



P.O. Box 1089 Coldspring Tx 77331
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January 24, 2020

Texas A&M Agrilife
Texas A and M AgriLife
1335 Regents Park Dr. Ste. 260
Houston, TX 77058

TX A and M Community Stormwater

Enclosed are the results of analyses for samples received by the laboratory on 01/11/20 11:46, with Lab ID Number C0A2409. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mark Bourgeois
Special Projects Manager



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Texas A and M AgriLife
 1335 Regents Park Dr. Ste. 260
 Houston TX, 77058

LABORATORY ANALYTICAL REPORT

Project: TX A and M Community Stormwater
 Sample Matrix: Water
 Client Matrix: Water

Sample Date & Time: 01/11/2020 06:15
 Collector: CT
 Sample Type: Grab
 Print Date: 1/24/2020

**UTRP 102-7
 C0A2409-01 (Water)**

Analyte	Result	Reporting Limit	Units	Nelac Status	Batch	Analyzed Date & Time	Method	Notes
<u>Metals</u>								
Arsenic, Total	<0.000500	0.000500	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Barium, Total	0.0161	0.00300	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Cadmium, Total	<0.00100	0.00100	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Chromium, Total	<0.00300	0.00300	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Lead, Total	<0.000500	0.000500	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Mercury, Total	<0.000200	0.000200	mg/L	A	B0A2051	01/17/2020 14:03	EPA 245.1	
Selenium, Total	<0.00500	0.00500	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Silver, Total	<0.000500	0.000500	mg/L	A	B0A1754	01/16/2020 19:25	EPA 200.8	
Total Phosphorus	<0.0600	0.0600	mg/L	A	B0A2562	01/22/2020 15:58	EPA 200.7	

Microbiological Lab

E coli IDEXX	323	10	mpn/100ml	A	B0A1514	01/11/2020 12:26	Colilert 18	15
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Organics

TPH TX 1005

TPH (>C6 - C12)	<2.00	2.00	mg/L	A	B0A2376	01/21/2020 03:00	TX 1005	
TPH (>C12 - C28)	<2.00	2.00	mg/L	A	B0A2376	01/21/2020 03:00	TX 1005	
TPH (>C28 - C35)	<5.00	5.00	mg/L	A	B0A2376	01/21/2020 03:00	TX 1005	
Total TPH (>C6-C35)	<5.00	5.00	mg/L		B0A2376	01/21/2020 03:00	TX 1005	
Surrogate: 1-Chlorooctane			97.3 %		70-130	B0A2376	01/21/2020 03:00	TX 1005
Surrogate: o-Terphenyl			108 %		70-130	B0A2376	01/21/2020 03:00	TX 1005

Wet Lab

Ammonia as N	<0.1	0.1	mg/L	A	B0A1496	01/13/2020 17:38	SM 4500 NH3 G	
Nitrate+Nitrite as N	0.08	0.02	mg/L	A	B0A1546	01/14/2020 10:00	SM 4500 NO3 F	
TSS	2.6	1.0	mg/L	A	B0A1505	01/13/2020 17:45	SM 2540 D	25



