

0000-0000-0043-6834

Document Control Sheet

Sheet Title:	PWS - OLS
Box ID:	12919
Control Sheet ID:	0000-0000-0043-6834
Record Series Name:	WS / Public Water Supply
Record Series:	PWS
Primary ID:	0200008
Secondary ID:	
Doc Type:	Analysis Chemical
Security:	Public
Date:	11/28/2018 12:00AM
Title:	WQP Analysis Report
Tertiary ID	

PWS 0200008 AC 20181128 WQP Analysis Report - 1



**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
WATER QUALITY PARAMETER MONITORING FORM 20679**

Completed by PWS (or Agent)

Completed by Laboratory

PWS Name: City of Pearland			Laboratory Name: Envirodyne Laboratories, Inc.		
PWS ID#: TX 0200008			TCEQ Lab ID #: TX-288		
PWS Address: 3501 East Orange St, Pearland, TX 77584			Laboratory Address: 11011 Brooklet Dr #230		
PWS Contact: Julian Kelly			Houston, TX 77099		
PWS Contact Phone #: 281-652-1900			Laboratory Contact: Laura Bonjonia		
Inhibitor or Stabilizer Used (✓):		Phosphate	Silica	Calcium carbonate	
TREATMENT	Alkalinity Dosage Rate:	Inhibitor Dosage Rate:		Laboratory Contact Phone #: 281-568-7880	

Sample Information			<b>Parameters Requested:</b> Analyses are required for the parameters checked. * If inhibitors containing phosphate or silica are used, then these parameters should also be analyzed depending on which is in use.	
Sample Type (✓):	Compliance	Non-compliance		
Sample Collector (✓):	Public Water System	Accredited Lab		3rd Party Contractor --> LAB ID AL TX-288
Temperature and pH (Y or N):	Y	Are temperature and pH included on the sampling entity's Laboratory Approval Form on file at the TCEQ?	Y	Were temperature and pH measured in the field within 15 minutes of sample collection?

Facility ID (e.g. DS01, PBCU001)	Sample Point ID (e.g. DSTWQP, EWQP)	Sample Location	Sample Collection		Field Measurements		Replacement? (✓)	Original Sample ID #	Original Sample Date (MMDDYY)	Lab Sample ID	Alkalinity (1927)	Calcium (1919)	Chloride (1017)	Conductivity (1064)	Hardness (1915)	Iron (1028)	Manganese (1032)	Sodium (1052)	Sulfate (1055)	TDS (1930)	O-Phosphate (1044) *	Silica (1049) *	
			Date (MMDDYY)	Time - 24 hr (HHMM)	pH	Temp (°C)																	
	EWQP	3702 ALICE	11-28-18	1222	7.59	16.0				18K3178-01	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
					7.82						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
											✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

RECEIVED  
MAR 03 2020  
TCEQ  
CENTRAL FILE ROOM

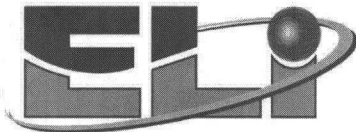
I acknowledge that information on this form is true and correct and sites selected for sampling follow the instructions in the TCEQ Monitoring and Sample Collection Guidance for Water Quality Parameters. This includes, but not limited to the measurement of pH and temperature immediately upon collection. Falsification of this form or tampering with water samples is a crime punishable under state and/or federal law. (Texas Penal Code, Title 8, Chapter 37.10)

Name of Authorized PWS Representative (Print): Charles B. Glynn				Signature: <i>Charles B. Glynn</i>		Organization: C.O.P.		Date: 11-28-18		Rejection Code (if applicable):		Actual / Corrected sample temperature: 55/5.5	
Chain of Custody				Date/Time: 11-28-18 1253		Relinquished By Courier (Signature): <i>[Signature]</i>		Date/Time:		Date & Time of Sample Preservation (Acidified): 11/28/18 @ 1800		Thermometer ID #: JRD4	
Relinquished By (Signature): <i>[Signature]</i>				Date/Time:		Received By Lab (Signature): <i>[Signature]</i>		Date/Time: 11/28/18 1253		Laboratory Comments:			

Relinquished By (Signature): <i>[Signature]</i>				Date/Time: 11-28-18 1253		Received By Lab (Signature): <i>[Signature]</i>		Date/Time: 11/28/18 1253		Laboratory Comments:			
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Houston, TX 77099  
281.568.7880 Phone  
www.envirodyne.com

13 December 2018

Pearland, City of  
Julian Kelly  
3501 E. Orange St.  
Pearland, TX 77581

**Pearland, City of - WQP**

Enclosed are the results of analyses for samples received by the laboratory on 28-Nov-18 12:53. The analytical data provided relates only to the samples as received in this laboratory report.

