



5301 Northshore Drive
North Little Rock, AR 72118
Telephone: 501-682-0744

Client Report For: C&H Hog Farm 2016 2503-2504
Attention:
Client Address:

Report Date: October 25, 2016
LAB ID: AR16JUL27-04
Comment: Report contains Total Nitrogen results

Approved By: _____

Date: October 25, 2016

Client: Special Samples

Client Sample ID: Pond 1

Lab ID: 2016-2503

Collection Date: 7/27/2016 10:52:00 AM

Matrix: Water

Analyses

E.Coli by MF

EPA 1103.1

Batch: 16072809 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
E. Coli	145000	4		cfu/100ml
Analyzed By	Melanie Treat			
Analysis Date/Time	7/27/2016 16:03			

Client: Special Samples **Client Sample ID:** Pond 2
Lab ID: 2016-2504 **Collection Date:** 7/27/2016 10:05:00 AM
Matrix: Water

Analyses

<i>E.Coli by MF</i>	<i>EPA 1103.1</i>	<i>Batch: 16072809</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
E. Coli	8000	4		cfu/100ml	
Analyzed By	Melanie Treat				
Analysis Date/Time	7/27/2016 16:03				

Client:	Special Samples	Client Sample ID:	Pond 1
Lab ID:	2016-2503	Collection Date:	7/27/2016 10:52:00 AM
		Matrix:	Water

Analyses

<i>Alkalinity</i>	<i>EPA 310.2</i>	<i>Batch: 16080414</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Total Alkalinity (as CaCO3)	6050	300			mg/L
Dilution Factor	50				
Analyzed By	Chad Carrington				
Analysis Date/Time	7/28/2016 8:22				

<i>Ammonia as Nitrogen</i>	<i>SM 4500-NH3 H (20th)</i>	<i>Batch: 16080409</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Ammonia as N	1350	30			mg/L
Dilution Factor	1000				
Analyzed By	Chad Carrington				
Analysis Date/Time	7/27/2016 3:21:30 PM				

<i>Anions by Ion Chromatography</i>	<i>EPA 300.0</i>	<i>Batch: 16080401</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Chloride	578	25			mg/L
Sulfate	73.8	25			mg/L
Dilution Factor	50				
Analyzed By	Katy Hattenhauer				
Analysis Date/Time	7/28/2016 9:29				

<i>Bicarbonate Alkalinity</i>	<i>SM 2320 B (1997)</i>	<i>Batch: 16081702</i>	<i>Run: 1</i>			
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	<u>Unit</u>	
Bicarbonate Alkalinity (as CaCO3)	6050**	300			mg/L	mg/L
Analyzed By	Chad Carrington					
Analysis Date/Time	7/28/2016 08:22					

**Result is calculated using Total Alkalinity and pH

Conductivity		EPA 120.1	Batch: 16080503	Run: 1	
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Specific Conductance (EC)	14400	1			uMHOS
Dilution Factor	10				
Analyzed By	Patrick Rawhouser				
Analysis Date/Time	7/27/2016 15:11				

Nitrate and Nitrite		SM 4500-NO3 I (20th)	Batch: 16080411	Run: 1	
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Nitrate/Nitrite as N	<50	50			mg/L
Dilution Factor	1000				
Analyzed By	Chad Carrington				
Analysis Date/Time	7/27/2016 3:21:30 PM				

pH		EPA 150.1	Batch: 16081601	Run: 1	
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
pH	7.86 ^E				SU
Analyzed By	Patrick Rawhouser				
Analysis Date/Time	7/27/2016 15:20				

^E Estimated; analyzed out of holding time

Salinity		SM 2520 B (2000)	Batch: 16081602	Run: 1	
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Salinity	7.3				PSU
Dilution Factor	10	.1			(Practical Salinity Unity)
Analyzed By	Patrick Rawhouser				
Analysis Date/Time	7/27/2016 15:00				

Percent Solids		EPA 160.3	Batch: 16080102	Run: 1	
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Percent Solids	4.1	0.2			%
Analyzed By	Robert Graddy				
Analysis Date/Time	7-29-2016 1500				

Total Organic Carbon

SM 5310 C (20th)

Batch: 16080902 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	844	100		mg/L
Dilution Factor	100			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	Jul 28 2016 8:30AM			

