

CITY OF LOMITA



# Cypress Water Production Facility Monthly Status Report

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February 2017

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**CITY COUNCIL**

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



**CITY OF LOMITA**

**ADMINISTRATION**

RYAN SMOOT  
CITY MANAGER

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,

A handwritten signature in black ink, appearing to read "Mark A. McAvoy".

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.**

	<b>Production for February 2017</b>		
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.

Date, week of	SP1, Well Raw Water Discharge							SP2, Combined Pressure Filter Effluent			SP3, After chloramination static mixer; reservoir entry					
	Iron, ug/L	*MCL = 3 00 ug/L	Manganese, ug/L	*MCL = 50 ug/L	Color	*MCL=15	Total Coliform	Total Coliform	HPC, MPN/100mL	MCL=500	Iron, mg/L	*MCL = 300 ug/L	Manganese, mg/L	*MCL = 50 ug/L	Color	*MCL=15
2/1/2017	210	300	120	50	15	15	A	A	A	500	ND	300	ND	50	7.5	15
2/8/2017											ND	300	ND	50	7.5	15
2/15/2017											ND	300	ND	50	7.5	15
2/22/2017											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, week of	SP2	SP3			SP4			SP5		
	Free Cl	Free Cl	Total Cl	Total NH <sub>3</sub>	Free Cl	Total Cl	Total NH <sub>3</sub>	Free Cl	Total Cl	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.

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
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- 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 CaCO<sub>3</sub>

Methane (Water) - Methane dissolved in water

**Monthly CWPf Monitoring Report – February 2017**  
**Cypress Water Production Facility**  
**City of Lomita; System No. 1910073**

Sample Locations and Parameters	Frequency	MCL/ Goal	2/1 1stWk	2/8 2 <sup>nd</sup> Wk	2/15 3rdWk	2/22 4 <sup>th</sup> Wk	5 <sup>th</sup> Wk	Comments and/or Other Info.
			or Mo. Result (date)					
SP1 --- Also called Well 5 Raw Water or Site#1.								
TDS, ppm	Monthly	See SP5	710 2/1/17	<b>Operations Data/Information:</b> <b>CWPF operation days</b> <b>On Well 5:</b> Daily average flow - 409 gpm; total prod. - 34.25 AF <b>Combined Well 5/MWD data:</b> Average Well 5: MWD blend Ratio – 41% WELL:59% MWD; total prod.- 84.05 AF  Chlorine Dosage: N/A*				*Chlorine injected after SP1, before entering the greensand filter.
Hardness	Monthly	See SP5	330 2/1/17					
CH4, ppm	Monthly	See SP5	3.6 2/1/17					
Iron, ppb	Monthly	See SP3	210 2/1/17					
Manganese, ppb	Monthly	See SP3	120 2/1/17					
Color, units	Monthly	See SP3	15 2/1/17					
Total Coliform, P or A	Monthly	A	A 2/1/17					
SP2 --- Also called Filter Effluent or Site#3.								
Total Coliform, P or A	Monthly	A	A	Ammonia Dosage: N/A*				*Ammonia added after filter effluent
HPC,MPN/100 ml	Monthly	500	A					
Free Cl Res, ppm	Continuous	Average: 6.89; Range: 6.47 – 7.31						
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	7.5	7.5	7.5	5		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.30; Range: 0.25 – 0.34 Total Cl: Average: 5.89; Range: 5.84 – 5.96 Ammonia: Average: 0.93; Range: 0.79 – 1.00						
SP4 --- Also called Reservoir Influent or the Site Well 5/MWD Water Blend Point/Phosphate Injection.								
Phosphate Injection		Phosphate Dosage: 1.17 mg/L						
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.33; Range: 0.26 – 0.49 Total Cl: Average: 3.82; Range: 3.76 – 3.90 Ammonia: Average: 0.70; Range: 0.67 – 0.72						Cl/NH3 Ratio: 5.45
SP5 --- Also called Reservoir Effluent or Site#5. SP5 discharges into Zone 1 of the distribution system.								
TDS, ppm	Weekly	SI Goal: 500-750ppm	610	560	480	490		
Hardness	Monthly	SI Goal: 180-250ppm	280					
CH4, ppm	Weekly	Goal: from PA	0.47	0.50	0.41	0.52		% CH4 Removal: 87%
Odor, units	Monthly	1	1	3	1	1		
Free and Total Cl Res, ppm	Continuous	Free Cl: Average: 0.06; Range: 0.05 – 0.08 Total Cl: Average: 3.29; Range: 3.28 – 3.30 Ammonia: Average: 0.65; Range: 0.61 – 0.68						Cl/NH3 Ratio: 5.04
Headspace of the Cypress Reservoir.								
<sup>1</sup> CH4 ppmv; using Portable Device	Daily (from log)	Goal - LEL	CH4 Average: 0.14% CH4 Range: 0% - 1%					
SP 6 --- MWD Source Feeding CWPF. Also called Zone 2 of the distribution system or Site #6.								
TDS, ppm	Monthly	-----	470					
Hardness	Monthly	-----	200					
Notes: <sup>1</sup> 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 <sup>th</sup> of the following month.								

