



P.O. Box 1089 Coldspring Tx 77331
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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 Watershed Ambient
 Sample Matrix: Water
 Client Matrix: Water

Sample Date & Time: 09/27/2019 13:47
 Collector: CT
 Sample Type: Grab
 Print Date: 10/10/2019

UTRP 101-1 C9I5928-01 (Water)

Analyte	Result	Reporting Limit	Units	Nelac Status	Batch	Analyzed Date & Time	Method	Notes
<u>Metals</u>								
Arsenic, Total	0.00137	0.000500	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Barium, Total	0.0114	0.00300	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Cadmium, Total	<0.00100	0.00100	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Chromium, Total	<0.00300	0.00300	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Lead, Total	<0.000500	0.000500	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Mercury, Total	<0.000200	0.000200	mg/L	A	B9J0546	10/03/2019 15:10	EPA 245.1	
Selenium, Total	<0.00500	0.00500	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Silver, Total	<0.000500	0.000500	mg/L	A	B9I3591	09/30/2019 22:29	EPA 200.8	
Total Phosphorus	<1.00	1.00	mg/L	A	B9J0206	10/02/2019 14:51	EPA 200.7	

Microbiological Lab

E coli IDEXX	<10	10	mpn/100ml	A	B9I3632	09/28/2019 12:25	Colilert 18	
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Organics

<u>TPH TX 1005</u>								
TPH (>C6 - C12)	<1.993356	1.993356	mg/L	A	B9J0639	10/09/2019 15:32	TX 1005	
TPH (>C12 - C28)	<1.993356	1.993356	mg/L	A	B9J0639	10/09/2019 15:32	TX 1005	
TPH (>C28 - C35)	<4.98339	4.98339	mg/L	A	B9J0639	10/09/2019 15:32	TX 1005	23
Total TPH (>C6-C35)	<4.98339	4.98339	mg/L		B9J0639	10/09/2019 15:32	TX 1005	
Surrogate: 1-Chlorooctane			94.3 %		70-130	B9J0639	10/09/2019 15:32	TX 1005
Surrogate: o-Tol phenyl			92.9 %		70-130	B9J0639	10/09/2019 15:32	TX 1005

Wet Lab

Ammonia as N	<0.1	0.1	mg/L	A	B9J0063	10/01/2019 10:46	SM 4500 NH3 G	
Nitrate+Nitrite as N	0.19	0.02	mg/L	A	B9J0907	10/07/2019 08:30	SM 4500 NO3 F	
TSS	2.9	1.0	mg/L	A	B9I3603	09/30/2019 13:27	SM 2540 D	25

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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 B913591 - EPA 200.8

Blank (B913591-BLK1)

Prepared & Analyzed: 9/30/2019 3:01:17PM

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 (B913591-BS1)

Prepared & Analyzed: 9/30/2019 3:06:28PM

Arsenic, Total	0.0987	0.000500	mg/L	0.100		98.7	85-115			
Barium, Total	0.100	0.00300	mg/L	0.100		100	85-115			
Cadmium, Total	0.0995	0.00100	mg/L	0.100		99.5	85-115			
Chromium, Total	0.0982	0.00300	mg/L	0.100		98.2	85-115			
Lead, Total	0.101	0.000500	mg/L	0.100		101	85-115			
Selenium, Total	0.0921	0.00500	mg/L	0.100		92.1	85-115			
Silver, Total	0.100	0.000500	mg/L	0.100		100	85-115			

Matrix Spike (B913591-MS1)

Source: C914686-01

Prepared & Analyzed: 9/30/2019 3:21:56PM

Arsenic, Total	0.101	0.000500	mg/L	0.100	0.00310	98.4	70-130			
Barium, Total	0.191	0.00300	mg/L	0.100	0.0965	94.1	70-130			
Cadmium, Total	0.0985	0.00100	mg/L	0.100	0.0000899	98.4	70-130			
Chromium, Total	0.0974	0.00300	mg/L	0.100	ND	97.4	70-130			
Lead, Total	0.102	0.000500	mg/L	0.100	0.000333	101	70-130			
Selenium, Total	0.0965	0.00500	mg/L	0.100	0.000395	96.2	70-130			
Silver, Total	0.0987	0.000500	mg/L	0.100	ND	98.7	70-130			

Matrix Spike Dup (B913591-MSD1)

