### CITY OF LOMITA



# Cypress Water Production Facility Monthly Status Report

February 2017

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#### CITY COUNCIL

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



#### **ADMINISTRATION**

RYAN SMOOT
CITY MANAGER

### **CITY OF LOMITA**

March 8, 2017

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

Subject: System No. 1910073 - Monthly Report for the Cypress Water Production Facility (CWPF) for the period of February 1 through February 28, 2017.

Dear Mr. Williams,

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

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

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**

The CWPF operated continuously during the month of February 2017 maintaining water levels inside the reservoir ranging from 7 feet to 10 feet. The average flow from Well No. 5 was 409 gpm and 597 gpm from MWD. The blend ratio for month was 41% Well water and 59% MWD water. See Table 1 below for production totals for the month of February 2017.

Table 1. Monthly Production Totals.

	Production for February 2017							
Well No. 5	34.25	ac-ft	(11,158,694 gallons)					
MWD	49.80	ac-ft	(16,227,000 gallons)					
Combined Total	84.05	ac-ft	(27,385,684 gallons)					
Daily	3.00	ac-ft/day	(3,912,241 gallons/day					

#### C. OPERATIONAL INTERRUPTIONS

There were no operational interruptions during the month of February 2017. Routine and preventive maintenance was performed on various pieces of equipment as-needed. No major planned operational interruptions are anticipated for the following month.

### D. SAMPLE LOCATIONS

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

#### E. WATER QUALITY MONITORING

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

#### E1. IRON, MANGANESE AND COLOR

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

#### **E2. FREE AND TOTAL CHLORINE RESIDUALS**

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

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

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

#### E3-1 TOTAL DISSOLVED SOLIDS (TDS)

The sampling results indicate the TDS levels of the effluent blended water to be on average 535 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 470 mg/L, respectively.

#### E3-2 HARDNESS

The sampling results for the month indicate the hardness levels of the blended water to be on average 280 mg/L. Although, this hardness level is in the upper range of the City's Water Quality Objective/Goal of 180 to 250 mg/L; staff continues to monitor hardness levels at the CWPF effluent (SP5) and within the water distribution system. The City has maintained a consistent blend ratio to ensure acceptable hardness levels are met.

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

### E3-3 DISSOLVED METHANE (IN WATER)

The methane levels in the CWPF effluent after aeration treatment remain negligible averaging 0.48 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 February 2017 in Appendix B.

#### E3-5 ODOR

The odor levels at the CWPF effluent averaged 1.5 unit for the month.

#### **E4. NITRIFICATION MONITORING**

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

### F. TABLES

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

		SP1, V	Vell Raw	/ Water	Discha	irge		100000	Comb sure f ffluer	ilter	SP3, /		nloramin reservoir		static mi	xer;
Date, week of	Iron, ug/L	*MCL = 3 00 ug/L	Manganese, ug/L	*MCL = 50 ug/L	Color	*MCL=15	Total Coliform	Total Coliform	HPC, MPN/100mL	MCL=500	Iron, mg/L	*MCL = 300 ug/L	Manganese, mg/L	*MCL = 50 ug/L	Color	*MCL=15
2/1/2017	210	300	120	50	15	15	A	Α	А	500	ND	300	ND	50	7.5	15
2/8/2017									1/19/10		ND	300	ND	50	7.5	15
2/15/2017											ND	300	ND	50	7.5	15
2/22/2017							724-1				ND	300	ND	50	5	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,	SP2		SP3			SP4		SP5			
week of	Free CI	Free CI	Total CI	Total NH <sub>3</sub>	Free CI	Total CI	Total NH <sub>3</sub>	Free CI	Total CI	Total NH <sub>3</sub>	
2/1/2017	7.31	0.34	5.84	0.99	0.28	3.76	0.72	0.06	3.28	0.67	
2/8/2017	6.47	0.29	5.96	0.94	0.26	3.76	0.71	0.08	3.30	0.68	
2/15/2017	7.21	0.25	5.87	1.00	0.29	3.90	0.70	0.06	3.30	0.65	
2/22/2017	6.56	0.30	5.91	0.79	0.49	3.86	0.67	0.05	3.29	0.61	

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

		TD	S, mg/L		T.C	T.O.N. Hardness, mg/L						hane r), mg/L
Date, week of	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
2/1/2017	710	470	610	500-750	1	3	330	200	280	180-250	3.6	0.47
2/8/2017			560	500-750	3	3						0.50
2/15/2017			480	500-750	1	3						0.41
2/22/2017			490	500-750	1	3						0.52
Average	780	470	535	500-750	1.5	3	330	200	280	180-250	3.6	0.48

#### Notes:

Monthly- <u>Orange</u>; Weekly- <u>Yellow</u> 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 – February 2017 Cypress Water Production Facility City of Lomita; System No. 1910073