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



## **APPENDIX A**

### LABORATORY RESULTS

# *Clinical Laboratory of San Bernardino, Inc.*



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,

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

Stu Styles  
Client Services Manager

# Clinical Laboratory of San Bernardino, Inc.



**Lomita, City of**  
24373 Walnut Avenue  
Lomita CA, 91717

Project: Standard Analysis  
Sub Project: Monthly Compliance/Monthly 1st week FEB  
Project Manager: Mark Andersen

Work Order: 17B0215  
Received: 02/01/17 15:20  
Reported: 02/16/17

## Raw Water Site #1

17B0215-01 (Water)

Sample Date: 02/01/17 7:55 Sampler: DGM

Analyte	Method	Result	Rep. Limit	MCL	Units	Prepared	Analyzed	Batch	Qualifier
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### 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	
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### General Chemical Analyses

Hardness, Total (as CaCO <sub>3</sub> )	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	

### Metals

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

17B0215-02 (Water)

Sample Date: 02/01/17 8:00 Sampler: DGM

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

Cl Res Total (Field)	Field	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	
Plate Count	SM9215B	ND	1	500	CFU/ml	02/01/17	02/03/17	1705180	HT-08

# Clinical Laboratory of San Bernardino, Inc.



<b>Lomita, City of</b> 24373 Walnut Avenue Lomita CA, 91717	Project: Standard Analysis Sub Project: Monthly Compliance/Monthly 1st week FEB Project Manager: Mark Andersen	Work Order: 17B0215 Received: 02/01/17 15:20 Reported: 02/16/17
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**Filter Effluent (Total Chlorine) Site#3**                      **17B0215-03 (Water)**                      **Sample Date:** 02/01/17 8:05                      **Sampler:** DGM

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

<b>Cl Res Total (Field)</b>	Field	<b>5.4</b>		N/A	mg/L	02/01/17	02/01/17	1706025	
<b>pH (Field)</b>	Field	<b>7.84</b>		N/A	pH Units	02/01/17	02/01/17	1706025	
<b>Temperature (Field)</b>	Field	<b>19.5</b>		N/A	°C	02/01/17	02/01/17	1706025	

## General Physical Analyses

<b>Apparent Color</b>	SM 2120B-M	<b>7.5</b>	3.0	15	Color Units	02/01/17	02/02/17	1705137	
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## Metals

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**                      **17B0215-04 (Water)**                      **Sample Date:** 02/01/17 8:12                      **Sampler:** DGM

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

<b>Cl Res Total (Field)</b>	Field	<b>2.1</b>		N/A	mg/L	02/01/17	02/01/17	1706025	
<b>pH (Field)</b>	Field	<b>8.31</b>		N/A	pH Units	02/01/17	02/01/17	1706025	
<b>Temperature (Field)</b>	Field	<b>15.6</b>		N/A	°C	02/01/17	02/01/17	1706025	

## General Chemical Analyses

<b>Hardness, Total (as CaCO3)</b>	Calculated	<b>200</b>	6.6	N/A	mg/L	02/07/17	02/07/17	[CALC]	
<b>Total Filterable Residue/TDS</b>	SM 2540C	<b>470</b>	5.0	1000	mg/L	02/08/17	02/10/17	1706095	

