



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: 1900357

EPA Lab#: FL00123

Profile: Environmental Mgmt - Ambient

Line Item: EMD - Land Run

SAMPLE SITE	SAMPLE NO.	COLLECTED DATE/TIME	RECEIVED DATE/TIME
12-02 19-01	190035701	02/19/2019 09:00	02/19/2019 14:25
12-04 19-01	190035702	02/19/2019 09:48	02/19/2019 14:25
11-05 19-01	190035703	02/19/2019 10:31	02/19/2019 14:25
06-03 19-01	190035704	02/19/2019 11:27	02/19/2019 14:25
05-06 19-01	190035705	02/19/2019 12:08	02/19/2019 14:25
06-06 19-01	190035706	02/19/2019 13:01	02/19/2019 14:25

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
727-582-2322

Terri Grimes

03/05/2019

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

Date



ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035701**
Sample ID: **12-02 19-01**

Date Received: 2/19/2019 14:25

Matrix: Surface Water

Date Collected: **2/19/2019 09:00**

Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	2.0 NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D								
Total Suspended Solids	1 mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	1.4 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll a (Uncorrected)	2.2 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll b	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll c	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Pheophytin	1.1 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology								
Analytical Method: SM 9223B								
E. coli	689 MPN/100mL	4	4		2/19/2019 15:49	QAC		MIC/1993
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.52 mg/L	1	0.10	0.40	2/21/2019 14:36	AMC		NUTR/2032
Analytical Method: EPA 365.1								
Total Phosphorus	0.17 mg/L	1	0.01	0.04	2/21/2019 11:44	AMC		NUTR/2034
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.11 mg/L	1	0.01	0.04	2/20/2019 11:11	ISP		NUTR/2026
Analytical Method: SM 4500NH3H								
Ammonia	0.02 I mg/L	1	0.01	0.04	2/20/2019 12:03	AJH		NUTR/2030
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.11 mg/L	1	0.01	0.04	2/20/2019 12:03	AJH		NUTR/2029

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ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035702**
Sample ID: **12-04 19-01**

Date Received: 2/19/2019 14:25 Matrix: Surface Water
Date Collected: 2/19/2019 09:48 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	2.2 NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D								
Total Suspended Solids	1 mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	NR mg/m3	1	0.5		2/21/2019 13:59	KAV	O	CHEM/2261
O - Sampled, but analysis lost or not performed.								
Chlorophyll a (Uncorrected)	NR mg/m3	1	0.5		2/21/2019 13:59	KAV	O	CHEM/2261
O - Sampled, but analysis lost or not performed.								
Chlorophyll b	NR mg/m3	1	0.5		2/21/2019 13:59	KAV	O	CHEM/2261
O - Sampled, but analysis lost or not performed.								
Chlorophyll c	NR mg/m3	1	0.5		2/21/2019 13:59	KAV	O	CHEM/2261
O - Sampled, but analysis lost or not performed.								
Pheophytin	NR mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology								
Analytical Method: SM 9223B								
E. coli	690 MPN/100mL	4	4		2/19/2019 15:49	QAC		MIC/1993
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.40 mg/L	1	0.10	0.40	2/21/2019 14:37	AMC		NUTR/2032
Analytical Method: EPA 365.1								
Total Phosphorus	0.10 mg/L	1	0.01	0.04	2/21/2019 11:45	AMC		NUTR/2034
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.05 mg/L	1	0.01	0.04	2/20/2019 11:12	ISP		NUTR/2026
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04	2/20/2019 12:04	AJH		NUTR/2030
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.25 mg/L	1	0.01	0.04	2/20/2019 12:04	AJH		NUTR/2029

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ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035703**
Sample ID: **11-05 19-01**

Date Received: 2/19/2019 14:25
Date Collected: 2/19/2019 10:31
Matrix: Surface Water
Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	1.1	NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D									
Total Suspended Solids	1	U mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	0.8	mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll a (Uncorrected)	1.2	mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll b	0.5	U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll c	0.5	U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Pheophytin	0.6	mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology									
Analytical Method: SM 9223B									
E. coli	167	MPN/100mL	2	2		2/19/2019 15:49	QAC		MIC/1993
Nutrients									
Analytical Method: ASTM D3590-11B									
Total Kjeldahl Nitrogen	0.58	mg/L	1	0.10	0.40	2/21/2019 14:38	AMC		NUTR/2032
Analytical Method: EPA 365.1									
Total Phosphorus	0.14	mg/L	1	0.01	0.04	2/21/2019 11:46	AMC		NUTR/2034
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.08	mg/L	1	0.01	0.04	2/20/2019 11:11	ISP		NUTR/2026
Analytical Method: SM 4500NH3H									
Ammonia	0.01	U mg/L	1	0.01	0.04	2/20/2019 12:05	AJH		NUTR/2030
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.19	mg/L	1	0.01	0.04	2/20/2019 12:05	AJH		NUTR/2029