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SM 4500 NH3 G - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1496 - No Prep										
Blank (B0A1496-BLK1)				Prepared & Analyzed: 1/13/2020 5:10:00PM						
Ammonia as N	ND	0.1	mg/L							
LCS (B0A1496-BS1)				Prepared & Analyzed: 1/14/2020 7:41:00AM						
Ammonia as N	1.98		mg/L	2.00		99.0	90-110			
LCS Dup (B0A1496-BSD1)				Prepared & Analyzed: 1/14/2020 7:39:00AM						
Ammonia as N	2.03		mg/L	2.00		101	90-110	2.35	20	
MRL Check (B0A1496-MRL1)				Prepared & Analyzed: 1/13/2020 5:12:00PM						
Ammonia as N	0.118		mg/L	0.100		118	0-200			
Matrix Spike (B0A1496-MS1)		Source: C0A2069-01		Prepared & Analyzed: 1/13/2020 5:14:00PM						
Ammonia as N	2.6	0.1	mg/L	2.50	ND	104	80-120			
Batch B0A1505 - No Prep										
Blank (B0A1505-BLK1)				Prepared & Analyzed: 1/13/2020 5:45:00PM						
TSS	ND	1.0	mg/L							
Duplicate (B0A1505-DUP1)		Source: C0A2080-01		Prepared & Analyzed: 1/13/2020 5:45:00PM						
TSS	214	1.0	mg/L		214			0.00	10	
Batch B0A1514 - No Prep Micro										
Blank (B0A1514-BLK1)				Prepared & Analyzed: 1/11/2020 12:26:00PM						
E coli IDEXX	ND		1 mpn/100ml							15
Duplicate (B0A1514-DUP1)		Source: C0A2410-01		Prepared & Analyzed: 1/11/2020 12:26:00PM						
E coli IDEXX	ND	10	mpn/100ml		63				200	15
Batch B0A1546 - No Prep										
Blank (B0A1546-BLK1)				Prepared & Analyzed: 1/14/2020 10:00:00AM						
Nitrate+Nitrite as N	ND	0.02	mg/L							
LCS (B0A1546-BS1)				Prepared & Analyzed: 1/14/2020 10:00:00AM						
Nitrate+Nitrite as N	1.09		mg/L	1.00		109	90-110			
LCS Dup (B0A1546-BSD1)				Prepared & Analyzed: 1/14/2020 10:00:00AM						
Nitrate+Nitrite as N	1.11		mg/L	1.00		111	90-110	1.82	20	

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SM 4500 NO3 F - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1546 - No Prep										
MRL Check (B0A1546-MRL1)					Prepared & Analyzed: 1/14/2020 10:00:00AM					
Nitrate+Nitrite as N	0.0150		mg/L	0.0200		75.0	0-200			
Matrix Spike (B0A1546-MS1)					Source: C0A2070-04 Prepared & Analyzed: 1/14/2020 10:00:00AM					
Nitrate+Nitrite as N	1.16	0.02	mg/L	1.00	0.190	97.0	80-120			
Batch B0A1754 - EPA 200.8										
Blank (B0A1754-BLK1)					Prepared & Analyzed: 1/16/2020 6:17:52PM					
Arsenic, Total	ND	0.000500	mg/L							
Barium, Total	ND	0.00300	mg/L							
Cadmium, Total	ND	0.00100	mg/L							
Chromium, Total	ND	0.00300	mg/L							
Lead, Total	ND	0.000500	mg/L							
Selenium, Total	ND	0.00500	mg/L							
Silver, Total	ND	0.000500	mg/L							
LCS (B0A1754-BS1)					Prepared & Analyzed: 1/16/2020 6:23:03PM					
Arsenic, Total	0.0919	0.000500	mg/L	0.100		91.9	85-115			
Barium, Total	0.0880	0.00300	mg/L	0.100		88.0	85-115			
Cadmium, Total	0.0943	0.00100	mg/L	0.100		94.3	85-115			
Chromium, Total	0.0999	0.00300	mg/L	0.100		99.9	85-115			
Lead, Total	0.0873	0.000500	mg/L	0.100		87.3	85-115			
Selenium, Total	0.0918	0.00500	mg/L	0.100		91.8	85-115			
Silver, Total	0.0972	0.000500	mg/L	0.100		97.2	85-115			
Matrix Spike (B0A1754-MS1)					Source: C0A2279-01 Prepared & Analyzed: 1/16/2020 6:38:31PM					
Arsenic, Total	0.0910	0.000500	mg/L	0.100	0.000434	90.6	70-130			
Barium, Total	0.123	0.00300	mg/L	0.100	0.0373	85.7	70-130			
Cadmium, Total	0.0888	0.00100	mg/L	0.100	ND	88.8	70-130			
Chromium, Total	0.0894	0.00300	mg/L	0.100	ND	89.4	70-130			
Lead, Total	0.0898	0.000500	mg/L	0.100	ND	89.8	70-130			
Selenium, Total	0.0849	0.00500	mg/L	0.100	0.00166	83.2	70-130			
Silver, Total	0.0905	0.000500	mg/L	0.100	ND	90.5	70-130			
Matrix Spike Dup (B0A1754-MSD1)					Source: C0A2279-01 Prepared & Analyzed: 1/16/2020 6:43:37PM					
Arsenic, Total	0.0936	0.000500	mg/L	0.100	0.000434	93.2	70-130	2.80	20	
Barium, Total	0.119	0.00300	mg/L	0.100	0.0373	81.4	70-130	3.53	20	
Cadmium, Total	0.0907	0.00100	mg/L	0.100	ND	90.7	70-130	2.03	20	

