field Analyses

Cl Res Total (Field)	Field	2.88		N/A	mg/L	03/30/16	03/30/16	1614375	
pH (Field)	Field	7.25		N/A	pH Units	03/30/16	03/30/16	1614376	
Temperature (Field)	Field	21.5		N/A	°C	03/30/16	03/30/16	1614378	

General Chemical Analyses

Hardness, Total (as CaCO ₃)	Calculated	350	6.6	N/A	mg/L	04/04/16	04/05/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	730	5.0	1000	mg/L	03/31/16	04/01/16	1614374	

Metals

Calcium (Ca)	EPA 200.7	91	1.0	N/A	mg/L	04/04/16	04/05/16	1615018	
Magnesium (Mg)	EPA 200.7	30	1.0	N/A	mg/L	04/04/16	04/05/16	1615018	

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16C2401

Report Date: 04/07/2016

Analyzing Lab: Clinical Laboratory of San Bernardino, Inc. ELAP 1088

Page 1 of 1

LOMITA-CITY, WATER DEPT.

User ID: 4TH

System: 1910073

WELL 05 TREATMENT PLANT EFFLUENT

Station No.: 1910073-006

Sampled: 160330 10:10

COLOR

Result: ND

Units: UNITS

Entry No.: 00081

Analyzed: 160330

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 160401

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 160401



Certificate of Analysis

Project: 16C2401

Report Date: 04/07/16 17:52

Received Date: 04/01/16 09:47

Turnaround Time: 5 workdays

Phones: (909) 825-7693

Fax: (909) 825-7696

P.O. #:

Attn: John Styles

Client: Clinical Laboratory of San Bernardino, Inc.
21881 Barton Road
Grand Terrace, CA 92313

Dear John Styles :

Enclosed are the results of analyses for samples received 4/1/2016 with the Chain of Custody document. The samples were received in good condition, at 5.9 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6D01013-01

Sample ID: Reservoir Effluent Site #5/ 16C2401-02

Matrix: Water

Sampled by: Client

Sampled: 03/30/16 10:15

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	1.4	0.0012	0.010	mg/l	1	RSK-175	4/5/16	4/5/16 18:58	W6D0217	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6D0217 - RSK-175

Blank (W6D0217-BLK1)

Prepared: 04/05/16 Analyzed: 04/05/16 17:59

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		ND		mg/l					

LCS (W6D0217-BS1)

Prepared: 04/05/16 Analyzed: 04/05/16 18:39

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.205		mg/l	0.198	104	85-115		

Duplicate (W6D0217-DUP1)

Source: 6D01013-01

Prepared: 04/05/16 Analyzed: 04/05/16 19:18

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	1.40	1.60		mg/l				14	20



Certificate of Analysis

Notes:

The Chain of Custody document is part of the analytical report.

Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.

The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).

For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Authorized Signature

Contact: Brandon Gee
(Project Manager)



ELAP # 1132
LACSD # 10143
NELAC #4047-002 ORELAP

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity
NR	Not Reportable

SUBCONTRACT ORDER
Clinical Laboratory of San Bernardino
16C2401

6001013

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:

Weck Lab, Analytical & Environmental
Analytical & Environmental Svc 14859 E Clark Ave
Industry, CA 91745
Phone : (626) 336-2139
Fax: (626) 336-2634

Please email results to Project Manager: Stu Styles

[] glaubig@clinical-lab.com [] ybarra@clinical-lab.com [x] styles@clinical-lab.com [] nelson@clinical-lab.com

California EDT transfer those samples with PS codes provided [] Yes [x] No
Transfer File requested; log in with Element ID only [] Yes [x] No

Turn Around Time [] 10 Days [x] 5 Days [] Other ___ Days

Subcontract Comments:

Analysis

Comments

Sample ID: Reservoir Effluent Site #5 / 16C2401-02

Sampled: 03/30/16 10:15 PS Code:
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (B)

40ml Amber Vial (C)

