



PINELLAS COUNTY UTILITIES LABORATORY
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CERTIFICATE OF ANALYSIS

Client: Pinellas County - Environmental Management
Division
22211 US Hwy 19 N
Clearwater, FL 33756

Analyzed By: Pinellas County Utilities Laboratory
1620 Ridge Road Bldg B, Largo, FL 33778
Ph: 727-582-2302

State of Florida Certification: E54357

Workorder Number: 1901196

EPA Lab#: FL00123

Profile: Environmental Mgmt - Ambient

Line Item: EMD - Land Run

SAMPLE SITE	SAMPLE NO.	COLLECTED DATE/TIME	RECEIVED DATE/TIME
35-01 19-04	190119601	06/13/2019 09:27	06/13/2019 13:24
35-04 19-04	190119602	06/13/2019 09:51	06/13/2019 13:24
35-15 19-04	190119603	06/13/2019 10:34	06/13/2019 13:24
35-10 19-04	190119604	06/13/2019 11:00	06/13/2019 13:24
35-12 19-04	190119605	06/13/2019 11:44	06/13/2019 13:24
24-01 19-04	190119606	06/13/2019 12:20	06/13/2019 13:24

THIS REPORT MEETS TNI STANDARDS

All analytical data contained in this report were obtained using the specified methods and were verified by our laboratory quality system. All methods referenced in this report meet TNI requirements unless otherwise indicated by analytical data codes and/or remarks. Analytical results listed within this report pertain only to the specific samples listed. No other inferences can be made. All measurements are on a wet weight basis unless otherwise indicated by the units of measure. Uncertainty of Measurement for each analyte and the associated Quality Control data for these sample results will be provided upon request.

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CERTIFICATION STATEMENT

An asterisk (*) appearing next to an analyte indicates certification is not currently held for that test/analyte or that the certified test method has been sufficiently modified to accommodate the customer requirements that it no longer qualifies as certified.

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Pinellas County Utilities Laboratory
Contact Person: Terri Grimes
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Terri Grimes

06/28/2019

Terri Grimes
Laboratory Project Coordinator/QA Manager
tgrimes@pinellascounty.org

Date



ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119601**
Sample ID: **35-01 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 09:27 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	7.0 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	12 mg/L	1	1			6/17/2019 11:45		CHEM/2785
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	51.6 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	61.4 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	10.1 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	1.5 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	14.1 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	3.7 mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: SM 9223B								
E. coli	212 MPN/100mL	4	4		6/13/2019 16:09	6/14/2019 12:59		MIC/2382
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	1.14 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:19		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.14 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:10		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119601**
Sample ID: **35-01 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 09:27 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.01 I mg/L	1	0.01	0.04		6/14/2019 11:23		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04		6/14/2019 13:36		NUTR/2478
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.03 I mg/L	1	0.01	0.04		6/14/2019 13:36		NUTR/2477

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119602**
Sample ID: **35-04 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 09:51 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.9 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	2 mg/L	1	1			6/17/2019 11:45		CHEM/2785
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	3.7 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	5.4 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	0.6 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	0.5 U mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	2.5 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.1 l mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: SM 9223B								
E. coli	205 MPN/100mL	4	4		6/13/2019 16:09	6/14/2019 12:59		MIC/2382
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.66 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:20		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.08 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:12		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119602**
Sample ID: **35-04 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 09:51 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.03 l mg/L	1	0.01	0.04		6/14/2019 11:24		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.05 mg/L	1	0.01	0.04		6/14/2019 13:37		NUTR/2478
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.07 mg/L	1	0.01	0.04		6/14/2019 13:37		NUTR/2477