Total Phosphorus

SM 4500-P J (20th)

Batch: 16080412 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Phosphorus-total	1280	40		mg/L
Dilution Factor	2000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 11:04:02 AM			

Nitrogen - Total

SM4500-N C

Batch: 16101901 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Nitrogen, Total	1990	50		mg/L
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/16 13:00			

Client:	Special Samples	Client Sample ID:	Pond 2
Lab ID:	2016-2504	Collection Date:	7/27/2016 10:05:00 AM
		Matrix:	Water

Analyses

<i>Alkalinity</i>	<i>EPA 310.2</i>	<i>Batch: 16080414</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Total Alkalinity (as CaCO3)	2320	300		mg/L	
Dilution Factor	50				
Analyzed By	Chad Carrington				
Analysis Date/Time	7/28/2016 8:23				

<i>Ammonia as Nitrogen</i>	<i>SM 4500-NH3 H (20th)</i>	<i>Batch: 16080409</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Ammonia as N	369	30		mg/L	
Dilution Factor	1000				
Analyzed By	Chad Carrington				
Analysis Date/Time	7/27/2016 3:22:32 PM				

<i>Anions by Ion Chromatography</i>	<i>EPA 300.0</i>	<i>Batch: 16080401</i>	<i>Run: 1</i>		
	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>	
Chloride	531	25		mg/L	
Sulfate	33.1	25		mg/L	
Dilution Factor	50				
Analyzed By	Katy Hattenhauer				
Analysis Date/Time	7/28/2016 9:37				

Bicarbonate Alkalinity

SM 2320 B (1997)

Batch: 16081702 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Bicarbonate Alkalinity (as CaCO ₃)	2320**	300		mg/L
Analysis Date/Time: 7/28/2016 8:23	**Result is calculated using Total Alkalinity and pH			
Analyzed By	Chad Carrington			

Conductivity EPA 120.1

**Batch: 16080503
Run: 1**

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Specific Conductance (EC)	7590	10		uMHOS
Dilution Factor	10			
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 15:13			

Nitrate and Nitrite

SM 4500-NO₃ I (20th)

Batch: 16080411 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Nitrate/Nitrite as N	<50	50		mg/L
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:22:32 PM			

pH

EPA 150.1

Batch: 16081601 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
pH	8.27 ^E			SU
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 15:20			

^E Estimated; analyzed out of holding time.

Salinity

SM 2520 B (2000)

Batch: 16081602 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Salinity	3.7	.1		PSU
Dilution Factor	10			(Practical Salinity Unity)
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 15:00			

Percent Solids

EPA 160.3

Batch: 16080102 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Percent Solids	5.4	0.2		%
Analyzed By	Robert Graddy			
Analysis Date/Time	7-29-2016 1500			

Total Organic Carbon

SM 5310 C (20th)

Batch: 16080902 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Total Organic Carbon	395	100		mg/L
Dilution Factor	100			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	Jul 28 2016 8:45AM			

Total Phosphorus

SM 4500-P J (20th)

Batch: 16080412 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Phosphorus-total	428	20		mg/L
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 10:50:56 AM			

Nitrogen - Total

SM4500-N C

Batch: 16101901 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Nitrogen, Total	590	50		mg/L
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/16 13:00			

Client:	Special Samples	Client Sample ID:	Pond 1
Lab ID:	2016-2503	Collection Date:	7/27/2016 10:52:00 AM
		Matrix:	Water

Analyses

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 16080103</i>	<i>Run: 2</i>		
	Result	Reporting Limit	Qual	Unit	
Calcium	968	125			mg/L
Magnesium	549	125			mg/L
Manganese	16100	375			ug/L
Potassium	1480	125			mg/L
Dilution Factor	500				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 8 2016 3:49PM				
Prep By	Robert Graddy				
Prep Date/Time	Jul 29 2016 8:00AM				

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 16080103</i>	<i>Run: 3</i>		
	Result	Reporting Limit	Qual	Unit	
Zinc	59000	5000			ug/L
Dilution Factor	5000				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 8 2016 3:43PM				
Prep By	Robert Graddy				
Prep Date/Time	Jul 29 2016 8:00AM				