Released By

Date / Time

Received By

Date / Time

5.9

Released By

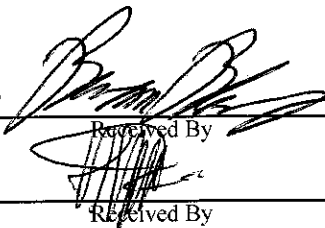
Date / Time

Received By

Date / Time

03/31/16 13:10

4/1/16



4/1/16 8:30

4.1.16 9:47

$$\frac{5}{10}$$

16C 2401

[illegible]

APPENDIX B

METHANE MONITORING LOG



CITY OF LOMITA
PUBLIC WORKS DEPARTMENT

**CYPRESS WATER PRODUCTION FACILITY
HANDHELD METHANE LOG READINGS**

MARCH 2016					
DATE	DAY	TIME	METHANE HANDHELD		COMMENTS
3/1/2016	T		CH ₄ - 1%	Oxy- 20.1%	
3/2/2016	W		CH ₄ - 0%	Oxy- 20.9%	
3/3/2016	TH		CH ₄ - 2%	Oxy- 20.0%	
3/4/2016	F		CH ₄ - 2%	Oxy- 20.0%	
3/5/2016	SA				
3/6/2016	SU				
3/7/2016	M		CH ₄ - 0%	Oxy- 20.9%	
3/8/2016	T		CH ₄ - 0%	Oxy- 20.9%	
3/9/2016	W		CH ₄ - 0%	Oxy- 20.9%	
3/10/2016	TH		CH ₄ - 3%	Oxy- 19.9%	
3/11/2016	F		CH ₄ - 0%	Oxy- 20.9%	
3/12/2016	SA				
3/13/2016	SU				
3/14/2016	M		CH ₄ - 0%	Oxy- 20.9%	
3/15/2016	T		CH ₄ - 0%	Oxy- 20.9%	
3/16/2016	W		CH ₄ - 0%	Oxy- 20.9%	
3/17/2016	TH		CH ₄ - 0%	Oxy- 20.9%	
3/18/2016	F		CH ₄ - 0%	Oxy- 20.9%	
3/19/2016	SA				
3/20/2016	SU				
3/21/2016	M		CH ₄ - 0%	Oxy- 20.9%	
3/22/2016	T		CH ₄ - 0%	Oxy- 20.9%	
3/23/2016	W		CH ₄ - 1%	Oxy- 20.9%	
3/24/2016	TH		CH ₄ - 2%	Oxy- 20.1%	
3/25/2016	F		CH ₄ - 0%	Oxy- 20.9%	
3/26/2016	SA		CH ₄ - 1%	20.9%	
3/27/2016	SU				
3/28/2016	M		CH ₄ - 0%	Oxy- 20.8%	
3/29/2016	T		CH ₄ - 0%	Oxy- 20.9%	
3/30/2016	W		CH ₄ - 2%	Oxy- 20.1%	
3/31/2016	TH		CH ₄ - 1%	Oxy- 20.9%	