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ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035704**
Sample ID: **06-03 19-01**

Date Received: 2/19/2019 14:25
Date Collected: 2/19/2019 11:27
Matrix: Surface Water
Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	0.8 NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D								
Total Suspended Solids	1 U mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	0.7 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll a (Uncorrected)	1 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll b	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll c	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Pheophytin	0.5 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology								
Analytical Method: SM 9223B								
E. coli	445 MPN/100mL	2	2		2/19/2019 15:49	QAC		MIC/1993
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.49 mg/L	1	0.10	0.40	2/21/2019 14:39	AMC		NUTR/2032
Analytical Method: EPA 365.1								
Total Phosphorus	0.09 mg/L	1	0.01	0.04	2/21/2019 11:47	AMC		NUTR/2034
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.05 mg/L	1	0.01	0.04	2/20/2019 11:13	ISP		NUTR/2026
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04	2/20/2019 12:06	AJH		NUTR/2030
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.10 mg/L	1	0.01	0.04	2/20/2019 12:06	AJH		NUTR/2029

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ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035705**
Sample ID: **05-06 19-01**

Date Received: 2/19/2019 14:25
Date Collected: 2/19/2019 12:08
Matrix: Surface Water
Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	6.5 NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D								
Total Suspended Solids	10 mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	4.6 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll a (Uncorrected)	8.6 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll b	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll c	0.9 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Pheophytin	6.4 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology								
Analytical Method: SM 9223B								
E. coli	326 MPN/100mL	1	1		2/19/2019 15:49	QAC		MIC/1993
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	1.35 mg/L	1	0.10	0.40	2/21/2019 14:40	AMC		NUTR/2032
Analytical Method: EPA 365.1								
Total Phosphorus	0.16 mg/L	1	0.01	0.04	2/26/2019 10:26	AMC		NUTR/2047
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.02 I mg/L	1	0.01	0.04	2/20/2019 11:14	ISP		NUTR/2026
Analytical Method: SM 4500NH3H								
Ammonia	0.17 mg/L	1	0.01	0.04	2/20/2019 12:08	AJH	F	NUTR/2030
F - Sample filtered to remove excessive debris								
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.06 mg/L	1	0.01	0.04	2/20/2019 12:08	AJH	F	NUTR/2029
F - Sample filtered to remove excessive debris								

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ANALYTICAL RESULTS

Workorder: 1900357

Lab ID: **190035706** Date Received: 2/19/2019 14:25 Matrix: Surface Water
Sample ID: **06-06 19-01** Date Collected: 2/19/2019 13:01 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.4 NTU	1	0.1		2/20/2019 13:50	TMT		CHEM/2266
Analytical Method: SM 2540D								
Total Suspended Solids	2 mg/L	1	1		2/20/2019 09:13	KDP		CHEM/2260
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	14.2 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll a (Uncorrected)	16.3 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll b	0.5 U mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Chlorophyll c	1.4 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Pheophytin	2.6 mg/m3	1	0.5		2/21/2019 13:59	KAV		CHEM/2261
Microbiology								
Analytical Method: SM 9223B								
E. coli	13 MPN/100mL	1	1		2/19/2019 15:49	QAC		MIC/1993
Nutrients								
Analytical Method: ASTM D3590-11B								
Total Kjeldahl Nitrogen	0.58 mg/L	1	0.10	0.40	2/21/2019 14:49	AMC		NUTR/2032
Analytical Method: EPA 365.1								
Total Phosphorus	0.03 I mg/L	1	0.01	0.04	2/26/2019 10:27	AMC		NUTR/2047
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.01 U mg/L	1	0.01	0.04	2/20/2019 11:15	ISP		NUTR/2026
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04	2/20/2019 12:09	AJH		NUTR/2030
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.01 U mg/L	1	0.01	0.04	2/20/2019 12:09	AJH		NUTR/2029

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