## Metals

<b>Calcium (Ca)</b>	EPA 200.7	<b>48</b>	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	
<b>Magnesium (Mg)</b>	EPA 200.7	<b>20</b>	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	

# Clinical Laboratory of San Bernardino, Inc.



**Lomita, City of**  
24373 Walnut Avenue  
Lomita CA, 91717

Project: Standard Analysis  
Sub Project: Monthly Compliance/Monthly 1st week FEB  
Project Manager: Mark Andersen

Work Order: 17B0215  
Received: 02/01/17 15:20  
Reported: 02/16/17

**Reservoir Effluent Site #5**      **17B0215-05 (Water)**      **Sample Date:** 02/01/17 8:20      **Sampler:** DGM

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

<b>Cl Res Total (Field)</b>	Field	<b>3.5</b>		N/A	mg/L	02/01/17	02/01/17	1706025	
<b>pH (Field)</b>	Field	<b>8.08</b>		N/A	pH Units	02/01/17	02/01/17	1706025	
<b>Temperature (Field)</b>	Field	<b>16.9</b>		N/A	°C	02/01/17	02/01/17	1706025	

## General Physical Analyses

<b>Odor Threshold</b>	EPA 140.1-M	<b>1</b>	1	3	TON	02/01/17	02/02/17	1705137	
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## General Chemical Analyses

<b>Hardness, Total (as CaCO<sub>3</sub>)</b>	Calculated	<b>280</b>	6.6	N/A	mg/L	02/07/17	02/07/17	[CALC]	
<b>Total Filterable Residue/TDS</b>	SM 2540C	<b>610</b>	5.0	1000	mg/L	02/08/17	02/10/17	1706095	

## Metals

<b>Calcium (Ca)</b>	EPA 200.7	<b>71</b>	1.0	N/A	mg/L	02/07/17	02/07/17	1706041	
<b>Magnesium (Mg)</b>	EPA 200.7	<b>25</b>	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



# Clinical Laboratory of San Bernardino, Inc.

## EDT Transfer Confirmation 1



Work Order: 17B0215

Report Date: 02/16/2017

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: 170201 07:55	
COLOR	Result: 15.0	Units: UNITS	Entry No.: 00081	Analyzed: 170202	
TOTAL HARDNESS (AS CaCO3)	Result: 330	Units: MG/L	Entry No.: 00900	Analyzed: 170207	
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	
TOTAL DISSOLVED SOLIDS	Result: 710	Units: MG/L	Entry No.: 70300	Analyzed: 170210	
MWD CONNECTION WB-8A & WB-8B/TREATED		Station No.: 1910073-005		Sampled: 170201 08:12	
TOTAL HARDNESS (AS CaCO3)	Result: 200	Units: MG/L	Entry No.: 00900	Analyzed: 170207	
CALCIUM	Result: 48	Units: MG/L	Entry No.: 00916	Analyzed: 170207	
MAGNESIUM	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	
COLOR	Result: 7.5	Units: UNITS	Entry No.: 00081	Analyzed: 170202	
IRON	Result: ND	Units: UG/L	Entry No.: 01045	Analyzed: 170206	
MANGANESE	Result: ND	Units: UG/L	Entry No.: 01055	Analyzed: 170206	



February 10, 2017

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



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



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

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

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

### 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,

A handwritten signature in blue ink, appearing to read "Mark Johnson", is written over a white background.

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**

2 of 4  
1020302

1020302-01/02

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

Please email results to Project Manager: Stu Styles

[ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab.com [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: 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:

40ml Amber Vial (B)

40ml Amber Vial (C)

Sample ID: Reservoir Effluent Site #5 / 17B0215-05

Sampled: 02/01/17 08:20 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°C

**Client:** Clinical Laboratory  
**Attn:** Stu Styles  
**Project Name:** NA  
**Project No.:** 17B0215  
**Date Received:** 02/03/17  
**Matrix:** Water  
**Reporting Units:** mg/L

