

CITY OF LOMITA



Cypress Water Production Facility Monthly Status Report

JULY 2016

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CITY COUNCIL

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CITY OF LOMITA

ADMINISTRATION

RYAN SMOOT
CITY MANAGER

August 10, 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 July 1 through July 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 July 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

The CWPF operated continuously during the month of July 2016 maintaining water levels within the reservoir ranging from 7' to 10'. The average flow from Well No. 5 was 451 gpm and 551 gpm from MWD. The blend ratio for the month was on average 43% Well water and 57% MWD water. See Table 1 below for production totals for the month of July 2016.

Table 1. Monthly Production Totals.

	Production for July 2016		
Well No. 5	54.57	ac-ft	(17,779,938 gallons)
MWD	73.31	ac-ft	(23,884,985 gallons)
Combined Total	127.87	ac-ft	(41,664,923 gallons)

C. OPERATIONAL INTERRUPTIONS

There were no major operational interruptions during the month of July 2016. Routine and preventive maintenance was performed on various pieces of equipment as-needed. At the end of the month, CWPF was taken offline for SCADA maintenance for August 2016.

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 in the raw water (SP1) for the month was below the MCL. Manganese concentration in the raw water (SP1) was 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 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 655 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 710 mg/L and 600 mg/L, respectively.

E3-2 HARDNESS

The sampling results for the month indicate the hardness levels of the blended water to be on average 285 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 at the CWPF effluent after aeration treatment remain negligible averaging 0.41 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 July 2016 in Appendix B.

E3-5 ODOR

The odor levels at the CWPF effluent averaged 2.5 units for the month.

E4. NITRIFICATION MONITORING

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

F. TABLES

Table 2. 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
7/6/2016	210	300	100	50	0	15	A	A	A	500	ND	300	ND	50	ND	15
7/13/2016											ND	300	ND	50	ND	15
7/20/2016											ND	300	ND	50	ND	15
7/27/2016											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

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
7/6/2016	5.54	0.40	4.08	0.64	0.37	3.38	0.61	0.06	2.47	0.57
7/13/2016	5.72	0.54	4.14	0.67	0.37	3.46	0.60	0.09	2.47	0.56
7/20/2016	6.26	0.45	4.32	0.77	0.35	3.61	0.68	0.06	2.74	0.59
7/27/2016	5.90	0.60	4.61	0.71	0.35	3.45	0.62	0.06	2.63	0.46

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
7/6/2016	710	600	670	500-750	4	3	330	270	300	180-250	9.6	0.34
7/13/2016			650	500-750	1	3						0.45
7/20/2016			650	500-750	4	3			270	180-250		0.48
7/27/2016			650	500-750	1	3						0.38
Average			655	500-750	2.5	3			285	180-250		0.41

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 – JULY 2016
Cypress Water Production Facility
City of Lomita; System No. 1910073

Sample Locations and Parameters	Frequency	MCL/ Goal	7/6 1stWk or Mo. Result (date)	7/13 2 nd Wk	7/20 3rdWk	7/27 4 th Wk	N/A 5 th Wk	Comments and/or Other Info.
SP1 --- Also called Well 5 Raw Water or Site#1.								
TDS, ppm	Monthly	See SP5	710	Operations Data/Information: <u>CWPf operation days</u> On Well 5: Daily average flow - 451 gpm; JULY 2016 total prod. – 54.57 AF Combined Well 5/MWD data: Average Well 5: MWD blend Ratio – 43%:57%; JULY 2016 total prod.- 127.87 AF Chlorine Dosage: N/A*				*Chlorine injected after SP1, before entering the greensand filter.
Hardness	Monthly	See SP5	330					
CH4, ppm	Monthly	See SP5	9.6					
Iron, ppb	Monthly	See SP3	210					
Manganese, ppb	Monthly	See SP3	100					
Color, units	Monthly	See SP3	0					
Total Coliform, P or A	Monthly	A	A					
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: 5.86; Range: 5.54 – 6.26						
SP3 --- Also called the Site After Chloramination & Before MWD Blending or Site#4.								
Iron, ppb	Weekly	300	ND	ND	ND	ND		
Manganese, ppb	Weekly	50	ND	ND	ND	ND		
Color	Weekly	15	ND	ND	ND	ND		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.50; Range: 0.40 – 0.60 Total Cl: Average: 4.29; Range: 4.08 – 4.61 Ammonia: Average: 0.70; Range: 0.64 – 0.77						
SP4 --- Also called Reservoir Influent or the Site Well 5/MWD Water Blend Point/Phosphate Injection.								
Phosphate Injection		Phosphate Dosage: 1.09 mg/L						
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.36; Range: 0.35 – 0.37 Total Cl: Average: 3.47; Range: 3.38 – 3.61 Ammonia: Average: 0.63; Range: 0.60 – 0.68						Cl/NH3 Ratio: 5.54, chloraminataed 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	690	700	690	690		
Hardness	Monthly	SI Goal: 180-250ppm	310		300	280		
CH4, ppm	Weekly	Goal: from PA	0.25	0.18	0.37	0.54		% CH4 Removal: 96%
Odor, units	Monthly		1	1	1	1		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.07; Range: 0.06 – 0.09 Total Cl: Average: 2.58; Range: 2.47 – 2.74 Ammonia: Average: 0.54; Range: 0.46 – 0.59						Cl/NH3 Ratio: 4.75, chloraminated water supplied Zone I
Headspace of the Cypress Reservoir.								
¹ CH4 ppmv; using Portable Device	Daily (from log)	Goal - LEL	CH4 Average: 0.48% CH4 Range: 0% - 2%					
SP 6 --- MWD Source Feeding CWPf. Also called Zone 2 of the distribution system or Site #6.								
TDS, ppm	Monthly	-----	600					
Hardness	Monthly	-----	270					
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.								