Osmanla I sastiana	Гианичана	MOL/	0/4	0.10	0/45			0
Sample Locations	Frequency	MCL/	2/1	2/8	2/15	2/22	—th. a.c.	Comments
and Parameters		Goal	1stWk	2 <sup>nd</sup> Wk	3rdWk	4 <sup>th</sup> Wk	5 <sup>th</sup> Wk	and/or
			or Mo.	1				Other Info.
			Result					
			(date)					
SP1 Also called	Woll 5 Day	, Water e		<u> </u>				
TDS, ppm	Monthly	See SP5	710	Operations	Data/Inforn	nation:		*Chlorine injected afte
103, ppm	Wichting	000 01 0	2/1/17	Operations	Data/IIIIOIII	ilation.		SP1, before entering
Hardness	Monthly	See SP5	330 2/1/17	CWPF opera				the greensand filter.
CH4, ppm	Monthly	See SP5	3.6 2/1/17	- 34.25 AF	Daily average f	0.		
Iron, ppb	Monthly	See SP3	210 2/1/17		Vell 5/MWD da - 41% WELL:5			
Manganese, ppb	Monthly	See SP3	<b>120</b> 2/1/17		sage: N/A*			
Color, units	Monthly	See SP3	<b>15</b> 2/1/17	Officiallo Bo	ougo. Twi			
Total Coliform, P or A	Monthly	Α	Α					
SP2 Also called	Filtor Effic	ont or Si	2/1/17 to#2					
Total Coliform, P or A	Monthly							*Ammonia added after
	<u> </u>	A 500	A	Ammonia D	osage: N/A*			filter effluent
HPC,MPN/100 ml	Monthly Continuous		, ,					
Free Cl Res, ppm				ge: 6.47 – 7			0!1-#4	
SP3 Also called			-				Site#4.	
Iron, ppb	Weekly	300	ND	ND	ND	ND		
	Weekly	50	ND	ND	ND	ND		
Color	Weekly	15	7.5	7.5	7.5	ND 5		
Color Free and Total Cl Res,		15 Free Cl: /	7.5 Average: 0.3	7.5 0; Range: 0.	7.5 25 – 0.34			
Color Free and Total Cl Res,	Weekly	15 Free Cl: A Total Cl: A	7.5 Average: 0.3 Average: 5.8	7.5 0; Range: 0. 9; Range: 5	7.5 25 – 0.34 .84 – 5.96			
Color Free and Total Cl Res, ppm	Weekly Continuous	15 Free Cl: A Total Cl: A Ammonia:	7.5 Average: 0.3 Average: 5.89 : Average: 0.	7.5 0; Range: 0. 9; Range: 5 93; Range:	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00	5	int/Phosp	hate Injection.
Color Free and Total CI Res, ppm  SP4 Also called	Weekly Continuous	15 Free Cl: A Total Cl: A Ammonia	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site	7.5 0; Range: 0.9; Range: 5 93; Range: • Well 5/M	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00	5	int/Phosp	hate Injection.
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection	Weekly Continuous	15 Free Cl: A Total Cl: A Ammonia Influent (	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1	7.5 0; Range: 0.9; Range: 5 93; Range: • Well 5/M	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00 WD Water	5	int/Phosp	hate Injection.  CI/NH3 Ratio:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res,	Weekly Continuous Reservoir	Total CI: A Ammonia Influent of Phosphate Free CI: A Total CI: A	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8	7.5 0; Range: 0.9; Range: 5 93; Range: 6 • Well 5/M .17 mg/L 3; Range: 0.12; Range: 3	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00 <b>WD Water</b> 26 – 0.49 .76 – 3.90	5	int/Phosp	•
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm	Weekly Continuous  Reservoir Continuous	Total CI: A Ammonia Influent of Phosphate Free CI: A Total CI: A Ammonia	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 9 Well 5/M .17 mg/L 3; Range: 0.62; Range: 3 70; Range:	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72	5 Blend Po	•	CI/NH3 Ratio: 5.45
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called	Weekly Continuous  Reservoir Continuous  Reservoir	15 Free Cl: A Total Cl: A Ammonia Influent ( Phosphate Free Cl: A Total Cl: A Ammonia Effluent (	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 9 Well 5/M .17 mg/L 3; Range: 0.62; Range: 3 70; Range:	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72	5 Blend Po	•	CI/NH3 Ratio: 5.45
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called	Weekly Continuous  Reservoir Continuous	Total Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia:  Effluent ( SI Goal: 500-750ppm	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 9 Well 5/M .17 mg/L 3; Range: 0.62; Range: 3 70; Range:	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72	5 Blend Po	•	CI/NH3 Ratio: 5.45
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm	Weekly Continuous  Reservoir Continuous  Reservoir	Total CI: A Ammonia: Influent (Phosphate Free CI: A Ammonia: Effluent (SI Goal: 500-750ppm) SI Goal: SI Goal:	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0. or Site#5.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 Well 5/M .17 mg/L 3; Range: 0.2; Range: 3 70; Range: 4 SP5 disc	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in	Blend Po	•	CI/NH3 Ratio: 5.45
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness	Weekly Continuous  Reservoir Continuous  Reservoir Weekly	Total Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia:  Effluent ( SI Goal: 500-750ppm	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0. or Site#5.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 Well 5/M .17 mg/L 3; Range: 0.2; Range: 3 70; Range: 4 SP5 disc	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in	Blend Po	•	CI/NH3 Ratio: 5.45
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly	15 Free Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia: Ffluent ( Sl Goal: 500-750ppm Sl Goal: 180-250ppm Goal: from	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 3.8 : Average: 0. or Site#5.	7.5 0; Range: 0.9; Range: 5 93; Range: 5 Well 5/M .17 mg/L 3; Range: 0.92; Range: 3 70; Range: 5 560	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 WD Water 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in	Blend Po	•	CI/NH3 Ratio: 5.45 tribution system % CH4 Removal:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm  Odor, units	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly	15 Free Cl: A Total Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia: Effluent ( SI Goal: 500-750ppm SI Goal: 180-250ppm Goal: from PA  1 Free Cl: A	7.5 Average: 0.3 Average: 0.8 : Average: 0.  or the Site e Dosage: 1 Average: 0.3 Average: 0.3  Average: 0.4  610  280  0.47  1 Average: 0.0	7.5 0; Range: 0. 9; Range: 5 93; Range: 5 Well 5/M .17 mg/L 3; Range: 0. 12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.0	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00 WD Water 26 – 0.49 .76 – 3.90 0.67 – 0.72 harges in 480 0.41 1	5  Blend Po  to Zone 1  490  0.52	•	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm  Odor, units Free and Total CI Res,	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly	15 Free Cl: A Total Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia: Effluent ( SI Goal: 500-750ppm SI Goal: from PA  1 Free Cl: A Total Cl: A	7.5 Average: 0.3 Average: 0.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 0.0 or Site#5. 610 280 0.47 1 Average: 0.0 Average: 0.0 Average: 0.2	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 0.17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560 0.50 3 6; Range: 0.09; Range: 3.2	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 WD Water 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in 480 0.41 1 05 - 0.08 28 - 3.30	5  Blend Po  to Zone 1  490  0.52	•	CI/NH3 Ratio: 5.45 tribution system % CH4 Removal: 87%
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm  Odor, units Free and Total CI Res, ppm	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous	15 Free Cl: A Total Cl: A Ammonia: Influent ( Phosphate Free Cl: A Total Cl: A Ammonia:  Effluent ( SI Goal: 500-750ppm  SI Goal: 180-250ppm Goal: from PA  1 Free Cl: A Total Cl: A Ammonia:	7.5 Average: 0.3 Average: 0.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 0.0 or Site#5. 610 280 0.47 1 Average: 0.0 Average: 0.0 Average: 0.2	7.5 0; Range: 0. 9; Range: 5 93; Range: 5 Well 5/M .17 mg/L 3; Range: 0. 12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.0	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 WD Water 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in 480 0.41 1 05 - 0.08 28 - 3.30	5  Blend Po  to Zone 1  490  0.52	•	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm  Odor, units Free and Total CI Res, ppm  Headspace of the C	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous  Cypress Re	15 Free Cl: A Ammonia: Influent of Phosphate Free Cl: A Total Cl: A Ammonia: Free Cl: A SI Goal: 500-750ppm Goal: from PA  1 Free Cl: A Total Cl: A Ammonia: SI Goal: 180-250ppm Goal: from PA  2 Free Cl: A Ammonia: Eservoir.	7.5 Average: 0.3 Average: 0.5 The Site Dosage: 1 Average: 0.3 Average: 0.3 Average: 0.4 The Site Dosage: 1 Average: 0.4 The Site Dosage: 0.4 The Site Dosa	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 6 Well 5/M .17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.12 9; Range: 0.12 65; Range: 0.12	7.5 25 – 0.34 .84 – 5.96 0.79 – 1.00 WD Water 26 – 0.49 .76 – 3.90 0.67 – 0.72 harges in 480 0.41 1 05 – 0.08 28 – 3.30 0.61 – 0.68	5  Blend Po  to Zone 1  490  0.52	•	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm  Odor, units Free and Total CI Res, ppm  Headspace of the C  CH4 ppmv; using	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous  Cypress Re Daily	15 Free Cl: A Ammonia: Influent of Phosphate Free Cl: A Total Cl: A Ammonia: Free Cl: A SI Goal: 500-750ppm Goal: from PA  1 Free Cl: A Total Cl: A Ammonia: Free Cl: A Total Cl: A Ammonia: SERVOIR. Goal -	7.5 Average: 0.3 Average: 0.5 The Site Dosage: 1 Average: 0.3 Average: 0.3 Average: 0.4 The Site Dosage: 1 The Site Dos	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 6 Well 5/M .17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.1 9; Range: 0.2 65; Range: 0.1	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 WD Water 26 - 0.49 .76 - 3.90 0.67 - 0.72 harges in 480 0.41 1 05 - 0.08 28 - 3.30 0.61 - 0.68	5  Blend Po  to Zone 1  490  0.52	•	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio:
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm Odor, units Free and Total CI Res, ppm  Headspace of the C1CH4 ppmv; using Portable Device	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous  Cypress Re Daily (from log)	Total Cl: A Ammonia Influent of Phosphate Free Cl: A Total Cl: A Ammonia Free Cl: A Ammonia Effluent of Si Goal: 500-750ppm Goal: from PA  Total Cl: A Ammonia  Free Cl: A Total Cl: A Ammonia  Free Cl: A Total Cl: A Ammonia	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 0.3 Average: 0.4 or Site#5. 610 280 0.47 1 Average: 0.0 Average: 0.0 CH4 Aver CH4 Ran	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 6 Well 5/M .17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.14% 9; Range: 0.4% 9e: 0% - 19	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72 <b>harges in</b> 480 0.41 1 05 - 0.08 28 - 3.30 0.61 - 0.68	5 Blend Po to Zone 1 490 0.52 1	of the dis	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio: 5.04
Manganese, ppb Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm Odor, units Free and Total CI Res, ppm  Headspace of the C  CH4 ppmv; using Portable Device SP 6 MWD Source	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous  Cypress Re Daily (from log)  Ce Feeding	15 Free Cl: / Ammonia: Influent ( Phosphate Free Cl: / Total Cl: / Ammonia: Effluent ( SI Goal: 500-750ppm Goal: from PA  1 Free Cl: / Total Cl: / Ammonia: Effluent ( CWPF. /	7.5 Average: 0.3 Average: 0.5 r the Site e Dosage: 1 Average: 0.3 Average: 0.3 Average: 0.4 r Site#5. 610 280 0.47 1 Average: 0.0 Average: 3.2 c Average: 0.0 Average: 0.0 Average: 0.1 CH4 Average: 0.1 CH4 Average: 0.1	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 6 Well 5/M .17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.14% 9; Range: 0.4% 9e: 0% - 19	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72 <b>harges in</b> 480 0.41 1 05 - 0.08 28 - 3.30 0.61 - 0.68	5 Blend Po to Zone 1 490 0.52 1	of the dis	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio: 5.04
Color Free and Total CI Res, ppm  SP4 Also called Phosphate Injection Free and Total CI Res, ppm  SP5 Also called TDS, ppm  Hardness CH4, ppm Odor, units Free and Total CI Res, ppm  Headspace of the C1CH4 ppmv; using Portable Device	Weekly Continuous  Reservoir Continuous  Reservoir Weekly Monthly Weekly Monthly Continuous  Cypress Re Daily (from log)	Total Cl: A Ammonia Influent of Phosphate Free Cl: A Total Cl: A Ammonia Free Cl: A Ammonia Effluent of Si Goal: 500-750ppm Goal: from PA  Total Cl: A Ammonia  Free Cl: A Total Cl: A Ammonia  Free Cl: A Total Cl: A Ammonia	7.5 Average: 0.3 Average: 5.8 : Average: 0. or the Site e Dosage: 1 Average: 0.3 Average: 0.3 Average: 0.4 or Site#5. 610 280 0.47 1 Average: 0.0 Average: 0.0 CH4 Aver CH4 Ran	7.5 0; Range: 0.9; Range: 5 93; Range: 5 93; Range: 6 Well 5/M .17 mg/L 3; Range: 0.12; Range: 3 70; Range: 5 560  0.50 3 6; Range: 0.14% 9; Range: 0.4% 9e: 0% - 19	7.5 25 - 0.34 .84 - 5.96 0.79 - 1.00 <b>WD Water</b> 26 - 0.49 .76 - 3.90 0.67 - 0.72 <b>harges in</b> 480 0.41 1 05 - 0.08 28 - 3.30 0.61 - 0.68	5 Blend Po to Zone 1 490 0.52 1	of the dis	CI/NH3 Ratio: 5.45  tribution system  % CH4 Removal: 87%  CI/NH3 Ratio: 5.04

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

### **APPENDIX A**

LABORATORY RESULTS



16 February 2017 Clinical Lab No.: 17B0215

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

Project Name: Standard Analysis

Sub Project: Monthly Compliance/Monthly 1st week FEB

Enclosed are the results of the analyses for samples received at the laboratory on 02/01/17 . Samples were received within temperature range, in correct containers and preservation.