**RSK175**

Lab No.:	I020302-01	I020302-02		
Client Sample I.D.:	Raw Water Site #1 / 17B0215-01	Reservoir Effluent Site #5 / 17B0215- 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.:	170210GC8A1	170210GC8A1		
Analyst Initials:	AS	AS		
Dilution Factor:	1.0	1.0		
ANALYTE	Result mg/L	RL mg/L	Result mg/L	RL mg/L
Methane	3.6	0.0010	0.47	0.0010

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: \_\_\_\_\_

Mark Johnson  
Operations Manager

Date 2-10-17

The cover letter is an integral part of this analytical report



QC Batch No.: 170210GC8A1  
Matrix: Water  
Units: mg/L

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

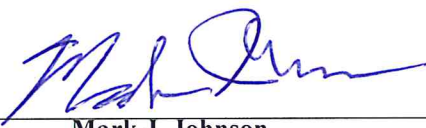
Lab No.:		Method Blank		LCS		LCSD			
Date/Time Analyzed:		2/10/17 10:06		2/10/17 9:35		2/10/17 9:53			
Analyst Initials:		AS		AS		AS			
Datafile:		09feb036		09feb034		09feb035			
Dilution Factor:		1.0		1.0		1.0			
ANALYTE	PQL	RL	Results	% Rec.	Criteria	% Rec.	Criteria	%RPD	Criteria
Methane	0.001	0.001	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

Date:

2-10-17

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



**AirTECHNOLOGY Laboratories, Inc.**

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



Client		City of Lomita		System Number		Analysis Requested																
Address		24373 Walnut Avenue		1910073																		
Phone #		(310) 325-9830		Destination Laboratory																		
Fax #		(310) 325-3627		[X] Clinical Laboratory																		
Project		Standard Analysis		RWQCB Compliance																		
Sub Project		Monthly Compliance/ Monthly 1st week DEC		YES																		
Comments				ELAP #																		
Sampled by		DGM		1088																		
Date	Time	Sample Identification		Matrix	Type	Preserv	Total Chlorine	Total Dissolved Solids		Iron & Manganese		E. Coli		Total Coliform		Heterotrophic Plate Count		Color		Odor		
2/1/17	0740	Raw Water Site #1		GW	IW	N/A	Ø	X		X		X		X		X		X		PH 7.62 TEMP 19.8°		
2/1/17	0755	Raw Water Site #1		GW	IW	2.7	Ø					X		X		X				X		
2/1/17		Raw Water Site #1		GW	IW	1.7	Ø															
2/1/17	0800	Filter Effluent (Free Chlorine) Site#2		DW	IW	1.7	7.0					X		X		X				PH 7.78 TEMP 19.8°		
2/1/17	0805	Filter Effluent (Total Chlorine) Site#3		DW	IW	N/A	5.4			X						X				PH 7.84 TEMP 19.5°		
2/1/17	0812	Zone #2 Site #6		DW	ID	N/A	2.1	X												PH 8.31 TEMP 15.6°		
2/1/17	0815	Reservoir Effluent Site #5		DW	ID	N/A	3.5	X								X				PH 8.08 TEMP 16.9°		
2/1/17	0820	Reservoir Effluent Site #5		DW	ID	2.7	3.5															
Preservatives: (1) Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (2) HCl (3) HNO <sub>3</sub> (4) NH <sub>4</sub> Cl (5) H <sub>2</sub> SO <sub>4</sub> (6) Na <sub>2</sub> SO <sub>3</sub> (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														
Patrick McCue		City of Lomita, CA		2-1-17 / 2:00		[Signature]		J. W. W. / USB														
Patrick McCue		J. W. W. / USB		2-17-17 / 3:20		[Signature]		A. W. W. / USB														
Comments:		Samples received: (X) On ice ( ) Intact ( ) Custody seals Temp 9.5																				
Shipped Via		Fed X		Golden State		UPS		Client		Other		Page 1 of 1										

# *Clinical Laboratory of San Bernardino, Inc.*



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,

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 of Feb Compliance Sampling  
Project Manager: Mark Andersen

Work Order: 17B0774  
Received: 02/08/17 15:30  
Reported: 02/27/17

## Reservoir Influent Site #3

17B0774-01 (Water)