Eastex Environmental Laboratory - Coldspring

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Texas A and M AgriLife
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EPA 200.8 - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0A1754 - EPA 200.8

Matrix Spike Dup (B0A1754-MSD1)		Source: C0A2279-01			Prepared & Analyzed: 1/16/2020 6:43:37PM					
Chromium, Total	0.0922	0.00300	mg/L	0.100	ND	92.2	70-130	3.03	20	
Lead, Total	0.0881	0.000500	mg/L	0.100	ND	88.1	70-130	1.97	20	
Selenium, Total	0.0877	0.00500	mg/L	0.100	0.00166	86.1	70-130	3.34	20	
Silver, Total	0.0925	0.000500	mg/L	0.100	ND	92.5	70-130	2.19	20	

Batch B0A2051 - EPA 245.1

Blank (B0A2051-BLK1)		Prepared & Analyzed: 1/17/2020 1:37:22PM								
Mercury, Total	ND	0.000200	mg/L							

Blank (B0A2051-BLK2)		Prepared & Analyzed: 1/17/2020 2:13:44PM								
Mercury, Total	ND	0.000200	mg/L							

LCS (B0A2051-BS1)		Prepared & Analyzed: 1/17/2020 1:41:24PM								
Mercury, Total	0.00285	0.000200	mg/L	0.00250		114	80-120			

LCS (B0A2051-BS2)		Prepared & Analyzed: 1/17/2020 2:15:45PM								
Mercury, Total	0.00267	0.000200	mg/L	0.00250		107	80-120			

Matrix Spike (B0A2051-MS1)		Source: C0A1864-01			Prepared & Analyzed: 1/17/2020 1:49:29PM					
Mercury, Total	0.00281	0.000200	mg/L	0.00250	0.000190	105	80-120			

Matrix Spike (B0A2051-MS2)		Source: C0A2724-01			Prepared & Analyzed: 1/17/2020 2:21:49PM					
Mercury, Total	0.00313	0.000200	mg/L	0.00250	0.000165	119	80-120			

Matrix Spike Dup (B0A2051-MSD1)		Source: C0A1864-01			Prepared & Analyzed: 1/17/2020 1:51:30PM					
Mercury, Total	0.00302	0.000200	mg/L	0.00250	0.000190	113	80-120	7.20	20	

Matrix Spike Dup (B0A2051-MSD2)		Source: C0A2724-01			Prepared & Analyzed: 1/17/2020 2:23:50PM					
Mercury, Total	0.00318	0.000200	mg/L	0.00250	0.000165	121	80-120	1.58	20	

Batch B0A2376 - No Prep- Organic

Blank (B0A2376-BLK1)		Prepared & Analyzed: 1/21/2020 3:00:00AM								
TPH (>C6 - C12)	ND	2.00	mg/L							
TPH (>C12 - C28)	ND	2.00	mg/L							
TPH (>C28 - C35)	ND	5.00	mg/L							
Total TPH (>C6-C35)	ND	5.00	mg/L							
Surrogate: 1-Chlorooctane	33.6		mg/L	33.3		101	70-130			