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

APPENDIX A

LABORATORY RESULTS

Clinical Laboratory of San Bernardino, Inc.



21 July 2016

Clinical Lab No.: 16G0446

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

Project Name: Standard Analysis
Sub Project: CWPF Monthly Standard 1st Week July

Enclosed are the results of the analyses for samples received at the laboratory on 07/06/16 . 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: CWPf Monthly Standard 1st Week July
Project Manager: Mark Andersen

Work Order: 16G0446
Received: 07/06/16 15:30
Reported: 07/21/16

Well SP#1

16G0446-01 (Water)

Sample Date: 07/06/16 8:00 Sampler: DGM

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

pH (Field)	Field	7.59		N/A	pH Units	07/06/16	07/06/16	1628357	
Temperature (Field)	Field	23.1		N/A	°C	07/06/16	07/06/16	1628357	

Microbiology Analyses

Total Coliform	SM 9223	A		N/A	P/A	07/06/16	07/07/16	1628261	
E. Coli	SM 9223	A		N/A	P/A	07/06/16	07/07/16	1628261	
Plate Count	SM9215B	ND	1	500	CFU/ml	07/06/16	07/08/16	1628413	HT-08

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/06/16	07/06/16	1628308	
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General Chemical Analyses

Hardness, Total (as CaCO ₃)	Calculated	330	6.6	N/A	mg/L	07/15/16	07/15/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	710	5.0	1000	mg/L	07/12/16	07/13/16	1629113	

Metals

Calcium (Ca)	EPA 200.7	85	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	
Iron (Fe)	EPA 200.7	210	100	300	ug/L	07/14/16	07/14/16	1629301	
Magnesium (Mg)	EPA 200.7	28	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	
Manganese (Mn)	EPA 200.7	100	20	50	ug/L	07/14/16	07/14/16	1629301	

Filter SP#2

16G0446-02 (Water)

Sample Date: 07/06/16 8:10 Sampler: DGM

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

Cl Res Total (Field)	Field	4.72		N/A	mg/L	07/06/16	07/06/16	1628357	
pH (Field)	Field	7.64		N/A	pH Units	07/06/16	07/06/16	1628357	
Temperature (Field)	Field	22.8		N/A	°C	07/06/16	07/06/16	1628357	

Microbiology Analyses

Total Coliform	SM 9223	A		N/A	P/A	07/06/16	07/07/16	1628261	
E. Coli	SM 9223	A		N/A	P/A	07/06/16	07/07/16	1628261	
Plate Count	SM9215B	ND	1	500	CFU/ml	07/06/16	07/08/16	1628413	HT-08

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWPf Monthly Standard 1st Week July
Project Manager: Mark Andersen

Work Order: 16G0446
Received: 07/06/16 15:30
Reported: 07/21/16

MWD SP #6

16G0446-03 (Water)

Sample Date: 07/06/16 8:20 **Sampler:** DGM

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

Cl Res Total (Field)	Field	2.18		N/A	mg/L	07/06/16	07/06/16	1628357	
pH (Field)	Field	8.25		N/A	pH Units	07/06/16	07/06/16	1628357	
Temperature (Field)	Field	22.8		N/A	°C	07/06/16	07/06/16	1628357	

General Chemical Analyses

Hardness, Total (as CaCO₃)	Calculated	270	6.6	N/A	mg/L	07/15/16	07/15/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	600	5.0	1000	mg/L	07/12/16	07/13/16	1629113	

Metals

Calcium (Ca)	EPA 200.7	66	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	
Magnesium (Mg)	EPA 200.7	26	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	

Reservoir Effluent Site SP #3

16G0446-04 (Water)

Sample Date: 07/06/16 8:40 **Sampler:** DGM

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

Cl Res Total (Field)	Field	4.15		N/A	mg/L	07/06/16	07/06/16	1628357	
pH (Field)	Field	7.66		N/A	pH Units	07/06/16	07/06/16	1628357	
Temperature (Field)	Field	22.9		N/A	°C	07/06/16	07/06/16	1628357	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/06/16	07/06/16	1628308	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	07/14/16	07/14/16	1629301	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	07/14/16	07/14/16	1629301	

Clinical Laboratory of San Bernardino, Inc.