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

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

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

Sincerely,

Stu Styles

Client Services Manager

tistes



Lomita, City ofProject:Standard AnalysisWork Order:17B021524373 Walnut AvenueSub Project:Monthly Compliance/Monthly 1st week FEBReceived:02/01/17 15:20Lomita CA, 91717Project Manager:Mark AndersenReported:02/16/17

Raw Water Site #1		17B0215-0	01 (Water)		Sample Da	te: 02/01/17	7:55 <b>S</b>	ampler: Do	GM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	0		N/A	mg/L	02/01/17	02/01/17	1706025	
pH (Field)	Field	7.62		N/A	pH Units	02/01/17	02/01/17	1706025	
Temperature (Field)	Field	19.8		N/A	°C	02/01/17	02/01/17	1706025	
Microbiology Analyses									
Total Coliform	SM 9223	A		N/A	P/A	02/01/17	02/02/17	1705130	
E. Coli	SM 9223	A		N/A	P/A	02/01/17	02/02/17	1705130	
Plate Count	SM9215B	90	1	500	CFU/ml	02/01/17	02/03/17	1705180	HT-08
General Physical Analyses									
Apparent Color	SM 2120B-M	15.0	3.0	15	Color Units	02/01/17	02/02/17	1705137	
General Chemical Analyses									
Hardness, Total (as CaCO3)	Calculated	330	6.6	N/A	mg/L	02/07/17	02/07/17	[CALC]	
Total Filterable Residue/TDS	SM 2540C	710	5.0	1000	mg/L	02/08/17	02/10/17	1706095	
<u>Metals</u>									
Calcium (Ca)	EPA 200.7	87	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	
Iron (Fe)	EPA 200.7	210	100	300	ug/L	02/06/17	02/06/17	1706009	
Magnesium (Mg)	EPA 200.7	28	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	
Manganese (Mn)	EPA 200.7	120	20	50	ug/L	02/06/17	02/06/17	1706009	
Filter Effluent (Free Chlorine) Site #2		17B0215-0	02 (Water)		Sample Da	te: 02/01/17	8:00 S	ampler: De	GM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	7		N/A	mg/L	02/01/17	02/01/17	1706025	
pH (Field)	Field	7.78		N/A	pH Units	02/01/17	02/01/17	1706025	
Temperature (Field)	Field	19.8		N/A	°C	02/01/17	02/01/17	1706025	
Microbiology Analyses									
Total Coliform	SM 9223	A		N/A	P/A	02/01/17	02/02/17	1705130	
E. Coli	SM 9223	A		N/A	P/A	02/01/17	02/02/17	1705130	



Lomita, City ofProjectStandard AnalysisWork Order:17B021524373 Walnut AvenueSub Project:Monthly Compliance/Monthly 1st week FEBReceived:02/01/17 15:20Lomita CA, 91717Project Manager:Mark AndersenReported:02/16/17

Filter Effluent (Total Chlorine) Site#3		17B0215-0	03 (Water)		Sample Da	te: 02/01/17	8:05 <b>Sa</b>	mpler: D	GM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	5.4		N/A	mg/L	02/01/17	02/01/17	1706025	
pH (Field)	Field	7.84		N/A	pH Units	02/01/17	02/01/17	1706025	
Temperature (Field)	Field	19.5		N/A	°C	02/01/17	02/01/17	1706025	
General Physical Analyses									
Apparent Color	SM 2120B-M	7.5	3.0	15	Color Units	02/01/17	02/02/17	1705137	
<u>Metals</u>									
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	02/06/17	02/06/17	1706009	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	02/06/17	02/06/17	1706009	
Zone #2 Site #6		17B0215-0	04 (Water)		Sample Da	te: 02/01/17	8:12 <b>Sa</b>	mpler: D	GM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	2.1		N/A	mg/L	02/01/17	02/01/17	1706025	
pH (Field)	Field	8.31		N/A	pH Units	02/01/17	02/01/17	1706025	
Temperature (Field)	Field	15.6		N/A	°C	02/01/17	02/01/17	1706025	
General Chemical Analyses									
Hardness, Total (as CaCO3)	Calculated	200	6.6	N/A	mg/L	02/07/17	02/07/17	[CALC]	
Total Filterable Residue/TDS	SM 2540C	470	5.0	1000	mg/L	02/08/17	02/10/17	1706095	
<u>Metals</u>									
<u>Metals</u> Calcium (Ca)	EPA 200.7	48	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	



Lomita, City ofProject:Standard AnalysisWork Order:17B021524373 Walnut AvenueSub Project:Monthly Compliance/Monthly 1st week FEBReceived:02/01/17 15:20Lomita CA, 91717Project Manager:Mark AndersenReported:02/16/17

	17B0215-0	05 (Water)		Sample Date: 02/01/17 8:20 Sampler: DGM					
Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier	
Field	3.5		N/A	mg/L	02/01/17	02/01/17	1706025		
Field	8.08		N/A	pH Units	02/01/17	02/01/17	1706025		
Field	16.9		N/A	°C	02/01/17	02/01/17	1706025		
EPA 140.1-M	1	1	3	TON	02/01/17	02/02/17	1705137		
Calculated	280	6.6	N/A	mg/L	02/07/17	02/07/17	[CALC]		
SM 2540C	610	5.0	1000	mg/L	02/08/17	02/10/17	1706095		
EPA 200.7	71	1.0	N/A	mg/L	02/07/17	02/07/17	1706041		
EPA 200.7	25	1.0	N/A	mg/L	02/07/17	02/07/17	1706041		
	Field Field Field  EPA 140.1-M  Calculated SM 2540C  EPA 200.7	Method         Result           Field         3.5           Field         8.08           Field         16.9           EPA 140.1-M         1           Calculated         280           SM 2540C         610           EPA 200.7         71	Field 3.5 Field 8.08 Field 16.9  EPA 140.1-M 1 1  Calculated 280 6.6 SM 2540C 610 5.0  EPA 200.7 71 1.0	Method         Result         Rep. Limit         MCL           Field         3.5         N/A           Field         8.08         N/A           Field         16.9         N/A           EPA 140.1-M         1         1         3           Calculated         280         6.6         N/A           SM 2540C         610         5.0         1000           EPA 200.7         71         1.0         N/A	Method         Result         Rep. Limit         MCL         Units           Field         3.5         N/A         mg/L           Field         8.08         N/A         pH Units           Field         16.9         N/A         °C           EPA 140.1-M         1         1         3         TON           Calculated         280         6.6         N/A         mg/L           SM 2540C         610         5.0         1000         mg/L           EPA 200.7         71         1.0         N/A         mg/L	Method         Result         Rep. Limit         MCL         Units         Prepared           Field         3.5         N/A         mg/L         02/01/17           Field         8.08         N/A         pH Units         02/01/17           Field         16.9         N/A         °C         02/01/17           EPA 140.1-M         1         1         3         TON         02/01/17           Calculated         280         6.6         N/A         mg/L         02/07/17           SM 2540C         610         5.0         1000         mg/L         02/08/17           EPA 200.7         71         1.0         N/A         mg/L         02/07/17	Method         Result         Rep. Limit         MCL         Units         Prepared         Analyzed           Field         3.5         N/A         mg/L         02/01/17         02/01/17         02/01/17           Field         8.08         N/A         pH Units         02/01/17         02/01/17         02/01/17           Field         16.9         N/A         °C         02/01/17         02/01/17         02/01/17           EPA 140.1-M         1         1         3         TON         02/01/17         02/02/17           Calculated         280         6.6         N/A         mg/L         02/07/17         02/07/17           SM 2540C         610         5.0         1000         mg/L         02/08/17         02/10/17           EPA 200.7         71         1.0         N/A         mg/L         02/07/17         02/07/17	Method         Result         Rep. Limit         MCL         Units         Prepared         Analyzed         Batch           Field         3.5         N/A         mg/L         02/01/17         02/01/17         1706025           Field         8.08         N/A         pH Units         02/01/17         02/01/17         1706025           Field         16.9         N/A         °C         02/01/17         02/01/17         1706025           EPA 140.1-M         1         1         3         TON         02/01/17         02/02/17         1705137           Calculated         280         6.6         N/A         mg/L         02/07/17         02/07/17         [CALC]           SM 2540C         610         5.0         1000         mg/L         02/08/17         02/10/17         1706095           EPA 200.7         71         1.0         N/A         mg/L         02/07/17         02/07/17         1706041	