Sample Date: 02/08/17 9:30

Sampler: PLM

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

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

17B0774-02 (Water)

Sample Date: 02/08/17 9:10

Sampler: PLM

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

Total Filterable Residue/TDS	SM 2540C	560	5.0	1000	mg/L	02/14/17	02/16/17	1707052	
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ND Analyte NOT DETECTED at or above the reporting limit

February 17, 2017

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



ADE-1461  
EPA Methods T03,  
T014A, T015 SIM & SCAN  
ASTM D1946



LA Cert #04140  
EPA Methods T03, T014A, T015, 25C/3C,  
RSK-175

TX Cert T104704450-14-6  
EPA Methods T014A, T015

UT Cert CA0133332015-3  
EPA Methods T03, T014A, T015, RSK-175

### 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  
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:**

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

**RECEIVING LABORATORY:**

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

Please email results to Project Manager: Stu Styles

[ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab.com [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 / 17B0774-02

Sampled: 02/08/17 09:10 PS Code:  
Water

WTX ID:

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (B)

40ml Amber Vial (C)

Released By Bu Jy Date / Time 2/10/17 08:00

Released By Michael Stiles Date / Time 2/10/17 11:17

Received By Michael Stiles Date / Time 2/10/17 8:00

Received By Jeff Date / Time 2/10/17 11:17

9°C



**Client:** Clinical Laboratory  
**Attn:** Stu Styles  
**Project Name:** NA  
**Project No.:** 17B0774  
**Date Received:** 02/10/17  
**Matrix:** Water  
**Reporting Units:** mg/L

RSK175

Lab No.:	I021003-01				
Client Sample I.D.:	Reservoir Effluent Site #5 / 17B0774- 02				
Date/Time Sampled:	2/8/17 9:10				
Date/Time Analyzed:	2/15/17 12:34				
QC Batch No.:	170215GC8A2				
Analyst Initials:	AS				
Dilution Factor:	1.0				
ANALYTE	Result mg/L	RL mg/L			
Methane	0.50	0.0010			

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: \_\_\_\_\_

Mark Johnson  
Operations Manager

Date

2-17-17

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.:		Method Blank		LCS		LCSD			
Date/Time Analyzed:		2/15/17 12:21		2/15/17 11:54		2/15/17 12:07			
Analyst Initials:		AS		AS		AS			
Datafile:		15feb020		15feb018		15feb019			
Dilution Factor:		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:

2-17-17

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



AirTECHNOLOGY Laboratories, Inc.

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

013

1 (4) 1730774

Client		City of Lomita		System Number		Analysis Requested																									
Address		24373 Walnut Avenue		1910073																											
Phone #		Lomita, CA 91717		Destination Laboratory																											
Fax #		(310) 325-9830		[X] Clinical Laboratory																											
Project		(310) 325-3627		RWQCB Compliance																											
Sub Project		Standard Analysis		yes																											
Comments		CWP/F 2nd Week Dec Compliance Sampling		ELAP #																											
Sampled by		For TC/EC/BACT see weekly Distro CoC		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	
2/8/17	0930			Reservoir Influent Site #3		DW		1W		N/A		5.3		X		X		X		X		X		X		X		ph 7.61 temp 21.5°			
2/8/17	0910			Reservoir Effluent Site #5		DW		1W		N/A		3.0																X ph 7.79 temp 18.1°			
2/8/17	0910			Reservoir Effluent Site #5		DW		1W		HCL		3.0																			

# *Clinical Laboratory of San Bernardino, Inc.*



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,

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 of Feb Compliance Sampling  
Project Manager: Mark Andersen

Work Order: 17B1410  
Received: 02/15/17 17:00  
Reported: 03/02/17

**Reservoir Influent Site #3** **17B1410-01 (Water)** **Sample Date:** 02/15/17 9:35 **Sampler:** PLM

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

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** **17B1410-02 (Water)** **Sample Date:** 02/15/17 9:40 **Sampler:** PLM

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	
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ND Analyte NOT DETECTED at or above the reporting limit

# Clinical Laboratory of San Bernardino, Inc.

## EDT Transfer Confirmation 1



Work Order: 17B1410

Report Date: 03/02/2017

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: 170215 09:35

COLOR

Result: 7.5

Units: UNITS

Entry No.: 00081

Analyzed: 170215

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 170221

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 170221





February 24, 2017

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



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



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

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

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

### 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,

A handwritten signature in blue ink, appearing to read "Mark Johnson".