Lomita, City of
24373 Walnut Avenue
Lomita CA, 91717

Project: Standard Analysis
Sub Project: CWPf Monthly Standard 1st Week July
Project Manager: Mark Andersen

Work Order: 16G0446
Received: 07/06/16 15:30
Reported: 07/21/16

Reservoir Effluent Site SP #5

16G0446-05 (Water)

Sample Date: 07/06/16 8:50 Sampler: DGM

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

Cl Res Total (Field)	Field	2.42		N/A	mg/L	07/06/16	07/06/16	1628357	
pH (Field)	Field	7.93		N/A	pH Units	07/06/16	07/06/16	1628357	
Temperature (Field)	Field	22.9		N/A	°C	07/06/16	07/06/16	1628357	

General Physical Analyses

Odor Threshold	EPA 140.1M	4	1	3	TON	07/06/16	07/06/16	1628308	
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General Chemical Analyses

Hardness, Total (as CaCO ₃)	Calculated	300	6.6	N/A	mg/L	07/15/16	07/15/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	670	5.0	1000	mg/L	07/12/16	07/13/16	1629113	

Metals

Calcium (Ca)	EPA 200.7	76	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	07/14/16	07/14/16	1629301	
Magnesium (Mg)	EPA 200.7	27	1.0	N/A	mg/L	07/15/16	07/15/16	1629398	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	07/14/16	07/14/16	1629301	

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: 16G0446

Report Date: 07/21/2016

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: 160706 08:00
COLOR	Result: ND	Units: UNITS	Entry No.: 00081	Analyzed: 160706
TOTAL HARDNESS (AS CaCO3)	Result: 330	Units: MG/L	Entry No.: 00900	Analyzed: 160715
CALCIUM	Result: 85	Units: MG/L	Entry No.: 00916	Analyzed: 160715
MAGNESIUM	Result: 28	Units: MG/L	Entry No.: 00927	Analyzed: 160715
IRON	Result: 210	Units: UG/L	Entry No.: 01045	Analyzed: 160714
MANGANESE	Result: 100	Units: UG/L	Entry No.: 01055	Analyzed: 160714
TOTAL DISSOLVED SOLIDS	Result: 710	Units: MG/L	Entry No.: 70300	Analyzed: 160713
WELL 05 TREATMENT PLANT EFFLUENT	Station No.: 1910073-006			Sampled: 160706 08:40
COLOR	Result: ND	Units: UNITS	Entry No.: 00081	Analyzed: 160706
IRON	Result: ND	Units: UG/L	Entry No.: 01045	Analyzed: 160714
MANGANESE	Result: ND	Units: UG/L	Entry No.: 01055	Analyzed: 160714



Certificate of Analysis

Project: 16G0446

Report Date: 07/14/16 13:19

Received Date: 07/08/16 12:55

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 7/8/2016 with the Chain of Custody document. The samples were received in good condition, at 0.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6G08043-01 Sample ID: Well SP#1/ 16G0446-01 Matrix: Water
Sampled by: Client Sampled: 07/06/16 08:00

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	9.6	0.024	0.20	mg/l	20	RSK-175	7/12/16	7/12/16 19:56	W6G0546	

Lab ID: 6G08043-02 Sample ID: Reservoir Effluent Site #5 / 16G0446-05 Matrix: Water
Sampled by: Client Sampled: 07/06/16 08:50

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	0.34	0.0012	0.010	mg/l	1	RSK-175	7/12/16	7/12/16 20:16	W6G0546	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6G0546 - RSK-175

Blank (W6G0546-BLK1)

Prepared: 07/12/16 Analyzed: 07/12/16 19:36

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

LCS (W6G0546-BS1)

Prepared: 07/12/16 Analyzed: 07/12/16 19:17

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.209		mg/l	0.198	106	85-115		

Duplicate (W6G0546-DUP1)

Source: 6G08043-02

Prepared: 07/12/16 Analyzed: 07/12/16 20:36

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	0.341	0.377		mg/l				10	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 Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then not detected at or above the 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
16G0446

6608043

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: Well SP#1 / 16G0446-01

Sampled: 07/06/16 08:00 PS Code:

Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (C)

40ml Amber Vial (D)

Sample ID: Reservoir Effluent Site SP #5 / 16G0446-05

Sampled: 07/06/16 08:50 PS Code:

Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40mL Amber Vial HCl (B)

40mL Amber Vial HCl (C)

Released By

Date / Time

Received By

Date / Time

Released By

Date / Time

Received By

Date / Time

B. dy

07/06/16 07:50

m chl

7/8/16 9:30

080

m chl

7/8/16 12:55

[Signature]

7/8/16 1255

"Your Water and Wastewater Analysis Solution"

Clinical Laboratory of San Bernardino, Inc.