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

### **EDT Transfer Confirmation 1**



Analyzed: 170206

Entry No.: 01055

Work Order: 17B0215 Report Date: 02/16/2017

MANGANESE

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

Result: ND

LOMITA-CITY, WATER DEPT. User ID: 4TH System: 1910073 Station No.: 1910073-003 WELL 05 Sampled: 170201 07:55 COLOR Units: UNITS Entry No.: 00081 Analyzed: 170202 Result: 15.0 Result: 330 Units: MG/L Entry No.: 00900 Analyzed: 170207 TOTAL HARDNESS (AS CACO3) CALCIUM Result: 87 Units: MG/L Entry No.: 00916 Analyzed: 170207 MAGNESIUM Result: 28 Units: MG/L Entry No.: 00927 Analyzed: 170207 IRON Result: 210 Units: UG/L Entry No.: 01045 Analyzed: 170206 MANGANESE Result: 120 Units: UG/L Entry No.: 01055 Analyzed: 170206 Entry No.: 70300 TOTAL DISSOLVED SOLIDS Result: 710 Units: MG/L Analyzed: 170210 Station No.: 1910073-005 Sampled: 170201 08:12 MWD CONNECTION WB-8A & WB-8B/TREATED TOTAL HARDNESS (AS CACO3) Analyzed: 170207 Result: 200 Units: MG/L Entry No.: 00900 CALCIUM Result: 48 Units: MG/L Entry No.: 00916 Analyzed: 170207 MAGNESTUM Result: 20 Units: MG/L Entry No.: 00927 Analyzed: 170207 TOTAL DISSOLVED SOLIDS Result: 470 Units: MG/L Entry No.: 70300 Analyzed: 170210 WELL 05 TREATMENT PLANT EFFLUENT Station No.: 1910073-006 Sampled: 170201 08:05 Units: UNITS Result: 7.5 Entry No.: 00081 Analyzed: 170202 IRON Result: ND Units: UG/L Entry No.: 01045 Analyzed: 170206

Units: UG/L



February 10, 2017

ATTN: Stu Styles

21881 Barton Rd.

Grand Terrace, CA 92313



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



TX Cert T104704450-14-6 EPA Methods TO14A, TO15 UT Cert CA0133332015-3

EPA Methods TO3, TO14A, TO15, RSK-175

LABORATORY TEST RESULTS

Project Reference: 17B0215

Lab Number:

I020302-01/02

Enclosed are results for sample(s) received 2/03/17 by Air Technology Laboratories. Samples were received intact and properly chilled. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

### Report Narrative:

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

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

Sincerely,

Mark Johnson

Operations Manager

MJohnson@AirTechLabs.com

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

### SUBCONTRACT ORDER

## Clinical Laboratory of San Bernardino 17B0215

To20302

	1/B0215	/
SENDING LABORATORY:	RECEIVING LABORATORY:	
Clinical Laboratory of San Bernardino	Air Technology Labs	
21881 Barton Road	18501 East Gale Avenue Suite 130	
Grand Terrace, CA 92313	City of Industry, CA 91748	
Phone: 909.825.7693	Phone :(626) 964-4032	
Fax: 909.825.7696	Fax:	
Project Manager: Stu Styles		
Please email results to Project Manager: Stu St [ ] glaubig@clinical-lab.com [ ] ybarra@cl	linical-lab.com [√] styles@clinical-lab.com [ ] nelson@clinical-lab.com	
California EDT transfer those samples Water Trax Upload Client:	with PS codes provided [ ] Yes [√] No [ ] Yes [ √] No	
Turn Around Time [] 10 Days [v] 5 I Subcontract Comments:	Days [ ] Other Days	
Analysis	Comments	
Sample ID: Raw Water Site #1 / 17B0215-01	Sampled: 02/01/17 07:55 PS Code: Water WTX ID:	
Methane RSK175	Report in mg/L	
Containers Supplied:		
	Oml Amber Vial (C)	
Sample ID: Reservoir Effluent Site #5 / 17B0215	5-05 Sampled: 02/01/17 08:20 PS Code: Water WTX ID:	
02	Water WTX ID:	
Methane RSK175	Report in mg/L	
Containers Supplied:		
40ml Amber Vial (B) 40	Oml Amber Vial (C)	

<u>2/3/17 847</u>

Released by Date / Time

Palaced By Date / Time

Received By

Date // Time

Client:

**Clinical Laboratory** 

Attn:

Stu Styles

**Project Name:** 

NA

Project No.:

17B0215

Date Received:

02/03/17

Matrix:

Water

Reporting Units: mg/L

R	S	K	17	15

Lab No.:	102030	2-01	102030	2-02		
~	Raw Wate	r Site #1	Resevoir			
Client Sample I.D.:	/ 17B02		Site #5 / 1			
	7 17 202	10 01	05			
Date/Time Sampled:	2/1/17	7:55	2/1/17	8:20		
Date/Time Analyzed:	2/10/17	10:19	2/10/17	10:32		
QC Batch No.:	1702100	GC8A1	170210GC8A1			
Analyst Initials:	AS	S	AS			
Dilution Factor:	1.0	)	1.0	)		
	Result	RL	Result	RL		
ANALYTE	mg/L	mg/L	mg/L	mg/L		
Methane	3.6	0.0010	0.47	0.0010		

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson

**Operations Manager** 

The cover letter is an integral part of this analytical report

Date 2-10-17

Date: 2-10-17

QC Batch No.:

170210GC8A1

Matrix:

Water

Units:

mg/L

### QC for Dissolved Gases by EPA Procedure RSKSOP-175

Lab	No.:	Metho	d Blank	I	LCS	L	CSD		
Date/Time An	alyzed:	2/10/1	7 10:06	2/10/	17 9:35	2/10/	17 9:53		
Analyst Ini	tials:	1	AS		AS	9	AS		
Data	Datafile:		09feb036		feb034	091	eb035		
Dilution Fa	ctor:		1.0		1.0		1.0		
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	ND	112	70-130%	108	70-130%	3.1	<30

**PQL = Practical Quantitation Limit** 

ND = Not Detected (Below RL).

RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark J. Johnson

**Operations Manager** 

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

Chain of Custody			Me	etha	nne (			ness ER)	(RSI	K175	)	PH 7.62 TEMP 19.8"	x x		PH7,78 TEMP   9.8°	PH7.84 TEMP 19,50	x PH8,31 TEMP 15.6°	X PHBOS TEMP /6.7	×	ater, GW- Ground Water, A-Air Seial W-Well D- Dist	Print Name / Company	J.W.COV (USB	AMCUSB	) Custody seals Temp 4.5	Page_1_of_1_
2/3	sted	Production of the Control of the Con		He	tetr	•	Ode Cole	or	e Cou	ınt		X	X		X	X		X		er, SW-Storm W	red By (Sign)			✓ Intact ( ( )F (×	
	<b>Analysis Requested</b>				Iroi	F 1 &	E. C	nga	nese			×	$\mathbf{x} \mid \mathbf{x} \mid$		$\mathbf{x} \mid \mathbf{x} \mid$	x				Matrix: DW-Drinking Water, WW-Waste Water, SW-Storm Water, GW- Gr Tvne- 1-Routine, 2-Repeat, 3-Replacement, 4-Special, W-Well	Received		9	On ice	
• • • • • • • • • • • • • • • • • • •	An							ved	Solid	ls	Total Chlorine	N N	Ø	Ø	12,0	15.4	2,1 x	3,5 x	35	V-Drinking Water, I Tvoe- 1-Routine, 2		2,00	13:50	Samples received: (	Other
and the same	System Number	101007	1910013	Destination Laboratory	[X] Clinical Laboratory	RWQCB Compliance	YES	ELAP#	0007	000	Type Preserv	IW N/A	IW 2,7	1,7	1,7	IW N/A	ID N/A	1D N/A	1D 2,7	Matrix: DW-D	Date / Time	161.1.5	2007	Sampl	.     Client
ic.	Syste		* .	)SeQ	) [X]	MA					Matrix T	GW	GW	GW	DW	WG	DW	DW	DW			11	4		I I UPS
Clinical Laboratory of San Bernardino, Inc.	City of Lomita	24373 Walnut Avenue	Lomita, CA 91717	(310) 325-9830	(310) 325-3627	Standard Analysis	Monthly Compliance/ Monthly 1st	week DEC		DGM	Sample Idenitification	Raw Water Site #1	Raw Water Site #1	Raw Water Site #1	Filter Effluent (Free Chlorine) Site#2	Filter Effluent (Total Chlorine) Site#3	Zone #2 Site #6	Reservoir Effluent Site #5	Reservoir Effluent Site #5	103 (4) NH4CI	Print Name / Company	City of Lomita, CA	J. Wegal ask		Fed X     Golden State
ioratory		24				-	Monthly	•			Sal				Filter Ef	Filter Eff				(1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCI (3) HNO <sub>3</sub>	Sign)		3	P	
Sinical Lab							1	lect	ıts	l by	Time	2 674c	70755	[1]	0030 11	20301	7 0812	2130 61	17 0820	rvatives: (1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCI (3) HNO3	Relinquished By (Sign)	Cue	Patrick Ma	IN SHIP	ja (
O	Client	Address		Phone #	Fax#	Project	, ,	Sub Project	Comments	Sampled by	Date	2/1/17	1/1/2	11/2	1/1/2	1/2	2/1/5	ンバ	11/2	Preservatives:	Rei	Patrick McCue	Les Contractions of the Contraction of the Contract	Comments:	Shipped Via

"Your Water and Wastewater Analysis Solution"



27 February 2017 Clinical Lab No.: 17B0774

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

Project Name: Standard Analysis

Sub Project: CWPF 2nd week of Feb Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 02/08/17 . Samples were received within temperature range, in correct containers and preservation.