ELI certifies that all results are NELAP compliant and performed in accordance with the referenced method except as noted in the Case Narrative or as noted with a qualifier. Any reproductions of this laboratory report should be in full and only with the written authorization from the client.

The total number of pages in this report is 8

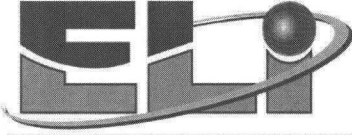
Thank you for selecting ELI for your analytical needs. If you have any questions regarding this report, please contact us.

Sincerely,

Laura Bonjonia For Monica Smith  
Project Manager



Certificate No: T104704265-18-14



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**Client:** Pearland, City of  
**Project:** Pearland, City of - WQP  
**Work Order:** 18K3178  
**PWS ID:** TX0200008

**Reported:**  
13-Dec-18 17:07

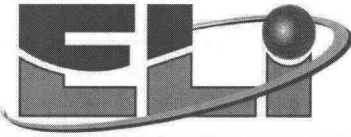
**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EWQP 3702 ALICE	18K3178-01	Water	28-Nov-18 12:22	28-Nov-18 12:53

Envirodyne Laboratories, Inc.

Laura Bonjonia For Monica Smith, Project Manager

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<b>Project:</b> Pearland, City of - WQP	
<b>Work Order:</b> 18K3178	
<b>PWS ID:</b> TX0200008	

**3702 ALICE**  
**18K3178-01 (Water) Sampled: 28-Nov-18 12:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Analyst	Notes
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**Envirodyne Laboratories, Inc.**

**Field Analysis**

pH	7.82		SU	1	B8K3589	28-Nov-18	28-Nov-18 12:22	SM4500H+ B	KLC	
Temperature	16.0	10.0	°C	1	B8K3589	28-Nov-18	28-Nov-18 12:22	SM2550 B	KLC	

**Wet Chemistry**

Alkalinity (m) as CaCO3	105	20	mg/L	1	B8L0361	11-Dec-18	11-Dec-18 15:15	SM 2320 B	JMM	
Alkalinity (p) as CaCO3	<20	20	mg/L	1	B8L0361	11-Dec-18	11-Dec-18 15:15	SM 2320 B	JMM	
Total Alkalinity as CaCO3	105	20	mg/L	1	[CALC]	11-Dec-18	11-Dec-18 15:15	[CALC]	JMM	
Conductivity	333	30	uS/cm	1	B8L0680	06-Dec-18	06-Dec-18 15:15	SM2510 B	MES	
OrthoPhosphate as P	<0.10	0.10	mg/L	1	B8K2631	28-Nov-18	28-Nov-18 15:40	SM4500-P E	MES	
TDS	206	10.0	mg/L	1	B8L0137	03-Dec-18	03-Dec-18 15:10	SM2540 C	JCR	

**Total Metals by ICP**

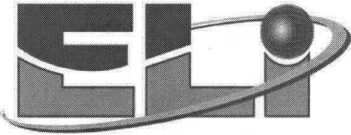
Calcium	44.0	0.07	mg/L	1	B8L0949	06-Dec-18	07-Dec-18 13:35	EPA 200.7	TS	
Total Hardness as CaCO3	122	0.79	mg/L	1	[CALC]	06-Dec-18	07-Dec-18 13:35	SM 2340B	TS	
Iron	<0.0037	0.0037	mg/L	1	B8L0943	06-Dec-18	09-Dec-18 17:44	EPA 200.7	TS	
Magnesium	3.02	0.15	mg/L	1	B8L0949	06-Dec-18	07-Dec-18 13:35	EPA 200.7	TS	
Manganese	0.0026	0.0005	mg/L	1	B8L0943	06-Dec-18	09-Dec-18 17:44	EPA 200.7	TS	
Sodium	13.6	0.03	mg/L	1	B8L0949	06-Dec-18	07-Dec-18 13:35	EPA 200.7	TS	

Envirodyne Laboratories, Inc.