27 July 2016

Clinical Lab No.: 16G1046

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

Project Name: Standard Analysis
Sub Project: CWPF 2nd Week July Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 07/13/16 . 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: CWPf 2nd Week July Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16G1046
Received: 07/13/16 15:45
Reported: 07/27/16

Reservoir Influent Site #3 **16G1046-01 (Water)** **Sample Date:** 07/13/16 8:45 **Sampler:** DGM

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

Field Analyses

Cl Res Total (Field)	Field	4.25		N/A	mg/L	07/13/16	07/13/16	1629389	
pH (Field)	Field	7.66		N/A	pH Units	07/13/16	07/13/16	1629389	
Temperature (Field)	Field	23		N/A	°C	07/13/16	07/13/16	1629389	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/13/16	07/13/16	1629403	
----------------	----------	----	-----	----	-------------	----------	----------	---------	--

Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	07/25/16	07/26/16	1631030	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	07/25/16	07/26/16	1631030	

Reservoir Effluent Site #5 **16G1046-02 (Water)** **Sample Date:** 07/13/16 9:00 **Sampler:** DGM

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

Field Analyses

Cl Res Total (Field)	Field	2.42		N/A	mg/L	07/13/16	07/13/16	1629389	
pH (Field)	Field	7.89		N/A	pH Units	07/13/16	07/13/16	1629389	
Temperature (Field)	Field	23		N/A	°C	07/13/16	07/13/16	1629389	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/13/16	07/13/16	1629403	
Odor Threshold	EPA 140.1M	1	1	3	TON	07/13/16	07/13/16	1629403	

General Chemical Analyses

Total Filterable Residue/TDS	SM 2540C	650	5.0	1000	mg/L	07/18/16	07/19/16	1630027	
-------------------------------------	----------	------------	-----	------	------	----------	----------	---------	--

Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	07/25/16	07/26/16	1631030	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	07/25/16	07/26/16	1631030	

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16G1046

Report Date: 07/27/2016

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: 160713 08:45

COLOR

Result: ND

Units: UNITS

Entry No.: 00081

Analyzed: 160713

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 160726

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 160726



Certificate of Analysis

Project: 16G1046

Report Date: 07/21/16 14:59

Received Date: 07/15/16 12:08

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 7/15/2016 with the Chain of Custody document. The samples were received in good condition, at 3.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6G15043-01		Sample ID: Redervoir Effluent Site #5/ 16G1046-02							Matrix: Water	
Sampled by: Client		Sampled: 07/13/16 09:00								
Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	0.45	0.0012	0.010	mg/l	1	RSK-175	7/15/16	7/15/16 17:07	W6G0779	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6G0779 - RSK-175

Blank (W6G0779-BLK1)

Prepared: 07/15/16 Analyzed: 07/15/16 16:47

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

LCS (W6G0779-BS1)

Prepared: 07/15/16 Analyzed: 07/15/16 16:28

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.173		mg/l	0.198	87	85-115		

Duplicate (W6G0779-DUP1)

Source: 6G15043-01

Prepared: 07/15/16 Analyzed: 07/15/16 17:27

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	0.451	0.450		mg/l				0.1	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 Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then not detected at or above the 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
16G1046

6615043

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 ☒ 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

Sample ID: Reservoir Effluent Site #5 / 16G1046-02

Sampled: 07/13/16 09:00 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

Released By

Date / Time

Received By

Date / Time

Released By: *Stu Styles* Date / Time: 07/15/16 07:45 Received By: *Deey Chaguan* Date / Time: 7/15/16 945
Released By: *Deey Chaguan* Date / Time: 7/15/16 1208 Received By: *[Signature]* Date / Time: 7/15/16 1708 3.8c

1661046

$$\frac{\phi}{13} \bigg| \bigcirc$$

"Your Water and Wastewater Analysis Solution"

Clinical Laboratory of San Bernardino, Inc.



