



PINELLAS COUNTY UTILITIES LABORATORY
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**CERTIFICATE OF ANALYSIS
SUBMISSION SUMMARY**

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: 1800455

EPA Lab#: FL00123

Profile: Environmental Mgmt - Ambient

Line Item: EMD - Land Run

SAMPLE SITE	SAMPLE NO.	COLLECTED DATE/TIME	RECEIVED DATE/TIME
24-07 18-04	180045501	07/05/2018 08:46	07/05/2018 12:59
35-01 18-04	180045502	07/05/2018 09:37	07/05/2018 12:59
35-10 18-04	180045503	07/05/2018 10:13	07/05/2018 12:59
35-12 18-04	180045504	07/05/2018 10:40	07/05/2018 12:59
35-04 18-04	180045505	07/05/2018 11:42	07/05/2018 12:59
24-01 18-04	180045506	07/05/2018 12:12	07/05/2018 12:59

THIS REPORT MEETS NELAC 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 NELAC 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 analyte or that the certified method has been sufficiently modified to accommodate the customer requirements that it no longer qualifies as certified. Results reported from methods referencing other laboratories are reported under their respective certification. Methods designated as "FIELD" are not certified results and are provided from the Chain of Custody for informational purposes only.

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Pinellas County Utilities Laboratory
Contact Person: Terri Grimes
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Terri Grimes

08/10/2018

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

Date



ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: **180045501**
Sample ID: **24-07 18-04**

Date Received: 7/5/2018 12:59 Matrix: Surface Water
Date Collected: 7/5/2018 08:46

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	3.6	NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D									
Total Suspended Solids	6	mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	35.2	mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	40.5	mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	1	mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll c	3.2	mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	6.7	mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	2.6	mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits									
Microbiology									
Analytical Method: SM 9223B									
E. coli	245	MPN/100mL	2	2		7/5/2018 13:42	KDP		MIC/1222
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	1.04	mg/L	1	0.10	0.40	7/10/2018 14:29	AMC		NUTR/1229
Analytical Method: EPA 365.4									
Total Phosphorus	0.16	mg/L	1	0.02	0.04	7/10/2018 15:37	AMC		NUTR/1231
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.08	mg/L	1	0.01	0.04	7/6/2018 10:26	AJH		NUTR/1224
Analytical Method: SM 4500NH3H									
Ammonia	0.11	mg/L	1	0.01	0.04	7/13/2018 14:10	RRM		NUTR/1237
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.08	mg/L	1	0.02	0.04	7/16/2018 12:28	RRM		NUTR/1236

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ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: **180045502**
Sample ID: **35-01 18-04**

Date Received: 7/5/2018 12:59 Matrix: Surface Water
Date Collected: 7/5/2018 09:37

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.2 NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D								
Total Suspended Solids	2 mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	8.7 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	12.5 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	1.3 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll c	0.5 U mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	5.8 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.5 I mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits								
Microbiology								
Analytical Method: SM 9223B								
E. coli	1160 MPN/100mL	2	2		7/5/2018 13:42	KDP		MIC/1222
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.50 mg/L	1	0.10	0.40	7/10/2018 14:31	AMC		NUTR/1229
Analytical Method: EPA 365.4								
Total Phosphorus	0.03 I mg/L	1	0.02	0.04	7/10/2018 15:38	AMC		NUTR/1231
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.01 I mg/L	1	0.01	0.04	7/6/2018 10:27	AJH		NUTR/1224
Analytical Method: SM 4500NH3H								
Ammonia	0.01 U mg/L	1	0.01	0.04	7/13/2018 14:11	RRM		NUTR/1237
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.02 U mg/L	1	0.02	0.04	7/16/2018 12:29	RRM		NUTR/1236

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ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: **180045503**
Sample ID: **35-10 18-04**

Date Received: 7/5/2018 12:59 Matrix: Surface Water
Date Collected: 7/5/2018 10:13

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.4 NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D								
Total Suspended Solids	3 mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	9.9 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	12.9 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	0.8 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll c	0.5 U mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	4.5 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.6 l mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits								
Microbiology								
Analytical Method: SM 9223B								
E. coli	582 MPN/100mL	2	2		7/5/2018 13:42	KDP		MIC/1222
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.70 mg/L	1	0.10	0.40	7/10/2018 14:32	AMC		NUTR/1229
Analytical Method: EPA 365.4								
Total Phosphorus	0.07 mg/L	1	0.02	0.04	7/10/2018 15:39	AMC		NUTR/1231
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.02 l mg/L	1	0.01	0.04	7/6/2018 10:28	AJH		NUTR/1224
Analytical Method: SM 4500NH3H								
Ammonia	0.11 mg/L	1	0.01	0.04	7/13/2018 14:12	RRM		NUTR/1237
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.12 mg/L	1	0.02	0.04	7/16/2018 12:30	RRM		NUTR/1236