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**

I021703-01

**SENDING LABORATORY:**

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

**RECEIVING LABORATORY:**

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

Please email results to Project Manager: Stu Styles

[ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab.com [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 / 17B1410-02	Sampled: 02/15/17 09:40 PS Code: Water WTX ID:
Methane RSK175	Report in mg/L
Containers Supplied: 40ml Amber Vial (B)	40ml Amber Vial (C)

3°C

Released By *Barry* 02/16/17 16:45 Received By *Henry Chapman* 2/17/17 900  
Released By *Henry Chapman* 2/17/17 1013 Received By *Barry* 2/17/17 1013


**Client:** Clinical Laboratory  
**Attn:** Stu Styles  
**Project Name:** NA  
**Project No.:** 17B1410  
**Date Received:** 02/17/17  
**Matrix:** Water  
**Reporting Units:** mg/L

RSK175

Lab No.:	I021703-01						
Client Sample I.D.:	Reservoir Effluent Site #5 / 17B1410- 02						
Date/Time Sampled:	2/15/17 9:40						
Date/Time Analyzed:	2/24/17 9:09						
QC Batch No.:	170224GC8A1						
Analyst Initials:	AS						
Dilution Factor:	1.0						
ANALYTE	Result mg/L	RL mg/L					
Methane	0.41	0.0010					

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

Reviewed/Approved By: \_\_\_\_\_

  
 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.:		Method Blank		LCS		LCSD				
Date/Time Analyzed:		2/24/17 8:56		2/24/17 8:30		2/24/17 8:43				
Analyst Initials:		AS		AS		AS				
Datafile:		24feb003		24feb001		24feb002				
Dilution Factor:		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: \_\_\_\_\_

  
Mark J. Johnson  
Operations Manager

Date: 2/24/17

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



17B1410

## *"Your Water and Wastewater Analysis Solution"*

# *Clinical Laboratory of San Bernardino, Inc.*



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,

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

Stu Styles  
Client Services Manager



# Clinical Laboratory of San Bernardino, Inc.



**Lomita, City of**  
24373 Walnut Avenue  
Lomita CA, 91717

Project: Standard Analysis  
Sub Project: CWP 4th Week February 2017 Compliance Sampling  
Project Manager: Mark Andersen

Work Order: 17B1856  
Received: 02/22/17 16:00  
Reported: 03/08/17

**Reservoir Influent Site #3** **17B1856-01 (Water)** **Sample Date:** 02/22/17 6:35 **Sampler:** PLM

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

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** **17B1856-02 (Water)** **Sample Date:** 02/22/17 6:37 **Sampler:** PLM

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

Total Filterable Residue/TDS	SM 2540C	490	5.0	1000	mg/L	03/01/17	03/06/17	1709082	
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ND Analyte NOT DETECTED at or above the reporting limit

# Clinical Laboratory of San Bernardino, Inc.

## EDT Transfer Confirmation 1



Work Order: 17B1856

Report Date: 03/08/2017

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: 170222 06:35

COLOR

Result: 5.0

Units: UNITS

Entry No.: 00081

Analyzed: 170222

IRON

Result: ND

Units: UG/L

Entry No.: 01045

Analyzed: 170228

MANGANESE

Result: ND

Units: UG/L

Entry No.: 01055

Analyzed: 170228



March 3, 2017

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



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



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

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

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

### 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,

A handwritten signature in blue ink, appearing to read "m. johnson".