ND- Non Detect
CH₄- Methane
Oxy- Oxygen
Weekend/Day Off/Holiday- Red

APPENDIX C

NITRIFICATION MONITORING DATA SUMMARY

1MONTHLY NITRIFICATION MONITORING SUMMARY REPORT

CITY OF LOMITA, System No. 1910073 --- Month, Year: MARCH 2016

C o d e	Sample I.D	Location	Sample Date (and Time)	Temp	pH	Total Chlorine	Free Chlorine	Total Ammonia	Free Ammonia	Nitrite	Nitrate	Coliform ²	HPC	Z o n e	Comments
Units/Others →															
			MWD/YYYY X:xx am/pm	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	P/A	CFU/ml		
D	S13-003	1948 W. 252 nd St	3/2/2016	18.0	7.5	-	1.3	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-004	24632 S Moon Av	3/2/2016	18.5	7.5	-	0.9	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-008	25417 Pennsylvania Av	3/2/2016	19.0	7.0	-	1.08	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	A	2052 Dawn St	3/2/2016	19.2	7.0	-	0.76	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D		Reservoir	3/2/2016	19.1	7.5	-	1.43	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	13-1	1912 W. 259 th Pl	3/2/2016	18.1	7.5	1.96	-	ND	ND	ND	0.67	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	3/2/2016	17.6	7.0	2.00	-	ND	ND	ND	0.64	A	ND	3	MWD Only
D	13-5	2500 PCH	3/2/2016	18.1	7.0	1.9	-	ND	ND	ND	0.64	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	3/9/2016	18.0	7.9	-	0.6	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-004	24632 S Moon Av	3/9/2016	19.3	7.9	-	0.62	ND	ND	ND	ND	A	12	1	We//MWD Blend
D	S13-008	25417 Pennsylvania Av	3/9/2016	19.1	7.9	-	0.61	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	A	2052 Dawn St	3/9/2016	19.3	7.9	-	0.47	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D		Reservoir	3/9/2016	19.1	7.9	-	0.55	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	13-1	1912 W. 259 th Pl	3/9/2016	18.0	8.0	1.72	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	3/9/2016	18.4	8.1	2.07	-	ND	ND	ND	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	3/9/2016	17.0	8.2	1.68	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	3/16/2016	18.0	8.1	-	1.16	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-004	24632 S Moon Av	3/16/2016	18.5	8.1	-	1.19	ND	ND	ND	ND	A	11	1	We//MWD Blend
D	S13-008	25417 Pennsylvania Av	3/16/2016	19.0	8.0	-	0.44	ND	ND	ND	ND	A	3	1	We//MWD Blend
D	A	2052 Dawn St	3/16/2016	19.0	8.1	-	1.85	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D		Reservoir	3/16/2016	19.1	7.8	-	1.62	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	13-1	1912 W. 259 th Pl	3/16/2016	18.1	8.1	1.91	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	3/16/2016	18.0	8.1	2.09	-	ND	ND	ND	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	3/16/2016	18.0	8.1	1.9	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	3/23/2016	19.0	7.9	0.96	-	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-004	24632 S Moon Av	3/23/2016	18.9	7.8	0.77	-	ND	ND	ND	ND	A	110	1	We//MWD Blend
D	S13-008	25417 Pennsylvania Av	3/23/2016	18.9	7.9	0.69	-	ND	ND	ND	ND	A	40	1	We//MWD Blend
D	A	2052 Dawn St	3/23/2016	18.0	8.0	1.63	-	ND	ND	ND	ND	A	12	1	We//MWD Blend
D		Reservoir	3/23/2016	19.0	7.9	1.16	-	0.65	ND	ND	ND	A	ND	1	We//MWD Blend
D	13-1	1912 W. 259 th Pl	3/23/2016	18.5	8.1	2.10	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	3/23/2016	17.5	8.1	2.15	-	ND	ND	ND	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	3/23/2016	18.9	8.1	1.99	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	3/30/2016	19.7	7.9	2.70	-	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	S13-004	24632 S Moon Av	3/30/2016	19.1	7.9	1.57	-	ND	ND	ND	ND	A	23	1	We//MWD Blend
D	S13-008	25417 Pennsylvania Av	3/30/2016	17.3	8.0	2.17	-	ND	ND	ND	ND	A	13	1	We//MWD Blend
D	A	2052 Dawn St	3/30/2016	19.2	7.9	0.77	-	ND	ND	ND	ND	A	8	1	We//MWD Blend
D		Reservoir	3/30/2016	19.5	7.9	19.5	-	ND	ND	ND	ND	A	ND	1	We//MWD Blend
D	13-1	1912 W. 259 th Pl	3/30/2016	18.5	8.2	2.01	-	ND	ND	ND	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	3/30/2016	17.9	8.2	2.15	-	ND	ND	ND	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	3/30/2016	16.9	8.5	2.16	-	ND	ND	ND	ND	A	ND	2	MWD Only

¹Notes: 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).

²Coliform results are part of weekly Bacti sampling results.