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

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

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

Sincerely,

Stu Styles

Client Services Manager

tistes



Lomita, City ofProjectStandard AnalysisWork Order:17B077424373 Walnut AvenueSub Project:CWPF 2nd week of Feb Compliance SamplingReceived:02/08/17 15:30Lomita CA, 91717Project Manager:Mark AndersenReported:02/27/17

Reservoir Influent Site #3		17B0774-0	01 (Water)		Sample Da	<b>te:</b> 02/08/17	7 9:30 <b>Sa</b>	mpler: PI	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	5.3		N/A	mg/L	02/08/17	02/08/17	1706154	
pH (Field)	Field	7.61		N/A	pH Units	02/08/17	02/08/17	1706154	
Temperature (Field)	Field	21.5		N/A	°C	02/08/17	02/08/17	1706154	
General Physical Analyses									
Apparent Color	SM 2120B-M	7.5	3.0	15	Color Units	02/08/17	02/08/17	1706215	
<u>Metals</u>									
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	02/15/17	02/15/17	1707099	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	02/15/17	02/15/17	1707099	
Reservoir Effluent Site #5		17B0774-0	02 (Water)		Sample Da	te: 02/08/1	7 9:10 <b>Sa</b>	mpler: PI	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	3		N/A	mg/L	02/08/17	02/08/17	1706154	
pH (Field)	Field	7.79		N/A	pH Units	02/08/17	02/08/17	1706154	
Temperature (Field)	Field	18.1		N/A	°C	02/08/17	02/08/17	1706154	
General Physical Analyses									
Apparent Color	SM 2120B-M	ND	3.0	15	Color Units	02/08/17	02/08/17	1706215	
Odor Threshold	EPA 140.1-M	3	1	3	TON	02/08/17	02/08/17	1706215	
General Chemical Analyses									
General Chemical Analyses  Total Filterable Residue/TDS	SM 2540C	560	5.0	1000	mg/L	02/14/17	02/16/17	1707052	



February 17, 2017



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



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

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

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

#### LABORATORY TEST RESULTS

Project Reference: 17B0774

Lab Number:

I021003-01

Enclosed are results for sample(s) received 2/10/17 by Air Technology Laboratories. Samples were received intact and properly chilled. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

### Report Narrative:

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

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

Sincerely,

Mark Johnson

Mall. 1

Operations Manager

MJohnson@AirTechLabs.com

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

### SUBCONTRACT ORDER

# Clinical Laboratory of San Bernardino 17B0774

I021003-01

SENDING LABORATORY:	RECEIVING LABORATORY:
Clinical Laboratory of San Bernardino	Air Technology Labs
21881 Barton Road	18501 East Gale Avenue Suite 130
Grand Terrace, CA 92313	City of Industry, CA 91748
Phone: 909.825.7693	Phone: (626) 964-4032
Fax: 909.825.7696	Fax:
Project Manager: Stu Styles	
Please email results to Project Manager: Stu Styles [ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab	b.com [v] styles@clinical-lab.com [] nelson@clinical-lab.com
California EDT transfer those samples with PS of Water Trax Upload Client:	
Turn Around Time [ ] 10 Days [ \sqrt{5 Days} [ Subcontract Comments:	] Other Days
	] Other Days  Comments
Subcontract Comments:	
Subcontract Comments:  Analysis	Comments Sampled: 02/08/17 09:10 PS Code:
Analysis  Sample ID: Reservoir Effluent Site #5 / 17B0774-02	Comments Sampled: 02/08/17 09:10 PS Code: Water WTX ID:

10

Released By Date / Time Received By Date / Time Received By Date / Time Date / Time

Client:

**Clinical Laboratory** 

Attn:

Stu Styles

**Project Name:** 

NA

Project No.:

17B0774

Date Received:

02/10/17

Matrix:

Water

Reporting Units: mg/L

RSK1	75
IIOII	13

Lab No.:	102100	3-01				
	Reservoir	Effluent				
Client Sample I.D.:	Site #5 / 1	7B0774-				
N.S.	02					
Date/Time Sampled:	2/8/17	9:10				
Date/Time Analyzed:	2/15/17 12:34					
QC Batch No.:	170215GC8A2					
Analyst Initials:	AS	S				
Dilution Factor:	1.0	)				
	Result	RL			5	
ANALYTE	mg/L	mg/L				
Methane	0.50	0.0010				
				_		

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By:

Mark Johnson **Operations Manager** 

Date Z-17-17

The cover letter is an integral part of this analytical report

QC Batch No.:

170215GC8A2

Matrix:

Water

Units:

mg/L

### QC for Dissolved Gases by EPA Procedure RSKSOP-175

Lab	No.:	Metho	d Blank	I	CS	L	CSD		
Date/Time An	alyzed:	2/15/1	7 12:21	2/15/	17 11:54	2/15/	17 12:07		
Analyst Init	ials:	AS			AS	2	AS		
Data	Datafile:		15feb020		15feb018		feb019		
Dilution Fa	ctor:	1	1.0		1.0		1.0		
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	ND	101	70-130%	95	70-130%	6.4	<30

**PQL = Practical Quantitation Limit** 

ND = Not Detected (Below RL).

RL = PQL X Dilution Factor

Reviewed/Approved By:

Mark J. Johnson

**Operations Manager** 

Date: 7-17-17

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

93

Chain of Custody

HL13 1780774

		4			-				100	7			
Client		City of Lomita	Syst	stem Number	ımber	1	Analys  -	SIS RE	Analysis Kequested	eg		ľ	
Address		24373 Walnut Avenue		101	1910073								
		Lomita, CA 91717		2									
Phone #		(310) 325-9830	7	estination	Destination Laboratory			T					
Fax#		(310) 325-3627		[X] Clinica	Clinical Laboratory				- (				
Project		Standard Analysis		RWQCB (	RWQCB Compliance		Viang Ir		Со			Od	
Sub Project	#	CWPF 2nd Week Dec Compliance Sampling			yes ELAP#		anese on	lved So		ss (as ( —— ter) (R	C/HP	or	
Comments	45	For TC/EC/BACT see weekly Distro CoC		7	1088			lids					
Sampled by	×	ЬГМ											
Date	Time	Sample Idenitification	Matrix	Type	Preserv	Total Chlorine							Comments / P.S. Codes
1/8/17	9930	ල93ල Reservoir Influent Site #3	DW	<u>M</u>	N/A	5.3	×	5.4	×	1	_		ph 7. (b) temp 21.5
							$\dashv$	_	_	+	_		ĺ
C1/8/2	246	Reservoir Effluent Site #5	DW	WI WI	-	3.0	+	_	×	+	_	×	ph /,   7 temp   8.1
2/8/17	0	CQ1C Reservoir Effluent Site #5	DW	<u>×</u>	HCL	3.0		×		×	_		
								$\dashv$		$\dashv$	4		
							$\dashv$	_	_		$\dashv$		
							+	-		+	1		
										+	-		
							$\dashv$	$\dashv$	_				
								$\dashv$	$\downarrow$	$\dashv$	$\perp$		
								+		$\dashv$	$\dashv$		
							+	+	1	+	+		
								-		- '			Time 4-
Preservative	s: (1) Na	Preservatives: (1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCI (3) HNO3 (4) NH4CI	Matrix	DW-Drin	Matrix: DW-Drinking Water, WW-Waste Water, SW-Storm Water, GW- Ground Water, A-All Dough 2-Benjacement 4-Special W-Well D- I	VW-Waste Poutin	Water	SW-S	torm M	ater, G	W- Gr	l bund Prije	)ist.
(5) H2S	04 (6) N.	(5) H2SO4 (6) Na2SO3 (7) Cold (8) Other:				- 1	, 5-MC	beat,	and o		20		
Relin	quished	Relinquished By (Sign) Print Name / Company			Date / Time	ne		(	Received	d y (Sign)	(ugis		Print Name / Company
Patrick McCue	ne l	City of Lomita		2/8/	7 /2:	2		V	4	4	COLUMN TO SERVICE		0-MC400 (CL)>
Postar 120	B	veces J. ULCPAO!	2	2.8	8-17/3	3	$\dashv$						
Commen(s:		all	•	)	San ples received:	receive	X	On ice	)≱ ಕ	() Intact	act (	~X	Custody seals Temp ( ) F
Shipped Via		Fed X     Golden State	UPS	Client	ent   Other	her						Page	ye_I_of_I_



02 March 2017 Clinical Lab No.: 17B1410

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

Project Name: Standard Analysis

Sub Project: CWPF 3rd week of Feb Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 02/15/17 . Samples were received within temperature range, in correct containers and preservation.