<i>Total Metals by EPA 200.8</i>	<i>EPA 200.8</i>	<i>Batch: 16080103</i>	<i>Run: 1</i>		
	Result	Reporting Limit	Qual	Unit	
Sodium	328	12.5			mg/L
Dilution Factor	50				
Analyzed By	Robert Graddy				
Analysis Date/Time	Aug 8 2016 4:08PM				
Prep By	Robert Graddy				
Prep Date/Time	Jul 29 2016 8:00AM				

Client:	Special Samples	Client Sample ID:	Pond 2
Lab ID:	2016-2504	Collection Date:	7/27/2016 10:05:00 AM
		Matrix:	Water

Analyses

<i>Total Metals by EPA 200.8</i>		<i>EPA 200.8</i>	<i>Batch: 16080103</i>	<i>Run: 1</i>		
		Result	Reporting Limit	Qual	Unit	
Sodium		303	12.5		mg/L	
Dilution Factor		50				
Analyzed By		Robert Graddy				
Analysis Date/Time		Aug 8 2016 4:15PM				
Prep By		Robert Graddy				
Prep Date/Time		Jul 29 2016 8:00AM				

<i>Total Metals by EPA 200.8</i>		<i>EPA 200.8</i>	<i>Batch: 16080103</i>	<i>Run: 2</i>		
		Result	Reporting Limit	Qual	Unit	
Calcium		316	125		mg/L	
Magnesium		114	125		mg/L	
Manganese		7340	375		ug/L	
Potassium		1370	125		mg/L	
Zinc		11900	500		ug/L	
Dilution Factor		500				
Analyzed By		Robert Graddy				
Analysis Date/Time		Aug 8 2016 3:56PM				
Prep By		Robert Graddy				
Prep Date/Time		Jul 29 2016 8:00AM				

Client: Special Samples **Client Sample ID:** Pond 1
Lab ID: 2016-2503 **Collection Date:** 7/27/2016 10:52:00 AM
Matrix: Water

Analyses

Field Data

Batch: 16081810 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	-			mg/L
pH	6.61			SU
Temperature	-			C
Analyzed By	Jason Bolenbaugh			
Analysis Date/Time	7/27/16 10:52			

Client: Special Samples **Client Sample ID:** Pond 2
Lab ID: 2016-2504 **Collection Date:** 7/27/2016 10:05:00 AM
Matrix: Water

Analyses

Field Data

Batch: 16081810 Run: 1

	<u>Result</u>	<u>Reporting Limit</u>	<u>Qual</u>	<u>Unit</u>
Dissolved Oxygen	-			mg/L
pH	5.72			SU
Temperature	-			C
Analyzed By	Jason Bolenbaugh			
Analysis Date/Time	7/27/16 10:05			

Analytical Quality Control Results Report

Batch: 16072809	E.Coli - water
Pond 2	LIMS ID: 2016-2504

E.Coli by MF - water DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
E. Coli	12500 cfu/100ml	4		
E. Coli (RPD)	44 % Exceeds Precision Acceptance Limits			0 - 20
Analyzed By	Melanie Treat			
Analysis Date/Time	7/27/2016 16:03			

Analytical Quality Control Results Report

Batch: 16081810	Field Data
Pond 2	LIMS ID: 2016-2504

Field Parameters DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
pH	7.73 SU				
pH (RPD)	29.9 % Exceeds Precision Acceptance limits				0 - 5
Analyzed By	Jason Bolenbaugh				
Analysis Date/Time	7/27/16 10:05				

Batch: 16081601	pH - water
Pond 2	LIMS ID: 2016-2504

pH - water DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>DL</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
pH	8.27 SU ^E				
pH (RPD)	0 %				0 - 10
Analyzed By	Patrick Rawhouser				
Analysis Date/Time	7/27/2016 15:20				

^E Estimated; analyzed out of holding time.

