



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: 1801630

EPA Lab#: FL00123

Profile: Environmental Mgmt - Ambient

Line Item: EMD - Land Run

SAMPLE SITE	SAMPLE NO.	COLLECTED DATE/TIME	RECEIVED DATE/TIME
39-01 18-08	180163001	12/12/2018 09:10	12/12/2018 14:30
39-05 18-08	180163002	12/12/2018 09:38	12/12/2018 14:30
25-07 18-08	180163003	12/12/2018 10:31	12/12/2018 14:30
27-09 18-08	180163004	12/12/2018 11:58	12/12/2018 14:30
27-11 18-08	180163005	12/12/2018 12:22	12/12/2018 14:30
27-08 18-08	180163006	12/12/2018 13:06	12/12/2018 14:30
27-10 18-08	180163007	12/12/2018 13:50	12/12/2018 14:30
LR7-FB 18-08	180163008	12/12/2018 14:00	12/12/2018 14:30

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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Kathleen Roach

12/27/2018

Kathleen Roach
Laboratory Manager
kroach@pinellascounty.org

Date



ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163001**
Sample ID: **39-01 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 09:10 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	4.3	NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	6	mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	7.7	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll a (Uncorrected)	9.4	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll b	0.5 U	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll c	1.6	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Pheophytin	2.4	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	5.2	mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology									
Analytical Method: ASTM D6503-99									
Enterococci	809	MPN/100mL	10	10		12/12/2018 14:55	KDP		MIC/1769
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	1.12	mg/L	1	0.10	0.40	12/19/2018 13:37	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.06	mg/L	1	0.01	0.04	12/19/2018 15:31	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.05	mg/L	1	0.01	0.04	12/13/2018 11:18	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.11	mg/L	1	0.01	0.04	12/14/2018 13:58	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.06	mg/L	1	0.01	0.04	12/13/2018 14:46	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163002**
Sample ID: **39-05 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 09:38 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	6.3	NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	18	mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	17.3	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll a (Uncorrected)	21.2	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll b	0.9	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Chlorophyll c	3.1	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Pheophytin	5.6	mg/m3	1	0.5		12/20/2018 15:16	KAV		CHEM/2012
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	1.9	mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology									
Analytical Method: ASTM D6503-99									
Enterococci	389	MPN/100mL	10	10		12/12/2018 14:55	KDP		MIC/1769
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	1.19	mg/L	1	0.10	0.40	12/19/2018 13:38	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.08	mg/L	1	0.01	0.04	12/19/2018 15:32	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.06	mg/L	1	0.01	0.04	12/13/2018 11:18	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.09	mg/L	1	0.01	0.04	12/14/2018 13:59	AJH	F	NUTR/1817
F - Sample filtered to remove excessive debris									
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.08	mg/L	1	0.01	0.04	12/13/2018 14:47	AJH	F	NUTR/1816
F - Sample filtered to remove excessive debris									

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163003**
Sample ID: **25-07 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 10:31 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		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	1	mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
I - Final dried residue < 2.5 mg as req'd by method									
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	3.0	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll a (Uncorrected)	3.8	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll b	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll c	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Pheophytin	1.3	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	1.1	I mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Metals									
Analytical Method: EPA 200.7-NPW									
Aluminum (Dissolved)	0.023	I mg/L	1	0.020	0.055	12/14/2018 11:07	RRM		MET/1362
Microbiology									
Analytical Method: SM 9223B									
E. coli	120	MPN/100mL	1	1		12/12/2018 15:11	KDP		MIC/1768
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	0.66	mg/L	1	0.10	0.40	12/19/2018 13:40	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.07	mg/L	1	0.01	0.04	12/19/2018 15:34	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.05	mg/L	1	0.01	0.04	12/13/2018 11:19	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.12	mg/L	1	0.01	0.04	12/14/2018 14:00	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.12	mg/L	1	0.01	0.04	12/13/2018 14:48	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163004**
Sample ID: **27-09 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 11:58 Type: Grab