Source: C914686-01

Prepared & Analyzed: 9/30/2019 3:27:02PM

Arsenic, Total	0.100	0.000500	mg/L	0.100	0.00310	97.1	70-130	1.27	20	
Barium, Total	0.189	0.00300	mg/L	0.100	0.0965	92.7	70-130	0.735	20	
Cadmium, Total	0.0965	0.00100	mg/L	0.100	0.0000899	96.4	70-130	2.09	20	
Chromium, Total	0.0930	0.00300	mg/L	0.100	ND	93.0	70-130	4.64	20	
Lead, Total	0.102	0.000500	mg/L	0.100	0.000333	102	70-130	0.665	20	
Selenium, Total	0.0963	0.00500	mg/L	0.100	0.000395	95.9	70-130	0.293	20	
Silver, Total	0.0969	0.000500	mg/L	0.100	ND	96.9	70-130	1.79	20	

Batch B913603 - No Prep

Blank (B913603-BLK1)

Prepared & Analyzed: 9/30/2019 1:27:00PM

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SM 2540 D - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9I3603 - No Prep										
Blank (B9I3603-BLK1) Prepared & Analyzed: 9/30/2019 1:27:00PM										
TSS	ND	1.0	mg/L							
Duplicate (B9I3603-DUP1) Source: C9I5782-01 Prepared & Analyzed: 9/30/2019 1:27:00PM										
TSS	63.0	1.0	mg/L		68.0			7.63	10	
Batch B9I3632 - No Prep Micro										
Blank (B9I3632-BLK1) Prepared & Analyzed: 9/28/2019 12:25:00PM										
E coli IDEXX	ND	1	mpn/100ml							
Duplicate (B9I3632-DUP1) Source: C9I5779-01 Prepared & Analyzed: 9/28/2019 12:25:00PM										
E coli IDEXX	ND	2	mpn/100ml		ND				200	
Batch B9J0063 - No Prep										
Blank (B9J0063-BLK1) Prepared & Analyzed: 10/1/2019 10:23:00AM										
Ammonia as N	ND	0.1	mg/L							
LCS (B9J0063-BS1) Prepared & Analyzed: 10/1/2019 10:21:00AM										
Ammonia as N	2.14		mg/L	2.00		107	90-110			
Matrix Spike (B9J0063-MS1) Source: C9I5834-01 Prepared & Analyzed: 10/1/2019 10:25:00AM										
Ammonia as N	2.6	0.1	mg/L	2.50	0.04	103	80-120			
Matrix Spike Dup (B9J0063-MSD1) Source: C9I5834-01 Prepared & Analyzed: 10/1/2019 10:27:00AM										
Ammonia as N	2.6	0.1	mg/L	2.50	0.04	104	80-120	0.229	20	
Batch B9J0206 - EPA 200.7										
Blank (B9J0206-BLK1) Prepared & Analyzed: 10/2/2019 10:53:49AM										
Total Phosphorus	ND	0.100	mg/L							
Blank (B9J0206-BLK2) Prepared & Analyzed: 10/2/2019 12:06:30PM										
Total Phosphorus	ND	0.100	mg/L							
Blank (B9J0206-BLK3) Prepared & Analyzed: 10/2/2019 1:17:42PM										
Total Phosphorus	ND	0.100	mg/L							
Blank (B9J0206-BLK4) Prepared & Analyzed: 10/2/2019 2:28:55PM										
Total Phosphorus	ND	0.100	mg/L							