05 August 2016

Clinical Lab No.: 16G1638

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

Project Name: Standard Analysis
Sub Project: CWPF 3rd Week July Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 07/20/16 . 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: CWPf 3rd Week July Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16G1638
Received: 07/20/16 16:15
Reported: 08/05/16

Reservoir Influent Site #3 **16G1638-01 (Water)** **Sample Date:** 07/20/16 0:00 **Sampler:** DGM

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

Cl Res Total (Field)	Field	4.55		N/A	mg/L	07/20/16	07/20/16	1630326	
pH (Field)	Field	7.7		N/A	pH Units	07/20/16	07/20/16	1630326	
Temperature (Field)	Field	23		N/A	°C	07/20/16	07/20/16	1630326	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/20/16	07/20/16	1630389	
----------------	----------	----	-----	----	-------------	----------	----------	---------	--

General Chemical Analyses

Hardness, Total (as CaCO3)	Calculated	310	6.6	N/A	mg/L	07/28/16	07/28/16	[CALC]	
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Metals

Calcium (Ca)	EPA 200.7	80	1.0	N/A	mg/L	07/28/16	07/28/16	1631293	
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	08/03/16	08/03/16	1632232	
Magnesium (Mg)	EPA 200.7	26	1.0	N/A	mg/L	07/28/16	07/28/16	1631293	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	08/03/16	08/03/16	1632232	

Reservoir Effluent Site #5 **16G1638-02 (Water)** **Sample Date:** 07/20/16 0:00 **Sampler:** DGM

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

Field Analyses

Cl Res Total (Field)	Field	2.73		N/A	mg/L	07/20/16	07/20/16	1630326	
pH (Field)	Field	7.95		N/A	pH Units	07/20/16	07/20/16	1630326	
Temperature (Field)	Field	22.9		N/A	°C	07/20/16	07/20/16	1630326	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/20/16	07/20/16	1630389	
Odor Threshold	EPA 140.1M	4	1	3	TON	07/20/16	07/20/16	1630389	

General Chemical Analyses

Hardness, Total (as CaCO3)	Calculated	270	6.6	N/A	mg/L	07/28/16	07/28/16	[CALC]	
Total Filterable Residue/TDS	SM 2540C	650	5.0	1000	mg/L	07/25/16	07/28/16	1631024	

Metals

Calcium (Ca)	EPA 200.7	69	1.0	N/A	mg/L	07/28/16	07/28/16	1631293	
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	08/03/16	08/03/16	1632232	
Magnesium (Mg)	EPA 200.7	23	1.0	N/A	mg/L	07/28/16	07/28/16	1631293	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	08/03/16	08/03/16	1632232	

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16G1638

Report Date: 08/05/2016

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: 160720 00:00

COLOR	Result: ND	Units: UNITS	Entry No.: 00081	Analyzed: 160720
TOTAL HARDNESS (AS CaCO3)	Result: 310	Units: MG/L	Entry No.: 00900	Analyzed: 160728
CALCIUM	Result: 80	Units: MG/L	Entry No.: 00916	Analyzed: 160728
MAGNESIUM	Result: 26	Units: MG/L	Entry No.: 00927	Analyzed: 160728
IRON	Result: ND	Units: UG/L	Entry No.: 01045	Analyzed: 160803
MANGANESE	Result: ND	Units: UG/L	Entry No.: 01055	Analyzed: 160803

Printed: 08/05/2016 09:22:22 AM Results of 16G1638 FINAL WRITEON 1910073-006

Post Office Box 329 San Bernardino, CA 92402 (909) 825-7693 Fax (909) 825-7696 ELAP Number 1088



Certificate of Analysis

Project: 16G1638

Report Date: 07/27/16 12:49

Received Date: 07/21/16 11:45

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 7/21/2016 with the Chain of Custody document. The samples were received in good condition, at 2.6 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Lab ID: 6G21063-01

Sample ID: Redervoir Effluent Site #5/ 16G1638-02

Matrix: Water

Sampled by: Client

Sampled: 07/20/16 00:00

Analyte	Result	MDL	MRL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Methane	0.48	0.0012	0.010	mg/l	1	RSK-175	7/25/16	7/25/16 17:37	W6G1229	



Certificate of Analysis

Quality Control Section

Dissolved Gases in Water by RSK-175 - Quality Control

Batch W6G1229 - RSK-175

Blank (W6G1229-BLK1)

Prepared: 07/25/16 Analyzed: 07/25/16 16:34

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

LCS (W6G1229-BS1)

Prepared: 07/25/16 Analyzed: 07/25/16 16:57

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane		0.217		mg/l	0.198	110	85-115		

Duplicate (W6G1229-DUP1)

Source: 6G21063-01

Prepared: 07/25/16 Analyzed: 07/25/16 17:57

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Methane	0.478	0.467		mg/l				2	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 Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then not detected at or above the 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
16G1638

6621063

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
Water Trax Upload Client: [] Yes [x] NoTurn Around Time [] 10 Days [x] 5 Days [] Other ___ Days
Subcontract Comments:**Comments****Analysis**

Sample ID: Reservoir Effluent Site #5 / 16G1638-02

Sampled: 07/20/16 00:00 PS Code:
Water

WTX ID:

Report in mg/L

Methane RSK175

Containers Supplied:

40mL Amber Vial HCl (B)