Analytical Quality Control Results Report

Batch: 16080102	Percent Solids - soil
Pond 2	LIMS ID: 2016-2504

Solids, Percent DUP

Run: 1

<i>Parameter</i>	<i>Result</i>	<i>RL</i>	<i>Accuracy Control</i>	<i>Precision Control</i>
Percent Solids (RPD)	7.7 %			0 - 20
Analyzed By	Robert Graddy			
Analysis Date/Time	7-29-2016 1500			

Analytical Quality Control Results Report

Batch: 16080103	ICP Metals - water (total)
Pond 2	LIMS ID: 2016-2504

ICP Metals - water (Total) DUP

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Sodium	297 mg/L	12.5		
Sodium (RPD)	1.9 %			0 - 20
Dilution Factor	50			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 8 2016 4:21PM			

Pond 2	LIMS ID: 2016-2504
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ICP Metals - water (Total) DUP

Run: 2

Parameter	Result	RL	Accuracy Control	Precision Control
Calcium	269 mg/L	125		
Calcium (RPD)	16.1 %			0 - 20
Magnesium (RPD)	3.3 %			0 - 20
Magnesium	110 mg/L	125		
Manganese	7000 ug/L	375		
Manganese (RPD)	5.0 %			0 - 20
Potassium (RPD)	3.7 %			0 - 20
Potassium	1320 mg/L	125		
Zinc	11200 ug/L	500		
Zinc (RPD)	6.0 %			0 - 20
Dilution Factor	500			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 8 2016 4:02PM			

MB	LIMS ID: 16080103-MB-01
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ICP Metals - water (Total) MB

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Calcium	<0.25 mg/L	0.25		
Magnesium	<0.25 mg/L	0.25		
Manganese	<0.75 ug/L	0.75		
Potassium	<0.25 mg/L	0.25		
Sodium	<0.25 mg/L	0.25		
Zinc	<1 ug/L	1		
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 8 2016 3:31PM			

LCS	LIMS ID: 16080103-LCS-01
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ICP Metals - water (Total) LCS

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Calcium (% Recovery)	110 %		70 - 130	
Magnesium (% Recovery)	108 %		70 - 130	
Manganese (% Recovery)	100 %		70 - 130	
Potassium (% Recovery)	109 %		70 - 130	
Sodium (% Recovery)	103 %		70 - 130	
Zinc (% Recovery)	115 %		70 - 130	
Dilution Factor	1			
Analyzed By	Robert Graddy			
Analysis Date/Time	Aug 8 2016 3:37PM			

Analytical Quality Control Results Report

Batch: 16080503	Conductivity - water
Pond 2	LIMS ID: 2016-2504

Conductivity - water DUP **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Specific Conductance (EC)	7590 uMHOS	10		
Specific Conductance (EC) (RPD)	0 %			0 - 20
Dilution Factor	10			
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 15:14			

MB	LIMS ID: 16080503-MB-04
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Conductivity - water MB **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Specific Conductance (EC)	<1 uMHOS	1		
Dilution Factor	1			
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 13:40			

LCS	LIMS ID: 16080503-LCS-04
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Conductivity - water LCS **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Specific Conductance (EC) (% Recovery)	99 %		95 - 105	
Dilution Factor	1			
Analyzed By	Patrick Rawhouser			
Analysis Date/Time	7/27/2016 13:40			

Analytical Quality Control Results Report

Batch: 16080409	Lachat - Ammonia (water)
Pond 2	LIMS ID: 2016-2504

Ammonia as N - water DUP **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Ammonia as N (RPD)	1.1 %			0 - 20
Ammonia as N	365 mg/L	30		
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:23:34 PM			

MB	LIMS ID: 16080409-MB-03
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Ammonia as N - water MB **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Ammonia as N	<0.03 mg/L	0.03		
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:01:43 PM			

LCS	LIMS ID: 16080409-LCS-03
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Ammonia as N - water LCS **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Ammonia as N (% Recovery)	102 %		80 - 120	
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:02:45 PM			

Analytical Quality Control Results Report

Batch: 16080411	Lachat - NO3+NO2 (water)
Pond 2	LIMS ID: 2016-2504

Nitrate and Nitrite - water DUP

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Nitrate/Nitrite as N	34.4 mg/L	50		
Nitrate/Nitrite as N (RPD)	44.4 %		Exceeds Precision Acceptance criteria	0 - 20
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:23:34 PM			

MB	LIMS ID: 16080411-MB-03
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Nitrate and Nitrite - water MB

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Nitrate/Nitrite as N	<0.05 mg/L	0.05		
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:01:43 PM			

LCS	LIMS ID: 16080411-LCS-03
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Nitrate and Nitrite - water LCS

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Nitrate/Nitrite as N (% Recovery)	97.3 %		80 - 120	
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/27/2016 3:02:45 PM			