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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 B9J0206 - EPA 200.7										
LCS (B9J0206-BS1)				Prepared & Analyzed: 10/2/2019 10:58:17AM						
Total Phosphorus	2.45	0.100	mg/L	2.52		97.3	85-115			
LCS (B9J0206-BS2)				Prepared & Analyzed: 10/2/2019 12:10:57PM						
Total Phosphorus	2.81	0.100	mg/L	2.52		111	85-115			
LCS (B9J0206-BS3)				Prepared & Analyzed: 10/2/2019 1:22:08PM						
Total Phosphorus	2.64	0.100	mg/L	2.52		105	85-115			
LCS (B9J0206-BS4)				Prepared & Analyzed: 10/2/2019 2:33:22PM						
Total Phosphorus	2.82	0.100	mg/L	2.52		112	85-115			
Matrix Spike (B9J0206-MS1)		Source: C9I5616-01		Prepared & Analyzed: 10/2/2019 11:07:11AM						
Total Phosphorus	29.3	1.00	mg/L	25.2	4.19	99.4	70-130			
Matrix Spike (B9J0206-MS2)		Source: C9J0058-01		Prepared & Analyzed: 10/2/2019 12:19:51PM						
Total Phosphorus	32.7	1.00	mg/L	25.2	4.18	113	70-130			
Matrix Spike (B9J0206-MS3)		Source: C9J0212-01		Prepared & Analyzed: 10/2/2019 1:31:02PM						
Total Phosphorus	43.6	1.00	mg/L	25.2	16.4	108	70-130			
Matrix Spike (B9J0206-MS4)		Source: C9I5927-01		Prepared & Analyzed: 10/2/2019 2:42:17PM						
Total Phosphorus	26.6	1.00	mg/L	25.2	ND	106	70-130			
Matrix Spike Dup (B9J0206-MSD1)		Source: C9I5616-01		Prepared & Analyzed: 10/2/2019 11:11:38AM						
Total Phosphorus	30.1	1.00	mg/L	25.2	4.19	103	70-130	2.85	20	
Matrix Spike Dup (B9J0206-MSD2)		Source: C9J0058-01		Prepared & Analyzed: 10/2/2019 12:24:18PM						
Total Phosphorus	32.9	1.00	mg/L	25.2	4.18	114	70-130	0.458	20	
Matrix Spike Dup (B9J0206-MSD3)		Source: C9J0212-01		Prepared & Analyzed: 10/2/2019 1:35:29PM						
Total Phosphorus	41.9	1.00	mg/L	25.2	16.4	101	70-130	4.05	20	
Matrix Spike Dup (B9J0206-MSD4)		Source: C9I5927-01		Prepared & Analyzed: 10/2/2019 2:46:44PM						
Total Phosphorus	26.4	1.00	mg/L	25.2	ND	105	70-130	0.754	20	
Batch B9J0546 - EPA 245.1										
Blank (B9J0546-BLK1)				Prepared & Analyzed: 10/3/2019 2:20:05PM						
Mercury, Total	ND	0.000200	mg/L							
LCS (B9J0546-BS1)				Prepared & Analyzed: 10/3/2019 2:24:07PM						

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EPA 245.1 - Quality Control
Eastex Environmental Laboratory - Coldspring

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9J0546 - EPA 245.1										
LCS (B9J0546-BS1)				Prepared & Analyzed: 10/3/2019 2:24:07PM						
Mercury, Total	0.00236	0.000200	mg/L	0.00250		94.4	80-120			
Matrix Spike (B9J0546-MS1)				Source: C9J0451-01		Prepared & Analyzed: 10/3/2019 2:30:11PM				
Mercury, Total	0.00248	0.000200	mg/L	0.00250	ND	99.2	80-120			
Matrix Spike Dup (B9J0546-MSD1)				Source: C9J0451-01		Prepared & Analyzed: 10/3/2019 2:32:12PM				
Mercury, Total	0.00251	0.000200	mg/L	0.00250	ND	100	80-120	1.20	20	
Batch B9J0639 - No Prep- Organic										
Blank (B9J0639-BLK1)				Prepared & Analyzed: 10/9/2019 12:39:00PM						
TPH (>C6 - C12)	ND	2	mg/L							
TPH (>C12 - C28)	ND	2	mg/L							
TPH (>C28 - C35)	ND	5	mg/L							
Total TPH (>C6-C35)	ND	5	mg/L							
Surrogate: 1-Chlorooctane	35.3		mg/L	33.3		106	70-130			
Surrogate: o-Tei phenyl	33.21		mg/L	33.3		99.6	70-130			
LCS (B9J0639-BS1)				Prepared & Analyzed: 10/9/2019 2:06:00PM						
TPH (>C6 - C12)	30.07	2	mg/L	33.3		90.2	70-130			
TPH (>C12 - C28)	32.39	2	mg/L	33.3		97.2	70-130			
TPH (>C28 - C35)	47.28	5	mg/L	66.7		70.9	70-130			
Surrogate: 1-Chlorooctane	37.19		mg/L	33.3		112	70-130			
Surrogate: o-Tei phenyl	34.87		mg/L	33.3		105	70-130			
Matrix Spike (B9J0639-MS1)				Source: C9I5927-01		Prepared & Analyzed: 10/9/2019 4:16:00PM				
TPH (>C6 - C12)	31.7549	1.960784	mg/L	32.7	ND	97.2	70-130			
TPH (>C12 - C28)	34.35294	1.960784	mg/L	32.7	ND	105	70-130			
TPH (>C28 - C35)	50.38235	4.901961	mg/L	65.4	ND	77.1	70-130			
Surrogate: 1-Chlorooctane	39.85294		mg/L	32.7		122	70-130			
Surrogate: o-Tei phenyl	37		mg/L	32.7		113	70-130			
Matrix Spike Dup (B9J0639-MSD1)				Source: C9I5927-01		Prepared & Analyzed: 10/9/2019 5:00:00PM				
TPH (>C6 - C12)	30.29808	1.923077	mg/L	32.1	ND	94.5	70-130	4.70	25	
TPH (>C12 - C28)	33.40384	1.923077	mg/L	32.1	ND	104	70-130	2.80	25	
TPH (>C28 - C35)	43.23077	4.807692	mg/L	64.1	ND	67.4	70-130	15.3	25	
Surrogate: 1-Chlorooctane	37.61538		mg/L	32.1		117	70-130			