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  
17B1856

I022401-01

SENDING LABORATORY:

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

RECEIVING LABORATORY:

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

Please email results to Project Manager: Stu Styles

[ ] glaubig@clinical-lab.com [ ] ybarra@clinical-lab.com [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 / 17B1856-02

Sampled: 02/22/17 06:37 PS Code:  
Water

WTX ID:

01

Methane RSK175

Report in mg/L

Containers Supplied:

40ml Amber Vial (B)

40ml Amber Vial (C)

30°C

Released By	02/24/17 08:00	Received By	2/24/17 8:30
m clal	2/24/17 12:53	Received By	2/24/17 1253

**Client:** Clinical Laboratory  
**Attn:** Stu Styles  
**Project Name:** NA  
**Project No.:** 17B1856  
**Date Received:** 02/24/17  
**Matrix:** Water  
**Reporting Units:** mg/L

RSK175

<b>Lab No.:</b>	<b>I022401-01</b>						
<b>Client Sample I.D.:</b>	<b>Reservoir Effluent Site #5 / 17B1856- 02</b>						
<b>Date/Time Sampled:</b>	<b>2/22/17 6:37</b>						
<b>Date/Time Analyzed:</b>	<b>3/1/17 11:28</b>						
<b>QC Batch No.:</b>	<b>170301GC8A1</b>						
<b>Analyst Initials:</b>	<b>AS</b>						
<b>Dilution Factor:</b>	<b>1.0</b>						
<b>ANALYTE</b>	<b>Result mg/L</b>	<b>RL mg/L</b>					
<b>Methane</b>	<b>0.52</b>	<b>0.0010</b>					

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

Reviewed/Approved By: Mark Johnson  
 Mark Johnson  
 Operations Manager

Date 3/3/17

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.:		Method Blank		LCS		LCSD				
Date/Time Analyzed:		3/1/17 8:54		3/1/17 13:56		3/1/17 14:12				
Analyst Initials:		AS		AS		AS				
Datafile:		01mar002		01mar019		01mar020				
Dilution Factor:		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: \_\_\_\_\_

Mark J. Johnson  
Operations Manager

Date: \_\_\_\_\_

3/3/17

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



**AirTECHNOLOGY Laboratories, Inc.**

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



17B1856

*"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**

FEBRUARY 2017						
DATE	DAY	METHANE HANDHELD			COMMENTS	
2/1/2017	W	CH4-	1%	Oxy-	19.9%	
2/2/2017	TH	CH4-	1%	Oxy-	19.9%	
2/3/2017	F	CH4-	0%	Oxy-	20.1%	
2/4/2017	S	CH4-	0%	Oxy-	20.2%	
2/5/2017	SU	CH4-	0%	Oxy-	20.1%	
2/6/2017	M	CH4-	0%	Oxy-	20.3%	
2/7/2017	T	CH4-	0%	Oxy-	20.1%	
2/8/2017	W	CH4-	0%	Oxy-	19.9%	
2/9/2017	TH	CH4-	0%	Oxy-	20.2%	
2/10/2017	F	CH4-	0%	Oxy-	20.1%	
2/11/2017	S	CH4-	0%	Oxy-	19.9%	
2/12/2017	SU	CH4-	0%	Oxy-	19.9%	
2/13/2017	M	CH4-	0%	Oxy-	20.3%	
2/14/2017	T	CH4-	0%	Oxy-	20.2%	
2/15/2017	W	CH4-	0%	Oxy-	20.2%	
2/16/2017	TH	CH4-	0%	Oxy-	20.1%	
2/17/2017	F	CH4-	0%	Oxy-	19.9%	
2/18/2017	S	CH4-	0%	Oxy-	19.9%	
2/19/2017	SU	CH4-	0%	Oxy-	20.1%	
2/20/2017	M	CH4-	0%	Oxy-	20.3%	
2/21/2017	T	CH4-	0%	Oxy-	20.1%	
2/22/2017	W	CH4-	0%	Oxy-	20.2%	
2/23/2017	TH	CH4-	0%	Oxy-	20.1%	
2/24/2017	F	CH4-	0%	Oxy-	20.1%	
2/25/2017	S	CH4-	1%	Oxy-	19.9%	
2/26/2017	SU	CH4-	1%	Oxy-	19.9%	
2/27/2017	M	CH4-	0%	Oxy-	19.9%	
2/28/2017	T	CH4-	0%	Oxy-	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	pH	Total Chlorine	Free Chlorine	Total Ammonia	Free Ammonia	Nitrite	Nitrate	Coliform <sup>2</sup>	HPC	Zone	Comments
Units/Others →				MM/DD/YYYY	°C		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	P/A	CFU/ml		
1	D	S13-003	1948 W 252nd St	2/1/2017	16.3	7.05	2.40	0.12	0.56	0.02	0.005	ND	A	ND	1	Well/MWD Blend
2	D	S13-004	24632 S Moon Ave	2/1/2017	15.9	7.74	2.50	0.10	0.5	0.02	0.008	ND	A	3	1	Well/MWD Blend
3	D	S13-008	25417 Pennsylvania Ave	2/1/2017	16.2	7.77	3.40	0.04	0.5	0	0.006	ND	A	2	1	Well/MWD Blend
4	D	A	2052 Dawn St	2/1/2017	15.7	7.62	1.46	0.17	0.44	0	0.007	ND	A	ND	1	Well/MWD Blend
5	D		Reservoir	2/1/2017	16.9	7.41	3.5	0.12	0.6	0.0	0.003	ND	A	ND	1	Well/MWD Blend
6	D	S13-001	1912 W 259th Pl	2/1/2017	15.1	8.05	2.50	0.07	0.38	0.01	0.005	ND	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	2/1/2017	15.5	8.06	1.90	0.07	0.39	0	0.007	ND	A	ND	3	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	A	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	A	ND	1	Well/MWD Blend
2	D	S13-004	24632 S Moon Ave	2/8/2017	17.7	7.72	3.00	0.10	0.56	0	0.009	ND	A	ND	1	Well/MWD Blend
3	D	S13-008	25417 Pennsylvania Ave	2/8/2017	18.0	7.71	3.30	0.08	0.56	0	0.006	ND	A	ND	1	Well/MWD Blend
4	D	A	2052 Dawn St	2/8/2017	17.5	7.90	2.04	0.06	0.44	0	0.009	ND	A	ND	1	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	1	Well/MWD Blend
6	D	S13-001	1912 W 259th Pl	2/8/2017	17.2	7.92	2.20	0.21	0.43	0	0.004	0.5	A	ND	2	MWD Only
7	D	S13-002	26314 S Monte Vista Ave	2/8/2017	17.0	8.03	1.88	0.06	0.39	0.05	0.014	0.48	A	ND	3	MWD Only
8	D	S13-005	2500 PCH	2/8/2017	16.9	7.87	2.10	0.10	0.47	0.02	0.005	0.48	A	ND	2	MWD Only