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

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

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

Sincerely,

Stu Styles

Client Services Manager

tistes



Lomita, City ofProjectStandard AnalysisWork Order:17B141024373 Walnut AvenueSub Project:CWPF 3rd week of Feb Compliance SamplingReceived:02/15/17 17:00Lomita CA, 91717Project Manager:Mark AndersenReported:03/02/17

Reservoir Influent Site #3		17B1410-0	01 (Water)		Sample Da	te: 02/15/17	7 9:35 <b>Sa</b>	mpler: PI	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	4.9		N/A	mg/L	02/15/17	02/15/17	1707173	
pH (Field)	Field	7.62		N/A	pH Units	02/15/17	02/15/17	1707173	
Temperature (Field)	Field	21		N/A	°C	02/15/17	02/15/17	1707173	
General Physical Analyses									
Apparent Color	SM 2120B-M	7.5	3.0	15	Color Units	02/15/17	02/15/17	1707145	
<u>Metals</u>									
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	02/20/17	02/21/17	1708021	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	02/20/17	02/21/17	1708021	
Reservoir Effluent Site #5		17B1410-0	02 (Water)		Sample Da	te: 02/15/17	7 9:40 <b>Sa</b>	mpler: PI	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	3.1		N/A	mg/L	02/15/17	02/15/17	1707173	
pH (Field)	Field	7.86		N/A	pH Units	02/15/17	02/15/17	1707173	
Temperature (Field)	Field	18.2		N/A	°C	02/15/17	02/15/17	1707173	
General Physical Analyses									
Apparent Color	SM 2120B-M	5.0	3.0	15	Color Units	02/15/17	02/15/17	1707145	
Odor Threshold	EPA 140.1-M	1	1	3	TON	02/15/17	02/15/17	1707145	
General Chemical Analyses									
Total Filterable Residue/TDS	SM 2540C	480	5.0	1000	mg/L	02/21/17	02/22/17	1708037	

### **EDT Transfer Confirmation 1**



Work Order: 17B1410 Report Date: 03/02/2017

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

System: 1910073 LOMITA-CITY, WATER DEPT. User ID: 4TH WELL 05 TREATMENT PLANT EFFLUENT Station No.: 1910073-006 Sampled: 170215 09:35 Result: 7.5 Units: UNITS Entry No.: 00081 Analyzed: 170215 Entry No.: 01045 Analyzed: 170221 IRON Result: ND Units: UG/L MANGANESE Entry No.: 01055 Analyzed: 170221 Result: ND Units: UG/L

Printed: 03/02/2017 03:33:06 PM Results of 17B1410 FINAL WRITEON 1910073-006



February 24, 2017



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



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

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

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

### LABORATORY TEST RESULTS

Project Reference: 17B1410 Lab Number:

I021703-01

Enclosed are results for sample(s) received 2/17/17 by Air Technology Laboratories. Samples were received intact and properly chilled. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

### Report Narrative:

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

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

Sincerely,

Mark Johnson

Operations Manager

MJohnson@AirTechLabs.com

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

### SUBCONTRACT ORDER

# Clinical Laboratory of San Bernardino 17B1410

I02703-01

SENDING LABORATORY:	RECEIVING LABORATORY:
Clinical Laboratory of San Bernardino	Air Technology Labs
21881 Barton Road	18501 East Gale Avenue Suite 130
Grand Terrace, CA 92313	City of Industry, CA 91748
Phone: 909.825.7693	Phone :(626) 964-4032
Fax: 909.825.7696	Fax:
Project Manager: Stu Styles	
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 prov Water Trax Upload Client:	ided []Yes [V]No []Yes [V]No
Turn Around Time [ ] 10 Days [ ] 5 Days [ ] Other Subcontract Comments:	_ Days
	C
Analysis	Comments
Sample ID: Reservoir Effluent Site #5 / 17B1410-02 Samp Water	oled: 02/15/17 09:40 PS Code: r WTX ID:
Methane RSK175	Report in mg/L
Containers Supplied:	

40ml Amber Vial (C)

40ml Amber Vial (B)

Released By

O2/16/17 16:45

Received By

Date / Time

Client:

Clinical Laboratory

Attn:

Stu Styles

**Project Name:** 

NA

Project No.:

17B1410

Date Received:

02/17/17

Matrix:

Water

Reporting Units: mg/L

-	~	w	-
11.0	6	12 1	75
I/V	13		1 / -

Lab No.:	I02170	3-01				
	Reservoir	Effluent				
Client Sample I.D.:	Site #5 / 1	7B1410-				
_	02		1			
Date/Time Sampled:	2/15/17	9:40				
Date/Time Analyzed:	2/24/17 9:09					
QC Batch No.:	170224GC8A1					
Analyst Initials:	AS	5				
Dilution Factor:	1.0	)				
	Result	RL				
ANALYTE	mg/L	mg/L				
Methane	0.41	0.0010				
					¥	

BID	TAT .	D / / I	(I: I	TATA
ND =	Not	Detected	(below	KL)

RL = Reporting Limit

Reviewed/Approved By:	, Mall. 1	
	Mark Johnson	

**Operations Manager** 

Date 2/24/17

The cover letter is an integral part of this analytical report

QC Batch No.:

170224GC8A1

Matrix:

Water

Units:

mg/L

### QC for Dissolved Gases by EPA Procedure RSKSOP-175

Lab	No.:	Metho	d Blank	I	LCS	L	CSD		
Date/Time An	alyzed:	2/24/	17 8:56	2/24/	17 8:30	2/24/	17 8:43		
Analyst Init	ials:	I	AS		AS		AS		
Data	file:	24f	eb003	24:	feb001	241	feb002		
Dilution Fac	etor:	1	1.0		1.0	-	1.0		
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	ND	117	70-130%	116	70-130%	0.5	<30

**PQL** = Practical Quantitation Limit

ND = Not Detected (Below RL).

RL = PQL X Dilution Factor

Reviewed/Approved By:

**Operations Manager** 

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

913 Chain of Custody

178 1410

Client Address	243	City of Lomita 24373 Walnut Avenue	Sy	System Number	em Number		Analysis Requested	sis Re	dnest	pa		,		
Phone #	Ĭ	Lomita, CA 91717 (310) 325-9830	Q	S	Laborato	,				Total Meth				
Fax#		(310) 325-3627		X] Clinical Laboratory	Laborato	2		Total			BA			
Project	IS ST	Standard Analysis		RWQCB Compliance	ompliance	6					CT	0		
Sub Project	CWPF 3rd we	CWPF 3rd week of February Compliance		Å	yes		ron		olor		TC/	dor		
nafoi i dao	×	Sampling		EL/	ELAP#		ese				/HI	•		
Comments	For TC/EC/BAC	For TC/EC/BACT see weekly Distro CoC		7.0	4000			lids			<b>'</b> C			
Sampled by		PLM		2	00									
Date Time		Sample Idenitification	Matrix	Type	Preserv	Total Chlorine							Comments / P.S. Codes	<b>σ</b>
2/15/17 0935	15/17 0935 Reservoir Influent Site #3	nt Site #3	DW	1W	N/A	4.9	×		×				ph 7.62 temp 21.0°	
l ľ														
2/15/17 10940	Reservoir Effluent Site #5	nt Site #5	NO	1W	A/N	3.1			×			×	ph 7.86 temp 18.20	
2115/17 0940	Reservoir Effluent Site #5	nt Site #5	DW	WI	HCL	3,1		7		<b>×</b>				
							1			+				
									+	+				
									<u> </u>	+				
								-	<u> </u>	-				
•										<u> </u>				
							+		1	+				
	S,O, (2) HCI (3) HNC	03 (4) NH4CI	Matrix:	DW-Drinki	ng Water,	Matrix: DW-Drinking Water, WW-Waste Water, SW-Storm Water, GW- Ground Water, A-Air	Water,	SW-Stc	- Ma	rter, Gl	V- Gro	N pur	/ater, A-Air	Type- 1-
(5) H2SO4 (6) Na	(5) H2SO4 (6) Na2SO3 (7) Cold (8) Other:	ther:			)	Routin	e, 2-Rep	seat, 3-1	Replac	ement,	4-Spe	cial N	Routine, 2-Repeat, 3-Replacement, 4-Special W-Well D- Dist.	
Relinquished By (Sign)	By (Sign)	Print Name / Company			Date / T	Time		*	erged.	S) (Z	(Sign)		Print Nama / Company	
Patrick McCue		City of Lomita		75172	1 4	1:30		V	H				3:1mm\p/ <13 (	
Potruck 271	2007	J. (MCGW/CI	8	2.15	5.17	5.00	_		+	2	9		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Comment	2				Sanhple	Samples received?	X	On ice,	9	) Intact	\(\bar{\bar{\bar{\bar{\bar{\bar{\bar{	, C	Custody seals Temp 7.7	( )F (
Shipped Via	)	Fed X     Golden State	SUL	Client	t   Other	ther						Page	1 of 1	
I and James			-	-								c	1	



08 March 2017 Clinical Lab No.: 17B1856

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

Project Name: Standard Analysis

Sub Project: CWPF 4th Week February 2017 Compliance Sampling

Enclosed are the results of the analyses for samples received at the laboratory on 02/22/17 . Samples were received within temperature range, in correct containers and preservation.