*Laura Bonjonia*

Laura Bonjonia For Monica Smith, Project Manager

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<b>Project:</b> Pearland, City of - WQP	
<b>Work Order:</b> 18K3178	
<b>PWS ID:</b> TX0200008	

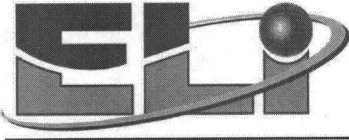
**Wet Chemistry - Quality Control**  
**Envirodyne Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8K2631 - Inorganics</b>										
<b>Blank (B8K2631-BLK1)</b> Prepared & Analyzed: 28-Nov-18										
OrthoPhosphate as P	<0.10	0.10	mg/L							
<b>LCS (B8K2631-BS1)</b> Prepared & Analyzed: 28-Nov-18										
OrthoPhosphate as P	1.00		mg/L	0.999		100	80-120			
<b>Matrix Spike (B8K2631-MS1)</b> Source: 18K1660-01 Prepared & Analyzed: 28-Nov-18										
OrthoPhosphate as P	2.47	0.10	mg/L	0.333	2.34	39.0	80-120			Q
<b>Matrix Spike Dup (B8K2631-MSD1)</b> Source: 18K1660-01 Prepared & Analyzed: 28-Nov-18										
OrthoPhosphate as P	2.49	0.10	mg/L	0.333	2.34	45.0	80-120	0.806	20	Q
<b>Batch B8L0137 - Inorganics</b>										
<b>Blank (B8L0137-BLK1)</b> Prepared & Analyzed: 03-Dec-18										
TDS	<10.0	10.0	mg/L							
<b>Duplicate (B8L0137-DUP1)</b> Source: 18K1130-01 Prepared & Analyzed: 03-Dec-18										
TDS	572	10.0	mg/L		554			3.20	20	
<b>Batch B8L0361 - Inorganics</b>										
<b>Blank (B8L0361-BLK1)</b> Prepared & Analyzed: 11-Dec-18										
Alkalinity (m) as CaCO3	<20	20	mg/L							
Alkalinity (p) as CaCO3	<20	20	"							
<b>LCS (B8L0361-BS1)</b> Prepared & Analyzed: 11-Dec-18										
Alkalinity (m) as CaCO3	54.6		mg/L	50.0		109	90-110			
Alkalinity (p) as CaCO3	53.55		"	50.0		107	90-110			

Envirodyne Laboratories, Inc.

Laura Bonjonia For Monica Smith, Project Manager

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<b>Project:</b> Pearland, City of - WQP	
<b>Work Order:</b> 18K3178	
<b>PWS ID:</b> TX0200008	

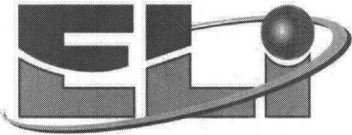
**Wet Chemistry - Quality Control**  
**Envirodyne Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8L0361 - Inorganics</b>										
<b>Duplicate (B8L0361-DUP1)</b>		<b>Source: 18K3177-05</b>		<b>Prepared &amp; Analyzed: 11-Dec-18</b>						
Alkalinity (m) as CaCO3	329.7	20	mg/L		323.4			1.93	20	
Alkalinity (p) as CaCO3	<20	20	"		<20			0	20	
<b>Batch B8L0680 - Inorganics</b>										
<b>Blank (B8L0680-BLK1)</b>		<b>Prepared &amp; Analyzed: 06-Dec-18</b>								
Conductivity	<30	30	uS/cm							
<b>Duplicate (B8L0680-DUP1)</b>		<b>Source: 18K3177-20</b>		<b>Prepared &amp; Analyzed: 06-Dec-18</b>						
Conductivity	334	30	uS/cm		336			0.328	20	
<b>Reference (B8L0680-SRM1)</b>		<b>Prepared &amp; Analyzed: 06-Dec-18</b>								
Conductivity	32.0		uS/cm	30.0		107	0-200			