40mL Amber Vial HCl (C)

Released By

Date / Time

Received By

Date / Time

Released By

Date / Time

Received By

Date / Time

Temp. 2.6°C

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		CWP/ 3rd Week July Compliance Sampling		No																			
Comments		For TC/EC/BACT see weekly Distro CoC		ELAP #																			
Sampled by		DGM		1088																			
Date	Time	Sample Identification	Matrix	Type	Preserv	Total Chlorine	Iron	Manganese	Total Dissolved Solids	Color	Methane (Water) (RSK175)	Total Hardness (as CaCO3)	BACT/TC/HPC	Odor	Comments / P.S. Codes								
7/20/2016		Reservoir Influent Site #3	DW	1W	N/A	4.55	X	X	X	X	X	X			PH 7.70 Temp 23.0								
7/20/2016		Reservoir Effluent Site #5	DW	1W	N/A	2.73	X	X	X	X	X			X									
7/20/2016		Reservoir Effluent Site #5	DW	1W	HCL	2.73					X	X			PH 7.95 Temp 22.9								
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		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 Matek	City of Lomita	7/20/2016																					
	J. Lucero/USB	7:20:16/4:15																					
Comments:		Samples received		On ice () Intact () F () C		Temp																	
Shipped Via		Fed X		Golden State		UPS		Client		Other		Page 1 of 1											

Clinical Laboratory of San Bernardino, Inc.



04 August 2016

Clinical Lab No.: 16G2179

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

Project Name: Standard Analysis
Sub Project: CWPF 4th Week July Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 07/27/16 . 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: CWPf 4th Week July Compliance Sampling
Project Manager: Mark Andersen

Work Order: 16G2179
Received: 07/27/16 16:00
Reported: 08/04/16

Reservoir Influent Site #3 **16G2179-01 (Water)** **Sample Date:** 07/27/16 10:20 **Sampler:** DGM

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

Cl Res Total (Field)	Field	4.4		N/A	mg/L	07/27/16	07/27/16	1631290	
pH (Field)	Field	7.67		N/A	pH Units	07/27/16	07/27/16	1631290	
Temperature (Field)	Field	23.3		N/A	°C	07/27/16	07/27/16	1631290	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/27/16	07/27/16	1631363	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	08/02/16	08/02/16	1632074	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	08/02/16	08/02/16	1632074	

Reservoir Effluent Site #5 **16G2179-02 (Water)** **Sample Date:** 07/27/16 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	2.55		N/A	mg/L	07/27/16	07/27/16	1631290	
pH (Field)	Field	7.95		N/A	pH Units	07/27/16	07/27/16	1631290	
Temperature (Field)	Field	23.3		N/A	°C	07/27/16	07/27/16	1631290	

General Physical Analyses

Apparent Color	SM 2120B	ND	3.0	15	Color Units	07/27/16	07/27/16	1631363	
Odor Threshold	EPA 140.1M	1	1	3	TON	07/27/16	07/27/16	1631363	

General Chemical Analyses

Total Filterable Residue/TDS	SM 2540C	650	5.0	1000	mg/L	07/29/16	08/02/16	1631373	
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Metals

Iron (Fe)	EPA 200.7	ND	100	300	ug/L	08/02/16	08/02/16	1632074	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	08/02/16	08/02/16	1632074	

ND Analyte NOT DETECTED at or above the reporting limit

Clinical Laboratory of San Bernardino, Inc.

EDT Transfer Confirmation 1



Work Order: 16G2179

Report Date: 08/04/2016

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: 160727 10:20

COLOR

Result: ND

Units: UNITS

Entry No.: 00081

Analyzed: 160727

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 160802

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 160802

Work Orders: 6G28021

Report Date: 8/03/2016

Project: 16G2179

Received Date: 7/28/2016

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 7/28/16 with the Chain-of-Custody document. The samples were received in good condition, at 2.4 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Sample Results

Sample: Reservoir Effluent Site #5/ 16G2179-02
6G28021-01 (Water)

Sampled: 07/27/16 10:10 by Client

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Method: RSK-175	Batch ID: W6H0123		Instr: GC09		Prepared: 08/02/16 10:53		Analyst: rhr
Methane	0.38	0.0012	0.010	mg/l	1	08/02/16 15:10	



WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Quality Control Results

Dissolved Gases in Water by RSK-175

Analyte	Result	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
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Batch: W6H0123 - Headspace

Blank (W6H0123-BLK1)

Prepared & Analyzed: 08/02/16

Methane ND 0.0012 mg/l

LCS (W6H0123-BS1)

Prepared & Analyzed: 08/02/16

Methane 0.185 0.0012 mg/l 0.198 93 85-115

Duplicate (W6H0123-DUP1)

Source: 6G28021-01

Prepared & Analyzed: 08/02/16

Methane 0.422 0.0012 mg/l 0.376 11 20



WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Notes and Definitions

Item	Definition
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ) and Detection Limit for Reporting (DLR)
MDA	Minimum Detectable Activity
NR	Not Reportable
TIC	Tentatively Identified Compound (TIC) using mass spectrometry. The reported concentration is relative concentration based on the nearest internal standard. If the library search produces no matches at, or above 85%, the compound is reported as unknown.