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 Houston TX, 77058

TX 1005 - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B0A2376 - No Prep- Organic

Blank (B0A2376-BLK1)				Prepared & Analyzed: 1/21/2020 3:00:00AM						
Surrogate: <i>o</i> -Terphenyl	39.0		mg/L	33.3		117	70-130			
LCS (B0A2376-BS1)				Prepared & Analyzed: 1/21/2020 3:00:00AM						
TPH (>C6 - C12)	28.5	2.00	mg/L	33.3		85.6	70-130			
TPH (>C12 - C28)	31.1	2.00	mg/L	33.3		93.3	70-130			
TPH (>C28 - C35)	66.2	5.00	mg/L	66.7		99.4	70-130			
Surrogate: <i>1</i> -Chlorooctane	31.1		mg/L	33.3		93.3	70-130			
Surrogate: <i>o</i> -Terphenyl	34.2		mg/L	33.3		103	70-130			

Matrix Spike (B0A2376-MS1)				Source: C0A2409-01		Prepared & Analyzed: 1/21/2020 3:00:00AM				
TPH (>C6 - C12)	31.9	2.00	mg/L	33.3	ND	95.7	70-130			
TPH (>C12 - C28)	36.0	2.00	mg/L	33.3	ND	108	70-130			
TPH (>C28 - C35)	63.0	5.00	mg/L	66.7	ND	94.5	70-130			
Surrogate: <i>1</i> -Chlorooctane	31.6		mg/L	33.3		94.8	70-130			
Surrogate: <i>o</i> -Terphenyl	34.6		mg/L	33.3		104	70-130			

Matrix Spike Dup (B0A2376-MSD1)				Source: C0A2409-01		Prepared & Analyzed: 1/21/2020 3:00:00AM				
TPH (>C6 - C12)	30.2	2.00	mg/L	33.3	ND	90.7	70-130	5.34	25	
TPH (>C12 - C28)	33.5	2.00	mg/L	33.3	ND	101	70-130	7.08	25	
TPH (>C28 - C35)	60.7	5.00	mg/L	66.7	ND	91.1	70-130	3.67	25	
Surrogate: <i>1</i> -Chlorooctane	31.7		mg/L	33.3		95.2	70-130			
Surrogate: <i>o</i> -Terphenyl	34.6		mg/L	33.3		104	70-130			

Batch B0A2562 - EPA 200.7

Blank (B0A2562-BLK1)				Prepared & Analyzed: 1/22/2020 3:06:47PM						
Total Phosphorus	ND	0.0600	mg/L							
Blank (B0A2562-BLK2)				Prepared & Analyzed: 1/22/2020 4:11:28PM						
Total Phosphorus	ND	0.0600	mg/L							
Blank (B0A2562-BLK3)				Prepared & Analyzed: 1/22/2020 5:22:53PM						
Total Phosphorus	ND	0.0600	mg/L							
LCS (B0A2562-BS1)				Prepared & Analyzed: 1/22/2020 3:15:42PM						
Total Phosphorus	2.31	0.0600	mg/L	2.52		91.8	85-115			
LCS (B0A2562-BS2)				Prepared & Analyzed: 1/22/2020 4:15:55PM						