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119603**
Sample ID: **35-15 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 10:34 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	5.9 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	12 mg/L	1	1			6/17/2019 11:45		CHEM/2785
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	54.6 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	64.7 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	5.2 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	2 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	13.8 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	3.9 mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: SM 9223B								
E. coli	273 MPN/100mL	4	4		6/13/2019 16:09	6/14/2019 12:59		MIC/2382
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	1.13 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:21		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.11 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:13		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119603**
Sample ID: **35-15 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 10:34 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.01 U mg/L	1	0.01	0.04		6/14/2019 11:25		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.02 I mg/L	1	0.01	0.04		6/14/2019 13:39	F	NUTR/2478
F - Sample filtered to remove excessive debris								
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.02 I mg/L	1	0.01	0.04		6/14/2019 13:39	F	NUTR/2477
F - Sample filtered to remove excessive debris								

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119604**
Sample ID: **35-10 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 11:00 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	3.2 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	5 mg/L	1	1			6/17/2019 11:45		CHEM/2785
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	23.6 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	27.4 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	1.7 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	1.1 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	5 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	2.2 mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: SM 9223B								
E. coli	332 MPN/100mL	2	2		6/13/2019 16:09	6/14/2019 12:59		MIC/2382
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.83 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:22		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.09 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:14		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119604**
Sample ID: **35-10 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 11:00 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.02 I mg/L	1	0.01	0.04		6/14/2019 11:26		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04		6/14/2019 13:40		NUTR/2478
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.04 mg/L	1	0.01	0.04		6/14/2019 13:40		NUTR/2477

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119605**
Sample ID: **35-12 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 11:44 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	2.8 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	3 mg/L	1	1			6/17/2019 11:45		CHEM/2785
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	9.7 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	11.2 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	1.2 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	0.6 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	2 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.8 l mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: SM 9223B								
E. coli	977 MPN/100mL	2	2		6/13/2019 16:09	6/14/2019 12:59		MIC/2382
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.96 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:23		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.15 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:21		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119605**
Sample ID: **35-12 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 11:44 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.06 mg/L	1	0.01	0.04		6/14/2019 11:27		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.10 mg/L	1	0.01	0.04		6/14/2019 13:41		NUTR/2478
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.20 mg/L	1	0.01	0.04		6/14/2019 13:41		NUTR/2477

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119606**
Sample ID: **24-01 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 12:20 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Inorganics								
Analytical Method: SM 2130B								
Turbidity	3.1 NTU	1	0.1			6/14/2019 08:58		CHEM/2776
Analytical Method: SM 2540D								
Total Suspended Solids	4 mg/L	1	1			6/17/2019 11:45		CHEM/2785
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	21.8 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll a (Uncorrected)	25.1 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll b	0.5 U mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Chlorophyll c	2.7 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Pheophytin	4.1 mg/m3	1	0.5		6/14/2019 09:03	6/20/2019 13:21		CHEM/2777
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	2.5 mg/L	1	0.5	2.0		6/14/2019 13:27		CHEM/2779
Microbiology								
Analytical Method: ASTM D6503-99								
Enterococci	20 MPN/100mL	10	10		6/13/2019 14:49	6/14/2019 15:17	J	MIC/2385
J - QC samples exceeded precision limits								
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.93 mg/L	1	0.10	0.40	6/17/2019 15:40	6/18/2019 15:53		NUTR/2483
Analytical Method: EPA 365.1								
Total Phosphorus	0.20 mg/L	1	0.01	0.04	6/20/2019 15:10	6/21/2019 10:22		NUTR/2497

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ANALYTICAL RESULTS

Workorder: 1901196

Lab ID: **190119606**
Sample ID: **24-01 19-04**

Date Received: 6/13/2019 13:24 Matrix: Surface Water
Date Collected: 6/13/2019 12:20 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Prep	Analyzed	Qualifiers	QC Batch
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.14 mg/L	1	0.01	0.04		6/14/2019 11:28		NUTR/2473
Analytical Method: SM 4500NH3H								
Ammonia	0.05 mg/L	1	0.01	0.04		6/14/2019 13:42		NUTR/2478
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.03 I mg/L	1	0.01	0.04		6/14/2019 13:42		NUTR/2477

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