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<b>Project:</b> Pearland, City of - WQP	
<b>Work Order:</b> 18K3178	<b>Reported:</b> 13-Dec-18 17:07
<b>PWS ID:</b> TX0200008	

**Total Metals by ICP - Quality Control**  
**Envirodyne Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B8L0943 - Metals - EPA 200.2**

**Blank (B8L0943-BLK1)** Prepared: 06-Dec-18 Analyzed: 09-Dec-18

Manganese	<0.0005	0.0005	mg/L							
Iron	<0.0037	0.0037	"							

**LCS (B8L0943-BS1)** Prepared: 06-Dec-18 Analyzed: 09-Dec-18

Iron	243		ug/L	250		97.1	85-115			
Manganese	246		"	250		98.3	85-115			

**Matrix Spike (B8L0943-MS1)** Source: 18L0273-09 Prepared: 06-Dec-18 Analyzed: 09-Dec-18

Manganese	0.491	0.0005	mg/L	0.500	0.00489	97.2	70-130			
Iron	0.478	0.0037	"	0.500	0.00513	94.5	70-130			

**Matrix Spike Dup (B8L0943-MSD1)** Source: 18L0273-09 Prepared: 06-Dec-18 Analyzed: 09-Dec-18

Manganese	0.485	0.0005	mg/L	0.500	0.00489	96.0	70-130	1.27	20	
Iron	0.473	0.0037	"	0.500	0.00513	93.6	70-130	0.930	20	

**Batch B8L0949 - Metals - EPA 200.2**

**Blank (B8L0949-BLK1)** Prepared: 06-Dec-18 Analyzed: 07-Dec-18

Magnesium	<0.15	0.15	mg/L							
Calcium	<0.07	0.07	"							
Sodium	<0.03	0.03	"							

**LCS (B8L0949-BS1)** Prepared: 06-Dec-18 Analyzed: 07-Dec-18

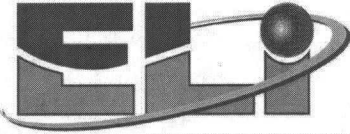
Sodium	19.3	0.03	mg/L				85-115			
Magnesium	19.5	0.15	"				85-115			
Calcium	20.0	0.07	"				85-115			

Envirodyne Laboratories, Inc.

*Laura Bonjonia*

Laura Bonjonia For Monica Smith, Project Manager

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<b>Project:</b> Pearland, City of - WQP	13-Dec-18 17:07
<b>Work Order:</b> 18K3178	
<b>PWS ID:</b> TX0200008	

**Total Metals by ICP - Quality Control**  
**Envirodyne Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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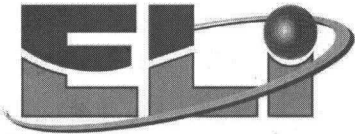
**Batch B8L0949 - Metals - EPA 200.2**

<b>Matrix Spike (B8L0949-MS1)</b>		<b>Source: 18L0273-09</b>		<b>Prepared: 06-Dec-18 Analyzed: 07-Dec-18</b>						
Calcium	50.7	0.07	mg/L	20.0	30.1	103	70-130			
Magnesium	23.6	0.15	"	20.0	4.30	96.6	70-130			
Sodium	53.6	0.03	"	20.0	33.1	102	70-130			
<b>Matrix Spike Dup (B8L0949-MSD1)</b>		<b>Source: 18L0273-09</b>		<b>Prepared: 06-Dec-18 Analyzed: 07-Dec-18</b>						
Magnesium	23.6	0.15	mg/L	20.0	4.30	96.5	70-130	0.0630	20	
Sodium	52.5	0.03	"	20.0	33.1	96.9	70-130	2.04	20	
Calcium	49.9	0.07	"	20.0	30.1	99.4	70-130	1.48	20	

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Laura Bonjonia For Monica Smith, Project Manager

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<b>Project:</b> Pearland, City of - WQP	
<b>Work Order:</b> 18K3178	<b>Reported:</b>
<b>PWS ID:</b> TX0200008	13-Dec-18 17:07

### Notes and Definitions

Q	QC did not meet ELI acceptance criteria
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
CLT	Client Representative

Envirodyne Laboratories, Inc.

A handwritten signature in cursive script that reads "Laura Bonjonia".

Laura Bonjonia For Monica Smith, Project Manager

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