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EPA 200.7 - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A2562 - EPA 200.7										
LCS (B0A2562-BS2)				Prepared & Analyzed: 1/22/2020 4:15:55PM						
Total Phosphorus	2.15	0.0600	mg/L	2.52		85.5	85-115			
LCS (B0A2562-BS3)				Prepared & Analyzed: 1/22/2020 5:27:19PM						
Total Phosphorus	2.15	0.0600	mg/L	2.52		85.4	85-115			
LCS Dup (B0A2562-BSD1)				Prepared & Analyzed: 1/22/2020 3:11:14PM						
Total Phosphorus	2.56	0.0600	mg/L	2.52		102	85-115	10.2	20	
LCS Dup (B0A2562-BSD2)				Prepared & Analyzed: 1/22/2020 4:20:21PM						
Total Phosphorus	2.19	0.0600	mg/L	2.52		87.0	85-115	1.77	20	
LCS Dup (B0A2562-BSD3)				Prepared & Analyzed: 1/22/2020 5:31:47PM						
Total Phosphorus	2.34	0.0600	mg/L	2.52		93.0	85-115	8.48	20	
MRL Check (B0A2562-MRL1)				Prepared & Analyzed: 1/22/2020 3:02:18PM						
Total Phosphorus	0.00660		mg/L	0.0600		11.0	0-200			
Matrix Spike (B0A2562-MS1)		Source: C0A2069-01		Prepared & Analyzed: 1/22/2020 3:24:38PM						
Total Phosphorus	2.44	0.0600	mg/L	2.52	0.0482	95.0	70-130			
Matrix Spike (B0A2562-MS2)		Source: C0A2410-01		Prepared & Analyzed: 1/22/2020 4:29:15PM						
Total Phosphorus	2.15	0.0600	mg/L	2.52	0.0108	85.0	70-130			
Matrix Spike (B0A2562-MS3)		Source: C0A3045-01		Prepared & Analyzed: 1/22/2020 5:40:46PM						
Total Phosphorus	1.98	0.0600	mg/L	2.52	0.0624	76.1	70-130			



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Notes and Definitions

- 25 Residue not in the method range of 2.5-200 mg.
- 15 Duplicate precision associated with sample batch outside of acceptance limits.
- 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



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White Copy-Follows Samples
 Yellow Copy-Laboratory
 Pink Copy-Client Copy

REPORT TO: *Christie Taylor*

INVOICE TO: *Christie Taylor*

Company: *TCWP April & Ext.*

Company: *TCWP April & Ext.*

Address: *1335 Regents Park 200 Houston TX 77058*

Address: *1335 Regents Park 200 Houston TX 77058*

Attn: *Christie Taylor*

Attn: *Christie Taylor*

Phone #: *979-399-4009*

Phone #: *979-399-4009*

Email: *ctaylor@tamuc.edu*

INSTRUCTIONS:

P.O. #:

C or G: C=Composite G=Grab
 Matrix: DW=Drinking Water WW=Wastewater SO=Soil/Sludge OT=Other
 Container Size: 1=Gallon 2=1/2 Gallon 3=Quart/Liter 4=500mL 5=250mL
 6=125mL (4oz) 7=60mL (2 oz) 8=40mL Vial 9=Other
 Type: P=Plastic G=Glass T=Teflon S=Sterile
 Preservatives: C=Chilled S=Sulfuric Acid N=Nitric Acid B=Base/Caustic Z=Zn Acetate
 ST=Sodium Thiosulfate H=HCL O=Other

Sampler's Name (print): *Christie Taylor*

Sampler's Signature: *Christie Taylor*

Project Name: *TCWP Stormwater Sampling*

Work Order ID: *24009* Sample ID: *UTRP102-7* Date: *1-11-20*

Time	Matrix	C or G	DO	pH	Cl2	Flow	Temp	#	Size	Type	Pres
6:15	OT	C	9.2	7.22	--	--	10.9	1	3	P	C

Field Data

Containers	Analysis Requested
	TSS
	Total Phosphate
	E. coli
	NO ₂ + NO ₃
	NH ₃ N
	RCRA metals
	TPH

Relinquished By: *Christie Taylor*

Received By: *John Doe*

Date: *1-11-20* Time: *9:41*

Received Iced: YES / NO

Relinquished By: *John Doe*

Received By: *John Doe*

Date: *1-11-20* Time: *11:46*

Received Iced: YES / NO

Received time: *7:53*

LAB USE ONLY	Sample Condition Acceptable:	Temp °C	*Therm ID	Logged In By:	Date	Time
	YES / NO	4°	15	<i>John Doe</i>		
Alternate Check In:						

*Thermometer has 0.0 factor and recorded temperature is actual temperature