Parameters	Results Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics								
Analytical Method: SM 2130B								
Turbidity	0.7 NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D								
Total Suspended Solids	1 U mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
Analytical Method: SM 10200H								
Chlorophyll a (Corrected)	1.0 mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll a (Uncorrected)	1.2 mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll b	0.5 U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll c	0.5 U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Pheophytin	0.5 U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Analytical Method: SM 5210B								
Biochemical Oxygen Demand	0.5 U mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology								
Analytical Method: SM 9223B								
E. coli	279 MPN/100mL	4	4		12/12/2018 15:11	KDP		MIC/1768
Nutrients								
Analytical Method: ASTM D3590-02B								
Total Kjeldahl Nitrogen	0.57 mg/L	1	0.10	0.40	12/19/2018 13:41	AMC		NUTR/1829
Analytical Method: EPA 365.1								
Total Phosphorus	0.09 mg/L	1	0.01	0.04	12/19/2018 15:35	AMC		NUTR/1832
Analytical Method: SM 4500PF								
Orthophosphate as P(Dissolved)	0.07 mg/L	1	0.01	0.04	12/13/2018 11:20	ISP		NUTR/1812
Analytical Method: SM 4500NH3H								
Ammonia	0.02 I mg/L	1	0.01	0.04	12/14/2018 14:01	AJH		NUTR/1817
Analytical Method: SM 4500NO3F								
Nitrate+Nitrite (N)	0.16 mg/L	1	0.01	0.04	12/13/2018 14:49	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163005**
Sample ID: **27-11 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 12:22 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	0.4	NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	1	U mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	0.7	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll a (Uncorrected)	0.8	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll b	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll c	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Pheophytin	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	0.5	U mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology									
Analytical Method: SM 9223B									
E. coli	252	MPN/100mL	4	4		12/12/2018 15:11	KDP		MIC/1768
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	0.54	mg/L	1	0.10	0.40	12/19/2018 13:42	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.10	mg/L	1	0.01	0.04	12/19/2018 15:36	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.08	mg/L	1	0.01	0.04	12/13/2018 11:28	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.01	I mg/L	1	0.01	0.04	12/14/2018 14:02	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.12	mg/L	1	0.01	0.04	12/13/2018 14:50	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163006** Date Received: 12/12/2018 14:30 Matrix: Surface Water
Sample ID: **27-08 18-08** Date Collected: 12/12/2018 13:06 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	1.5	NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	2	mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
I - Final dried residue < 2.5 mg as req'd by method									
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	2.4	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll a (Uncorrected)	3.7	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll b	0.5 U	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll c	0.5 U	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Pheophytin	2	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	1.0 I	mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology									
Analytical Method: SM 9223B									
E. coli	458	MPN/100mL	4	4		12/12/2018 15:11	KDP		MIC/1768
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	0.73	mg/L	1	0.10	0.40	12/19/2018 13:43	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.06	mg/L	1	0.01	0.04	12/19/2018 15:37	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.04 I	mg/L	1	0.01	0.04	12/13/2018 11:21	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.12	mg/L	1	0.01	0.04	12/14/2018 14:03	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.75	mg/L	1	0.01	0.04	12/13/2018 14:51	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163007** Date Received: 12/12/2018 14:30 Matrix: Surface Water
Sample ID: **27-10 18-08** Date Collected: 12/12/2018 13:50 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Inorganics									
Analytical Method: SM 2130B									
Turbidity	1.5	NTU	1	0.1		12/13/2018 08:17	RRM		CHEM/2006
Analytical Method: SM 2540D									
Total Suspended Solids	3	mg/L	1	1		12/14/2018 15:11	AJH		CHEM/2019
Analytical Method: SM 10200H									
Chlorophyll a (Corrected)	8.4	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll a (Uncorrected)	9.3	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Chlorophyll b	0.5	U mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
The Absolute Difference between the duplicate results is less than or equal to the LOD; data not qualified.									
Chlorophyll c	0.7	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Pheophytin	1.1	mg/m3	1	0.5		12/21/2018 15:47	KAV		CHEM/2013
Analytical Method: SM 5210B									
Biochemical Oxygen Demand	0.6	I mg/L	1	0.5	2.0	12/13/2018 09:00	TMT		CHEM/2005
Microbiology									
Analytical Method: SM 9223B									
E. coli	10	MPN/100mL	1	1		12/12/2018 15:11	KDP		MIC/1768
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	0.69	mg/L	1	0.10	0.40	12/19/2018 13:44	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.02	I mg/L	1	0.01	0.04	12/19/2018 15:38	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.01	U mg/L	1	0.01	0.04	12/13/2018 11:27	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.02	I mg/L	1	0.01	0.04	12/14/2018 14:06	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.05	mg/L	1	0.01	0.04	12/13/2018 14:54	AJH		NUTR/1816

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ANALYTICAL RESULTS

Workorder: 1801630

Lab ID: **180163008**
Sample ID: **LR7-FB 18-08**

Date Received: 12/12/2018 14:30 Matrix: Surface Water
Date Collected: 12/12/2018 14:00 Type: Grab

Parameters	Results	Units	DF	LOD	LOQ	Analyzed	By	Qualifiers	QC Batch ID
Nutrients									
Analytical Method: ASTM D3590-02B									
Total Kjeldahl Nitrogen	0.10 U	mg/L	1	0.10	0.40	12/19/2018 13:46	AMC		NUTR/1829
Analytical Method: EPA 365.1									
Total Phosphorus	0.01 U	mg/L	1	0.01	0.04	12/19/2018 15:40	AMC		NUTR/1832
Analytical Method: SM 4500PF									
Orthophosphate as P(Dissolved)	0.01 U	mg/L	1	0.01	0.04	12/13/2018 11:29	ISP		NUTR/1812
Analytical Method: SM 4500NH3H									
Ammonia	0.01 U	mg/L	1	0.01	0.04	12/14/2018 14:05	AJH		NUTR/1817
Analytical Method: SM 4500NO3F									
Nitrate+Nitrite (N)	0.01 U	mg/L	1	0.01	0.04	12/13/2018 14:53	AJH		NUTR/1816

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