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

An Absence of Total Coliform meets the drinking water standards as established by the California State Water Resources Control Board (SWRCB)

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

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS 002.

Not Certified Analyses Summary

Analyte	CAS #	Not Accredited By
RSK-175 in Water		
Methane	74-82-8	NELAP

Reviewed by:

Brandon Gee
Senior Project Manager



DoD-ELAP #L15-366 • ELAP-CA #1132 • EPA-UCMR #CA00211 • HW-DOH # • ISO 17025 #L15-365 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

SUBCONTRACT ORDER
Clinical Laboratory of San Bernardino
16G2179

6628021

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

Water Trax Upload Client: [] Yes [x] No

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

Subcontract Comments:

Analysis

Comments

Sample ID: Reservoir Effluent Site #5 / 16G2179-02

Sampled: 07/27/16 10:10 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

Released By

Date / Time

Received By

Date / Time

2.42

"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**

JULY 2016				
DATE	DAY	METHANE HANDHELD		COMMENTS
7/1/2016	F	CH ₄ - 0%	Oxy- 20.2%	
7/2/2016	SA	CH ₄ - 0%	Oxy- 20.3%	
7/3/2016	SU	CH ₄ - 0%	Oxy- 20.3%	
7/4/2016	M	CH ₄ - 0%	Oxy- 20.2%	
7/5/2016	TU	CH ₄ - 1%	Oxy- 20.2%	
7/6/2016	W	CH ₄ - 2%	Oxy- 19.9%	
7/7/2016	TH	CH ₄ - 0%	Oxy- 20.3%	
7/8/2016	F	CH ₄ - 0%	Oxy- 20.4%	
7/9/2016	SA	CH ₄ - 2%	Oxy- 19.9%	
7/10/2016	SU	CH ₄ - 0%	Oxy- 20.5%	
7/11/2016	M	CH ₄ - 1%	Oxy- 20.1%	
7/12/2016	TU	CH ₄ - 0%	Oxy- 20.4%	
7/13/2016	W	CH ₄ - 0%	Oxy- 20.3%	
7/14/2016	TH	CH ₄ - 0%	Oxy- 20.1%	
7/15/2016	F	CH ₄ - 2%	Oxy- 19.9%	
7/16/2016	SA	CH ₄ - 0%	Oxy- 20.1%	
7/17/2016	SU	CH ₄ - 0%	Oxy- 20.2%	
7/18/2016	M	CH ₄ - 0%	Oxy- 20.1%	
7/19/2016	TU	CH ₄ - 1%	Oxy- 20.2%	
7/20/2016	W	CH ₄ - 0%	Oxy- 20.2%	
7/21/2016	TH	CH ₄ - 0%	Oxy- 20.2%	
7/22/2016	F	CH ₄ - 2%	Oxy- 19.9%	
7/23/2016	SA	CH ₄ - 2%	Oxy- 19.9%	
7/24/2016	SU	CH ₄ - 0%	Oxy- 20.2%	
7/25/2016	M	CH ₄ - 0%	Oxy- 20.1%	
7/26/2016	TU	CH ₄ - 0%	Oxy- 20.4%	
7/27/2016	W	CH ₄ - 0%	Oxy- 20.2%	
7/28/2016	TH	CH ₄ - 0%	Oxy- 20.3%	
7/29/2016	F	CH ₄ - 0%	Oxy- 20.4%	
7/30/2016	SA	CH ₄ - 2%	Oxy- 19.9%	
7/31/2016	SU	CH ₄ - 0%	Oxy- 20.2%	
ND- Non Detect CH ₄ - Methane Oxy- Oxygen Day Off/Holiday- Red				