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	A	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	A	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	A	ND	1	Well/MWD Blend
4	D	A	2052 Dawn St	2/15/2017	16.2	7.30	2.03	0.07	0.4	0	0.01	ND	A	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	A	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	A	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	A	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	A	ND	2	MWD Only

1	D	S13-003	1948 W 252nd St	2/22/2017	16.4	7.47	2.80	0.06	0.59	0	0.014	0.46	A	ND	1	Well/MWD Blend
2	D	S13-004	24632 S Moon Ave	2/22/2017	16.8	7.69	3.00	0.12	0.58	0	0.02	0.47	A	ND	1	Well/MWD Blend
3	D	S13-008	25417 Pennsylvania Ave	2/22/2017	16.9	7.82	3.50	0.18	0.56	0	0.011	0.46	A	ND	1	Well/MWD Blend
4	D	A	2052 Dawn St	2/22/2017	14.8	7.00	2.09	0.16	0.49	0	0.018	0.50	A	10	1	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	A	ND	1	Well/MWD Blend
6	D	S13-001	1912 W 259th Pl	2/22/2017	15.7	8.55	2.40	0.06	0.44	0.01	0.014	0.78	A	ND	2	MWD Only
7	D	S13-002	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	3	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	A	ND	2	MWD Only

1	D	S13-003	1948 W 252nd St												1	
2	D	S13-004	24632 S Moon Ave												1	
3	D	S13-008	25417 Pennsylvania Ave												1	
4	D	A	2052 Dawn St												1	
5	D		Reservoir												1	
6	D	S13-001	1912 W 259th Pl												2	
7	D	S13-002	26314 S Monte Vista Ave												3	
8	D	S13-005	2500 PCH												2	

<sup>1</sup>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>2</sup>Coliform results are part of weekly Bacti sampling results.