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TX 1005 - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9J0639 - No Prep- Organic										
Matrix Spike Dup (B9J0639-MSD1)		Source: C9I5927-01			Prepared & Analyzed: 10/9/2019 5:00:00PM					
Surrogate o-Toliphenyl	34.65384		mg/L	32.1		108	70-130			
Batch B9J0907 - No Prep										
Blank (B9J0907-BLK1)					Prepared & Analyzed: 10/7/2019 8:30:00AM					
Nitrate+Nitrite as N	ND	0.02	mg/L							
LCS (B9J0907-BS1)					Prepared & Analyzed: 10/7/2019 8:30:00AM					
Nitrate+Nitrite as N	0.940		mg/L	1.00		94.0	90-110			
Matrix Spike (B9J0907-MS1)		Source: C9J0768-01			Prepared & Analyzed: 10/7/2019 8:30:00AM					
Nitrate+Nitrite as N	1.17	0.02	mg/L	1.00	0.0400	113	80-120			
Matrix Spike Dup (B9J0907-MSD1)		Source: C9J0768-01			Prepared & Analyzed: 10/7/2019 8:30:00AM					
Nitrate+Nitrite as N	1.06	0.02	mg/L	1.00	0.0400	102	80-120	9.87	20	



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Notes and Definitions

- 25 Residue not in the method range of 2.5-200 mg.
- 23 Spike recovery outside of acceptance limits due to matrix interference.
- 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



EASTEX ENVIRONMENTAL LABORATORY, INC.
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 Yellow Copy-Laboratory
 Pink Copy-Client Copy

REPORT TO: Christie Taylor
Company: TWP AgriLife
Address: 1335 Regents Park Dr. Suite 260 77058
Attn: Christie Taylor
Phone: 979-399-4009
Email: ctaylor@tamw.edu
P.O. #:

INSTRUCTIONS:
 C or G: C=Composite G=Grab
 Matrix: DW=Drinking Water WW=Wastewater SO=Soil/Sedgs OT=Other
 Container Size: 1=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=Stainless
 Preservatives: C=Chilled S=Sulfuric Acid N=Nitric Acid B=Base/Caustic Z=Zn Acetate
 ST=Sodium Thiosulfate H=HCl O=Other

Project Name: TWP stormwater sampling
Work Order ID: WTRP101-1
Date: 9/28/19

Time	Matrix	C or G	DO	pH	C12	Flow	Temp	Containers		
								#	Size	Type
28.5	OT	C	7.7	10.4	11.95		28.5	1	5	P
								1	4	P
								1	4	P
								1	4	P
								3	8	P

Remarks: Inflow Sampling

ANALYSIS REQUESTED: NH₃N, NO₂+NO₃, Total Phosphate, E coli, R.C.R.A metals, TPH

Received By: Christie Taylor
Received By:
Received By:

Received Iced: YES / NO
Received Iced: YES / NO
Received Iced: YES / NO

LAB USE ONLY
Alternate Check In: 9/28/19
Temp C: 3.3
Therm ID: 15
Applied In By: [Signature]
Date: 9/29/19
Time: 755