APPENDIX C

NITRIFICATION MONITORING DATA SUMMARY

1MONTHLY NITRIFICATION MONITORING SUMMARY REPORT

CITY OF LOMITA, System No. 1910073 --- Month, Year: JULY 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
			MM/DD/YYYY XX:xx am/pm	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	P/A	CFU/ml		
Units/Others →															
D	S13-003	1948 W. 252 nd St	7/6/2016	23.6	8.08	2.02	0.17	ND	ND	ND	ND	A	ND	1	Well/MWD Blend
D	S13-004	24632 S Moon Av	7/6/2016	22.6	8.01	1.86	0.09	ND	ND	ND	ND	A	ND	1	Well/MWD Blend
D	S13-008	25417 Pennsylvania Av	7/6/2016	22.9	7.96	2.06	0.13	ND	ND	ND	ND	A	9	1	Well/MWD Blend
D	A	2052 Dawn St	7/6/2016	23.4	8.03	0.82	0.08	ND	ND	0.067	ND	A	10	1	Well/MWD Blend
D		Reservoir	7/6/2016	22.9	7.93	2.42	0.16	ND	ND	0.005	ND	A	ND	1	Well/MWD Blend
D	13-1	1912 W. 259 th Pl	7/6/2016	24.7	8.18	2.20	0.15	ND	ND	ND	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	7/6/2016	23.2	8.24	2.20	0.23	ND	ND	ND	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	7/6/2016	23.2	8.14	2.07	0.20	ND	ND	ND	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	7/13/2016	25.0	7.98	1.67	0.28	ND	ND	0.016	ND	A	ND	1	Well/MWD Blend
D	S13-004	24632 S Moon Av	7/13/2016	24.1	7.90	1.27	0.32	ND	ND	0.019	ND	A	8	1	Well/MWD Blend
D	S13-008	25417 Pennsylvania Av	7/13/2016	24.8	7.97	1.55	0.17	ND	ND	0.011	ND	A	53	1	Well/MWD Blend
D	A	2052 Dawn St	7/13/2016	25.1	7.80	0.43	0.06	ND	ND	0.065	ND	A	33	1	Well/MWD Blend
D		Reservoir	7/13/2016	23.0	7.89	2.42	0.12	ND	ND	0.035	ND	A	ND	1	Well/MWD Blend
D	13-1	1912 W. 259 th Pl	7/13/2016	24.9	8.24	2.20	0.23	ND	ND	0.044	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	7/13/2016	22.3	8.05	2.20	0.29	0.63	ND	0.034	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	7/13/2016	22.6	7.33	2.20	0.00	ND	ND	0.058	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	7/20/2016	26.0	7.96	1.40	0.08	ND	ND	0.019	ND	A	1	1	Well/MWD Blend
D	S13-004	24632 S Moon Av	7/20/2016	25.0	7.17	0.95	0.06	ND	ND	0.023	ND	A	12	1	Well/MWD Blend
D	S13-008	25417 Pennsylvania Av	7/20/2016	29.2	8.03	1.79	0.24	ND	ND	0.012	ND	A	64	1	Well/MWD Blend
D	A	2052 Dawn St	7/20/2016	26.1	7.87	0.24	0.05	ND	ND	0.046	ND	A	75	1	Well/MWD Blend
D		Reservoir	7/20/2016	22.9	7.95	2.73	-	ND	ND	0.005	ND	A	ND	1	Well/MWD Blend
D	13-1	1912 W. 259 th Pl	7/20/2016	22.9	8.44	2.30	0.12	ND	ND	0.007	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	7/20/2016	22.7	8.40	2.30	0.15	ND	ND	0.008	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	7/20/2016	29.3	7.80	2.17	0.11	ND	ND	0.008	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St	7/27/2016	26.5	8.00	1.40	0.08	ND	ND	0.013	ND	A	ND	1	Well/MWD Blend
D	S13-004	24632 S Moon Av	7/27/2016	26.5	7.93	0.64	0.07	ND	ND	0.019	ND	A	72	1	Well/MWD Blend
D	S13-008	25417 Pennsylvania Av	7/27/2016	27.9	7.91	1.42	0.21	ND	ND	0.018	ND	A	130	1	Well/MWD Blend
D	A	2052 Dawn St	7/27/2016	30.8	7.75	0.20	0.08	ND	ND	0.020	ND	A	83	1	Well/MWD Blend
D		Reservoir	7/27/2016	23.3	7.95	2.55	0.11	ND	ND	0.008	ND	A	ND	1	Well/MWD Blend
D	13-1	1912 W. 259 th Pl	7/27/2016	25.5	8.54	2.30	0.11	ND	ND	0.006	ND	A	ND	2	MWD Only
D	13-2	26314 S Monte Vta.	7/27/2016	24.1	8.37	2.40	0.00	ND	ND	0.009	ND	A	ND	3	MWD Only
D	13-5	2500 PCH	7/27/2016	29.6	8.14	2.10	0.39	ND	ND	0.010	ND	A	ND	2	MWD Only
D	S13-003	1948 W. 252 nd St												1	Well/MWD Blend
D	S13-004	24632 S Moon Av												1	Well/MWD Blend
D	S13-008	25417 Pennsylvania Av												1	Well/MWD Blend
D	A	2052 Dawn St												1	Well/MWD Blend
D		Reservoir												1	Well/MWD Blend
D	13-1	1912 W. 259 th Pl												2	MWD Only
D	13-2	26314 S Monte Vta.												3	MWD Only
D	13-5	2500 PCH												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.