Analytical Quality Control Results Report

Batch: 16080412	Lachat - TP (water)
Pond 2	LIMS ID: 2016-2504

TP (Total Phosphorus) - water DUP **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Phosphorus-total	403 mg/L	20		
Phosphorus-total (RPD)	6.0 %			0 - 20
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 10:51:56 AM			

MB	LIMS ID: 16080412-MB-03
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TP (Total Phosphorus) - water MB **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Phosphorus-total	<0.02 mg/L	0.02		
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 10:30:46 AM			

LCS	LIMS ID: 16080412-LCS-03
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TP (Total Phosphorus) - water LCS **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Phosphorus-total (% Recovery)	105 %		80 - 120	
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 10:31:46 AM			

Analytical Quality Control Results Report

Batch: 16080414	Alkalinity - water
Pond 2	LIMS ID: 2016-2504

Alkalinity - water DUP **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Total Alkalinity (as CaCO3)	2310 mg/L	300		
Total Alkalinity (as CaCO3) (RPD)	0.4 %			0 - 20
Dilution Factor	50			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 8:24			

MB	LIMS ID: 16080414-MB-04
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Alkalinity - water MB **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Total Alkalinity (as CaCO3)	<6 mg/L	6		
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 8:20			

LCS	LIMS ID: 16080414-LCS-04
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Alkalinity - water LCS **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Total Alkalinity (as CaCO3)	73.5 mg/L			
Total Alkalinity (as CaCO3) (% Recovery)	98.0 %		90 - 110	
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/2016 8:21			

Analytical Quality Control Results Report

Batch: 16080902	TOC - water
Pond 2	LIMS ID: 2016-2504

TOC - water DUP

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Total Organic Carbon	401 mg/L	100		
Total Organic Carbon (RPD)	1.5 %			0 - 20
Dilution Factor	100			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	Jul 28 2016 8:59AM			

MB	LIMS ID: 16080902-MB-04
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TOC - water MB

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Total Organic Carbon	<1 mg/L	1		
Dilution Factor	1			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	Jul 28 2016 8:02AM			

LCS	LIMS ID: 16080902-LCS-04
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TOC - water LCS

Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Total Organic Carbon (% Recovery)	104 %		85 - 115	
Dilution Factor	1			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	Jul 28 2016 8:16AM			

Analytical Quality Control Results Report

Batch: 16080401	Anions - water
Pond 2	LIMS ID: 2016-2504

Anions - water DUP **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Chloride	538 mg/L	25		
Chloride (RPD)	1.2 %			0 - 20
Sulfate	31.3 mg/L	25		
Sulfate (RPD)	5.7 %			0 - 20
Dilution Factor	50			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	7/28/2016 9:45			

MB	LIMS ID: 16080401-MB-04
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Anions - water MB **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Chloride	<0.5 mg/L	0.5		
Sulfate	<0.5 mg/L	0.5		
Dilution Factor	1			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	7/28/2016 8:26			

LCS	LIMS ID: 16080401-LCS-04
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Anions - water LCS **Run: 1**

Parameter	Result	RL	Accuracy Control	Precision Control
Chloride (% Recovery)	101 %		90 - 110	
Sulfate (% Recovery)	99.8 %		90 - 110	
Dilution Factor	1			
Analyzed By	Katy Hattenhauer			
Analysis Date/Time	7/28/2016 8:34			

Analytical Quality Control Results Report

Batch: 16101901	Total Nitrogen - water
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Pond 2	LIMS ID: 2016-2504
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Nitrogen - Total - water DUP Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Nitrogen, Total	623 mg/L	50		
Nitrogen, Total (RPD)	5.4 %			0 - 20
Dilution Factor	1000			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/16 13:00			

MB	LIMS ID: 16101901-MB-01
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Nitrogen - Total - water MB Run: 1

Parameter	Result	RL	Accuracy Control	Precision Control
Nitrogen, Total	<0.05 mg/L	0.05		
Dilution Factor	1			
Analyzed By	Chad Carrington			
Analysis Date/Time	7/28/16 13:00			

LCS	LIMS ID: 16101901-LCS-01
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Nitrogen - Total - water LCS Run: 1

Parameter	Result	Accuracy Control	Precision Control
Nitrogen, Total (% Recovery)	107 %	80 - 120	
Dilution Factor	1		
Analyzed By	Chad Carrington		
Analysis Date/Time	7/28/16 13:00		