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

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

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

Sincerely,

Stu Styles

Client Services Manager

tistes



Lomita, City ofProject:Standard AnalysisWork Order:17B185624373 Walnut AvenueSub Project:CWPF 4th Week February 2017 Compliance Sampling Received:02/22/17 16:00Lomita CA, 91717Project Manager:Mark AndersenReported:03/08/17

Reservoir Influent Site #3		17B1856-0	01 (Water)		Sample Da	te: 02/22/17	7 6:35 <b>Sa</b>	mpler: Pl	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	5.2		N/A	mg/L	02/22/17	02/22/17	1708141	
pH (Field)	Field	7.64		N/A	pH Units	02/22/17	02/22/17	1708141	
Temperature (Field)	Field	20.9		N/A	°C	02/22/17	02/22/17	1708141	
General Physical Analyses									
Apparent Color	SM 2120B-M	5.0	3.0	15	Color Units	02/22/17	02/22/17	1708168	
<u>Metals</u>									
Iron (Fe)	EPA 200.7	ND	100	300	ug/L	02/28/17	02/28/17	1709030	
Manganese (Mn)	EPA 200.7	ND	20	50	ug/L	02/28/17	02/28/17	1709030	
Reservoir Effluent Site #5		17B1856-0	02 (Water)		Sample Da	te: 02/22/17	7 6:37 <b>Sa</b>	mpler: Pl	LM
Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
Field Analyses									
Cl Res Total (Field)	Field	2.88		N/A	mg/L	02/22/17	02/22/17	1708141	
pH (Field)	Field	7.95		N/A	pH Units	02/22/17	02/22/17	1708141	
Temperature (Field)	Field	17.5		N/A	°C	02/22/17	02/22/17	1708141	
General Physical Analyses									
Apparent Color	SM 2120B-M	ND	3.0	15	Color Units	02/22/17	02/22/17	1708168	
Odor Threshold	EPA 140.1-M	1	1	3	TON	02/22/17	02/22/17	1708168	
General Chemical Analyses									
General Chemical Huaryses						03/01/17	03/06/17	1709082	

### **EDT Transfer Confirmation 1**



Work Order: 17B1856 Report Date: 03/08/2017

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

LOMITA-CITY, WATER DEPT.		User ID: 4TH	System:	1910073
WELL 05 TREATMENT PLANT EFFLUENT	Stat	tion No.: 1910073-0	006	Sampled: 170222 06:35
COLOR	Result: 5.0	Units: UNITS	Entry No.: 000	81 Analyzed: 170222
IRON	Result: ND	Units: UG/L	Entry No.: 010	45 Analyzed: 170228
MANGANESE	Result: ND	Units: UG/L	Entry No.: 010	55 Analyzed: 170228



March 3, 2017



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



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

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

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

### LABORATORY TEST RESULTS

Project Reference: 17B1856 Lab Number:

I022401-01

Enclosed are results for sample(s) received 2/24/17 by Air Technology Laboratories. Samples were received intact and properly chilled. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

### Report Narrative:

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

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

Sincerely,

Mark Johnson

**Operations Manager** 

well. 1

MJohnson@AirTechLabs.com

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

### SUBCONTRACT ORDER

# Clinical Laboratory of San Bernardino 17B1856

Id22401-01

<b>SENDING LABORATORY:</b>		RECEIVING LABORA	ATORY:
Clinical Laboratory of San I	Bernardino	Air Technology Labs	
21881 Barton Road		18501 East Gale Avenu	ue Suite 130
Grand Terrace, CA 92313	¥	City of Industry, CA 9	1748
Phone: 909.825.7693		Phone :(626) 964-4032	
Fax: 909.825.7696		Fax:	
Project Manager: Stu Style	es		
Please email results to Proje	ect Manager: Stu Styles m [] ybarra@clinical-lab	o.com [\sqrt{styles@clinical-lab.com}	m [] nelson@clinical-lab.com
	sfer those samples with PS c	odes provided [ ] Yes [ \( \sqrt{No} \)	
Water Trax Upload	Client:	[] Yes []/No	
Turn Around Time [ ] Subcontract Comments:	10 Days [v] 5 Days [	] Other Days	
		2.00	
			Comments
Analysis		e e	Commences
Sample ID: Reservoir Efflue	ent Site #5 / 17B1856-02	Sampled: 02/22/17 06:37 PS Co Water	ode: WTX ID:
Ol	8	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Methane RSK175			Report in mg/L
Containers Supplied:			
10ml Amber Vial (B)	40ml Amber	· Vial (C)	
			g g g grae e
			· · · · · · · · · · · · · · · · · · ·
			5
3,01/			0127
Released By	02/24/17 08 Date/Time	Received By	7/14/17 8 Date / Time
io A a A A	/		2/74/17 1757
Palacad Pa	2/24/19 /2: Date/Time	Received By	Date!/Time
Released By	1 Date / Time	Received by	/ Date / Time

**Client:** 

**Clinical Laboratory** 

Attn:

Stu Styles

**Project Name:** 

NA

Project No.:

17B1856

Date Received:

02/24/17

Matrix:

Water

Reporting Units: mg/L

### **RSK175**

Lab No.:	I02240	1-01				
	Reservoir	Effluent	8			
Client Sample I.D.:	Site #5 / 1'	7B1856-		Į.		
	02					
Date/Time Sampled:	2/22/17	6:37				
Date/Time Analyzed:	3/1/17 1	11:28				
QC Batch No.:	170301G	C8A1				
Analyst Initials:	AS	5				
Dilution Factor:	1.0	)		8		
	Result	RL				
ANALYTE	mg/L	mg/L				
Methane	0.52	0.0010				

ND	= Not	Detected	(helow	RI)

RL = Reporting Limit

Reviewed/Approved By:	McM_ 1

Mark Johnson **Operations Manager** 

The cover letter is an integral part of this analytical report

QC Batch No.:

170301GC8A1

Matrix:

Water

Units: mg/L

### QC for Dissolved Gases by EPA Procedure RSKSOP-175

Lab	No.:	Metho	d Blank	1	LCS	L	CSD		
Date/Time Ar	alyzed:	3/1/1	17 8:54	3/1/1	7 13:56	3/1/1	7 14:12		
Analyst Ini	tials:		AS		AS		AS		
Data	Datafile:		nar002	011	mar019	01r	mar020		
Dilution Fa	ctor:		1.0		1.0		1.0		
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	ND	92	70-130%	86	70-130%	6.8	<30

**PQL = Practical Quantitation Limit** 

ND = Not Detected (Below RL).

RL = PQL X Dilution Factor

Reviewed/Approved By:	and.	1	Date:	3/3/17
	Mark J. Johnson			
	<b>Operations Manager</b>			

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

O B 4 Chain of Custody

17R1856

Client		City of Lomita	Š.	System Number	mher		Analysis	sis Re	Regulested	Pa				
Address	2437	24373 Walnut Avenue						-		$\vdash$	-			
	LC	Lomita, CA 91717		191	1910073									
Phone #		(310) 325-9830	7	Destination Laboratory	Laborato	7.								
Fax#		(310) 325-3627		[X] Clinical Laboratory	Laborato	,		Tota						
Project	Sk	Standard Analysis		RWQCB Compliance	omplianc	8					CT	O		
C.:b 0.:04	CWPF 4th	CWPF 4th week of February, 2017		Š	yes		ron	solve ngan	olo			doı		
onn riojeci	Com	Compliance Sampling		EL/	ELAP#		ese					r		
Comments	For TC/EC/BAC	For TC/EC/BACT see weekly Distro CoC		4	0			olids						
Sampled by		PLM		2	000									
Date Time		Sample Idenitification	Matrix	Type	Preserv	Total							Comments / P.S. Codes	
2/24/17 0635	Co35 Reservoir Influent Site #3	nt Site #3	DW	<u>*</u>	A/A	5.20	×	×	×	$\vdash$	_		ph 7,64 temp 20,9°	
-														
2/22/17 0633	OC33 Reservoir Effluent Site #5	nt Site #5	DW	<u>*</u>	A/A	2.88			×			×	ph 7.95 temp 17.5°	
72/2/17 6637	S(63 7 Reservoir Effluent Site #5	nt Site #5	ΜG	<u>*</u>	HCL	38.2		×		×	_			
		4												
										-	-			
	ł.													
								-			_			
			Matrix	idaino MO	Mator	14/14/14/2014				-		7	Veter A Six	7
Freservatives: (1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCl (3) HNO3 (4) NH4Cl (5) H2SO4 (6) Na <sub>2</sub> SO3 (7) Cold (8) Other:	Vatives: (1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCl (3) HNO3   (5) H2SO4 (6) Na2SO3 (7) Cold (8) Other:	US (4) NH4CI ther:	Maurix	איייטיי	ng water,	Routi	e water, ne, 2-Re	, SW-Si speat, 3	orm w Replac	ater, G ement	w- Gro , 4-Spe	und v cial V	DW-Dinking Water, WW-Waste Water, SW-Storm Water, GW- Ground Water, A-Air Routine, 2-Repeat, 3-Replacement, 4-Special W-Well D- Dist.	lype- 1-
Relinquished By (Sign)	By (Sign)	Print Name / Company			Date / Time	١.	H	R	Received By (Sign)	By (S	ign)		Print Name / Company	
Patrick McCue		City of Lomita		122/5	121	31,6	1						1) Colon DALL	
1string 1	3000	30 @9 11 r	2	1:22	Ċ	4,00					72	1	W	
Commen	1	2000			Sample	Samples received: (	X ë	On ice	) ə	) Intact	<u>ن</u> پ		Custody seals Temp 95	( )F (
											*	اد		
Shipped Via		Fed X     Golden State	UPS	Client		Other						Page	$Page_{-1}$ of $_{-1}$	