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ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: **180045504**
Sample ID: **35-12 18-04**

Date Received: 7/5/2018 12:59 Matrix: Surface Water
Date Collected: 7/5/2018 10:40

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.2 NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D								
Total Suspended Solids	2 mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	4.0 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	6.4 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	0.5 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll c	0.5 U mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	3.8 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	0.9 l mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits								
Microbiology								
Analytical Method: SM 9223B								
E. coli	472 MPN/100mL	2	2		7/5/2018 13:42	KDP		MIC/1222
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.68 mg/L	1	0.10	0.40	7/10/2018 14:33	AMC		NUTR/1229
Analytical Method: EPA 365.4								
Total Phosphorus	0.07 mg/L	1	0.02	0.04	7/10/2018 15:40	AMC		NUTR/1231
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.04 l mg/L	1	0.01	0.04	7/6/2018 10:29	AJH		NUTR/1224
Analytical Method: SM 4500NH3H								
Ammonia	0.10 mg/L	1	0.01	0.04	7/13/2018 14:13	RRM		NUTR/1237
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.30 mg/L	1	0.02	0.04	7/16/2018 12:31	RRM		NUTR/1236

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ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: 180045505
Sample ID: 35-04 18-04

Date Received: 7/5/2018 12:59
Date Collected: 7/5/2018 11:42
Matrix: Surface Water

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.0 NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D								
Total Suspended Solids	3 mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	6.3 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	8.2 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	0.7 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll c	0.5 U mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	2.8 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.5 l mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits								
Microbiology								
Analytical Method: SM 9223B								
E. coli	288 MPN/100mL	2	2		7/5/2018 13:42	KDP		MIC/1222
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.64 mg/L	1	0.10	0.40	7/10/2018 14:34	AMC		NUTR/1229
Analytical Method: EPA 365.4								
Total Phosphorus	0.07 mg/L	1	0.02	0.04	7/10/2018 15:42	AMC		NUTR/1231
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.03 l mg/L	1	0.01	0.04	7/6/2018 10:30	AJH		NUTR/1224
Analytical Method: SM 4500NH3H								
Ammonia	0.03 l mg/L	1	0.01	0.04	7/13/2018 14:15	RRM		NUTR/1237
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.10 mg/L	1	0.02	0.04	7/16/2018 12:32	RRM		NUTR/1236

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ANALYTICAL RESULTS

Workorder: 1800455

Lab ID: **180045506**
Sample ID: **24-01 18-04**

Date Received: 7/5/2018 12:59 Matrix: Surface Water
Date Collected: 7/5/2018 12:12

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	1.7 NTU	1	0.1		7/6/2018 13:28	TMT		CHEM/1280
Analytical Method: SM 2540D								
Total Suspended Solids	3 mg/L	1	1		7/6/2018 13:54	AJH		CHEM/1281
I - Final dried residue < 2.5 mg as req'd by method								
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	12.4 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll a (Uncorrected)	14.8 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Chlorophyll b	0.6 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
The Absolute Difference between the duplicate results is less than or equal to the LOD; data not qualified.								
Chlorophyll c	1.1 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Pheophytin	3.2 mg/m3	1	0.5		7/10/2018 14:47	QAC		CHEM/1279
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	1.8 l mg/L	1	0.5	2.0	7/6/2018 14:06	JDH	J	CHEM/1283
J - Standard exceeded accuracy limits								
Microbiology								
Analytical Method: ASTM D6503-99								
Enterococci	393 MPN/100mL	10	10		7/5/2018 13:26	KDP		MIC/1223
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.82 mg/L	1	0.10	0.40	7/10/2018 14:35	AMC		NUTR/1229
Analytical Method: EPA 365.4								
Total Phosphorus	0.13 mg/L	1	0.02	0.04	7/10/2018 15:43	AMC		NUTR/1231
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.08 mg/L	1	0.01	0.04	7/6/2018 10:31	AJH		NUTR/1224
Analytical Method: SM 4500NH3H								
Ammonia	0.08 mg/L	1	0.01	0.04	7/13/2018 14:16	RRM		NUTR/1237
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.04 l mg/L	1	0.02	0.04	7/16/2018 12:33	RRM		NUTR/1236

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