### **APPENDIX B**

METHANE MONITORING LOG



# CITY OF LOMITA PUBLIC WORKS DEPARTMENT

# CYPRESS WATER PRODUCTION FACILITY HANDHELD METHANE LOG READINGS

DATE	DAY		METHANE	HANDHELI	D	COMMENTS
2/1/2017	W	CH4-	1%	Оху-	19.9%	
2/2/2017	TH	CH4-	1%	Оху-	19.9%	
2/3/2017	F	CH4-	0%	Оху-	20.1%	
2/4/2017	S	CH4-	0%	Оху-	20.2%	
2/5/2017	SU	CH4-	0%	Оху-	20.1%	
2/6/2017	М	CH4-	0%	Оху-	20.3%	
2/7/2017	Т	CH4-	0%	Оху-	20.1%	
2/8/2017	W	CH4-	0%	Оху-	19.9%	
2/9/2017	TH	CH4-	0%	Оху-	20.2%	
2/10/2017	F	CH4-	0%	Оху-	20.1%	
2/11/2017	S	CH4-	0%	Оху-	19.9%	
2/12/2017	SU	CH4-	0%	Оху-	19.9%	
2/13/2017	М	CH4-	0%	Оху-	20.3%	
2/14/2017	Т	CH4-	0%	Оху-	20.2%	
2/15/2017	V	CH4-	0%	Оху-	20.2%	
2/16/2017	TH	CH4-	0%	Оху-	20.1%	
2/17/2017	F	CH4-	0%	Оху-	19.9%	
2/18/2017	S	CH4-	0%	Оху-	19.9%	
2/19/2017	SU	CH4-	0%	Оху-	20.1%	
2/20/2017	М	CH4-	0%	Оху-	20.3%	
2/21/2017	Т	CH4-	0%	Оху-	20.1%	
2/22/2017	W	CH4-	0%	Оху-	20.2%	
2/23/2017	TH	CH4-	0%	Оху-	20.1%	
2/24/2017	F	CH4-	0%	Оху-	20.1%	
2/25/2017	S	CH4-	1%	Оху-	19.9%	
2/26/2017	SU	CH4-	1%	Оху-	19.9%	
2/27/2017	М	CH4-	0%	Оху-	19.9%	
2/28/2017	Т	CH4-	0%	Оху-	20.1%	

ND- Non Detect CH4- Methane

Oxy- Oxygen

Day Off/Holiday- Red

### **APPENDIX C**

NITRIFICATION MONITORING DATA SUMMARY

## <sup>1</sup> MONTHLY NITRIFICATION MONITORING SUMMARY REPORT CITY OF LOMITA, System No. 1910073 --- Month, Year: **February 2017**

# Code	Sample ID	Location	Sample Date	Temp	рН	Total Chlorine	Free Chlorine	Total Ammonia	Free Ammonia	Nitrite	Nitrate	Coliform <sup>2</sup>	НРС	Zone	Comments
	thers $ ightarrow$		MM/DD/YYYY	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	P/A	CFU/ml		
1 D		1948 W 252nd St	2/1/2017	16.3	7.05	2.40	0.12	0.56	0.02	0.005	ND	Α	ND	_	Well/MWD Blend
2 D		24632 S Moon Ave	2/1/2017	15.9	7.74	2.50	0.10	0.5	0.02	0.008	ND	Α	3		Well/MWD Blend
3 D		25417 Pennsylvania Ave	2/1/2017	16.2	7.77	3.40	0.04	0.5	0	0.006	ND	Α	2	_	Well/MWD Blend
4 D		2052 Dawn St	2/1/2017	15.7	7.62	1.46	0.17	0.44	0	0.007	ND	Α	ND	_	Well/MWD Blend
5 D		Reservoir	2/1/2017	16.9	7.41	3.5	0.12	0.6	0.0	0.003	ND	Α	ND		Well/MWD Blend
6 D		1912 W 259th Pl	2/1/2017	15.1	8.05	2.50	0.07	0.38	0.01	0.005	ND	A	ND		MWD Only
7 D		26314 S Monte Vista Ave	2/1/2017	15.5	8.06	1.90	0.07	0.39	0	0.007	ND	A	ND	_	MWD Only
8 D	S13-005	2500 PCH	2/1/2017	15.3	7.98	2.20	0.04	0.45	0	0.006	ND	Α	ND	2	MWD Only
1 D	S13-003	1948 W 252nd St	2/8/2017	17.8	7.82	2.90	0.17	0.59	0.02	0.005	ND	Α	ND	1	Well/MWD Blend
2 D		24632 S Moon Ave	2/8/2017	17.7	7.72	3.00	0.17	0.56	0.02	0.003	ND ND	A	ND	_	Well/MWD Blend
3 D		25417 Pennsylvania Ave	2/8/2017	18.0	7.72	3.30	0.08	0.56	0	0.005	ND	A	ND	_	Well/MWD Blend
4 D		2052 Dawn St	2/8/2017	17.5	7.90	2.04	0.06	0.44	0	0.009	ND	A	ND		Well/MWD Blend
5 D		Reservoir	2/8/2017	17.9	7.76	3.0	0.08	0.68	0.03	0.004	ND	A	ND		Well/MWD Blend
6 D		1912 W 259th Pl	2/8/2017	17.2	7.92	2.20	0.21	0.43	0	0.004	0.5	Α	ND		MWD Only
7 D		26314 S Monte Vista Ave	2/8/2017	17.0	8.03	1.88	0.06	0.39	0.05	0.014	0.48	Α	ND		MWD Only
8 D		2500 PCH	2/8/2017	16.9	7.87	2.10	0.10	0.47	0.02	0.005	0.48	А	ND	2	MWD Only
							1					I.	<u>l</u>		,
1 D	S13-003	1948 W 252nd St	2/15/2017	16.9	7.63	2.90	0.03	0.62	0	0.007	ND	Α	ND	1	Well/MWD Blend
2 D	S13-004	24632 S Moon Ave	2/15/2017	17.1	7.73	3.00	0.04	0.53	0	0.009	ND	Α	ND	1	Well/MWD Blend
3 D	S13-008	25417 Pennsylvania Ave	2/15/2017	17.1	7.78	3.20	0.04	0.54	0.01	0.007	ND	Α	ND	1	Well/MWD Blend
4 D	Α	2052 Dawn St	2/15/2017	16.2	7.30	2.03	0.07	0.4	0	0.01	ND	Α	ND	1	Well/MWD Blend
5 D		Reservoir	2/15/2017	18.0	7.9	3.2	0.03	0.66	0	0.005	ND	Α	ND	1	Well/MWD Blend
6 D	S13-001	1912 W 259th Pl	2/15/2017	16.3	8.46	2.20	0.08	0.46	0	0.007	0.61	Α	ND	2	MWD Only
7 D	S13-002	26314 S Monte Vista Ave	2/15/2017	17.5	8.53	2.00	0.12	0.44	0.02	0.019	0.61	Α	ND	3	MWD Only
8 D	S13-005	2500 PCH	2/15/2017	16.2	8.24	2.20	0.07	0.42	0.01	0.014	0.62	Α	ND	2	MWD Only
	1		, ,			1	1					T	ı	,	
1 D		1948 W 252nd St	2/22/2017	16.4	7.47	2.80	0.06	0.59	0	0.014	0.46	Α	ND	_	Well/MWD Blend
2 D		24632 S Moon Ave	2/22/2017	16.8	7.69	3.00	0.12	0.58	0	0.02	0.47	Α	ND		Well/MWD Blend
3 D		25417 Pennsylvania Ave	2/22/2017	16.9	7.82	3.50	0.18	0.56	0	0.011	0.46	Α	ND		Well/MWD Blend
4 D		2052 Dawn St	2/22/2017	14.8	7.00	2.09	0.16	0.49	0	0.018	0.50	А	10		Well/MWD Blend
5 D		Reservoir	2/22/2017	17.4	8.05	3.50	0.11	0.62	0.0	0.004	0.46	А	ND	_	Well/MWD Blend
6 D		1912 W 259th Pl	2/22/2017	15.7	8.55	2.40	0.06	0.44	0.01	0.014	0.78	А	ND		MWD Only
7 D		26314 S Monte Vista Ave	2/22/2017	16.1	8.53	2.20	0.04	0.44	0.02	0.013	0.79	A	ND		MWD Only
8 D	S13-005	2500 PCH	2/22/2017	15.9	8.27	2.30	0.12	0.45	0	0.012	0.77	Α	ND	2	MWD Only
1 5	C12 002	1948 W 252nd St	1	1		1					1	ı	ı	1 4	
1 D 2 D														1	
3 D		24632 S Moon Ave												1	
4 D		25417 Pennsylvania Ave 2052 Dawn St												1	
5 D														1	
6 D		Reservoir 1912 W 259th Pl												2	
7 D														3	
7 D 8 D		26314 S Monte Vista Ave 2500 PCH					+							2	
0 0	312-002	2300 FCN	l												

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

<sup>&</sup>lt;sup>2</sup>Coliform results are part of weekly Bacti sampling results.