

FLOWERS CHEMICAL LABORATORIES INC.

P.O. Box 150597, Altamonte Springs, FL 32715-0597
571 NW Mercantile Pl, Suite 111, Port St. Lucie, FL 34986
812 SW Harvey Green Dr, Madison, FL 32340
3980 Overseas Hwy, Suite 103, Marathon, FL 33050

Phone: 407-339-5984 E83018 (Main Lab)
Phone: 772-343-8006 E86562 (South Lab)
Phone: 850-973-6878 E82405 (North Lab)
Phone: 305-743-8598 E35834 (Keys Lab)

Florida Keys Aqueduct Authority-WWTP
3375 Overseas Hwy
Marathon, FL 33050

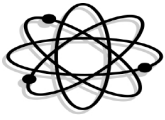
PO #: 15352
Client Project #: Cudjoe Key -M- SW Grabs
Date Sampled: Jul 15, 2016
Jul 26, 2016; Invoice: 304395

Report Summary

Date Received: Jul 15, 2016

FCL Project Manager: Thomas D. Cross

Laboratory #	Sample Description	Analysis	Chemist	Location	Sample Matrix
304395SW1	C-23	EPA350.1	PCW	Main Lab	Surface Water
		EPA351.2	VLB	Main Lab	
		EPA353.2	PCW	Main Lab	
		EPA365.1	VLB	Main Lab	
		OrgNit			
304395SW2	C-22	SM10200 H	TRB	Main Lab	Surface Water
		TotNit			
		EPA350.1	PCW	Main Lab	
		EPA351.2	VLB	Main Lab	
		EPA353.2	PCW	Main Lab	
304395SW3	C-21	EPA365.1	VLB	Main Lab	Surface Water
		OrgNit			
		SM10200 H	TRB	Main Lab	
		TotNit			
		EPA350.1	PCW	Main Lab	
304395SW4	CK-5	EPA351.2	VLB	Main Lab	Surface Water
		EPA353.2	PCW	Main Lab	
		EPA365.1	VLB	Main Lab	
		OrgNit			
		SM10200 H	TRB	Main Lab	
304395SW5	CK-8	TotNit			Surface Water
		EPA350.1	PCW	Main Lab	
		EPA351.2	VLB	Main Lab	
		EPA353.2	PCW	Main Lab	
		EPA365.1	VLB	Main Lab	
304395SW6	CK-14	OrgNit			Surface Water
		SM10200 H	TRB	Main Lab	
		TotNit			
		EPA350.1	PCW	Main Lab	
		EPA351.2	VLB	Main Lab	



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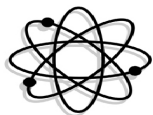
304395SW7	C-26	EPA350.1	PCW	Main Lab	Surface Water
		EPA351.2	VLB	Main Lab	
		EPA353.2	PCW	Main Lab	
		EPA365.1	VLB	Main Lab	
		OrgNit			
		SM10200 H	TRB	Main Lab	
		TotNit			
304395SW8	CK-1	EPA350.1	PCW	Main Lab	Surface Water
		EPA351.2	VLB	Main Lab	
		EPA353.2	PCW	Main Lab	
		EPA365.1	VLB	Main Lab	
		OrgNit			
		SM10200 H	TRB	Main Lab	
		TotNit			

Certificate of Results

Sample integrity was certified prior to analysis. Test results meet all requirements of the NELAC Standards except as noted in the Quality Control Report. Uncertainties for these data are available on request. This report may not be reproduced in part; results relate only to items tested.



Jefferson S. Flowers, Ph.D.
President/Technical Director



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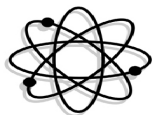
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Analysis Report

Lab #:	Sampled:	Desc:	Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
304395SW1	07/15/16 08:00 AM	C-23	Organic Nitrogen	0.308		0				OrgNit		
			Total Nitrogen(as N)	0.308		0				TotNit	17778-88-0	
			TKN(as N)	0.308 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
			NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
			Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
			Chlorophyll a	0.210	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
			Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16
304395SW2	07/15/16 08:10 AM	C-22	Organic Nitrogen	0.284		0				OrgNit		
			Total Nitrogen(as N)	0.284		0				TotNit	17778-88-0	
			TKN(as N)	0.284 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
			NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
			Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
			Chlorophyll a	0.120 I	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
			Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16
304395SW3	07/15/16 08:15 AM	C-21	Organic Nitrogen	0.335		0				OrgNit		
			Total Nitrogen(as N)	0.335		0				TotNit	17778-88-0	
			TKN(as N)	0.335 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
			NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
			Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
			Chlorophyll a	0.110 I	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
			Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16



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Lab #: 304395SW4 Sampled: 07/15/16 08:25 AM Desc: CK-5

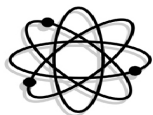
Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
Organic Nitrogen	0.324		0				OrgNit		
Total Nitrogen(as N)	0.324		0				TotNit	17778-88-0	
TKN(as N)	0.324 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
Chlorophyll a	0.140 I	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16

Lab #: 304395SW5 Sampled: 07/15/16 08:40 AM Desc: CK-8

Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
Organic Nitrogen	0.541		0				OrgNit		
Total Nitrogen(as N)	0.541		0				TotNit	17778-88-0	
TKN(as N)	0.541	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
Chlorophyll a	0.0800 I	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16

Lab #: 304395SW6 Sampled: 07/15/16 09:05 AM Desc: CK-14

Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
Organic Nitrogen	0.360		0				OrgNit		
Total Nitrogen(as N)	0.360		0				TotNit	17778-88-0	
TKN(as N)	0.360 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
Chlorophyll a	0.240	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16



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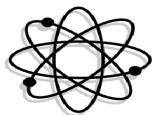
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Lab #: 304395SW7 Sampled: 07/15/16 09:20 AM Desc: C-26

Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
Organic Nitrogen	0.289		0				OrgNit		
Total Nitrogen(as N)	0.289		0				TotNit	17778-88-0	
TKN(as N)	0.289 I	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
Chlorophyll a	0.280	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16

Lab #: 304395SW8 Sampled: 07/15/16 09:45 AM Desc: CK-1

Parameter	Result	Units	DF	MDL	PQL	QC Batch	Method	CAS #	Analyzed
Organic Nitrogen	0.490		0				OrgNit		
Total Nitrogen(as N)	0.490		0				TotNit	17778-88-0	
TKN(as N)	0.490	mg/L	1.00	0.200	0.400	10316686	EPA351.2	7727-37-9	07/20/16
NO3+NO2(as N)	0.0200 U	mg/L	1.00	0.0200	0.0400	10316867	EPA353.2	I-005	07/20/16
Ammonia (as N)	0.0100 U	mg/L	1.00	0.0100	0.0200	10316868	EPA350.1	7664-41-7	07/20/16
Chlorophyll a	0.560	ug/L	1.00	0.0200	0.150	10317234	SM10200 H	479-61-8	07/14/16
Total Phosphorus(as P)	0.00200 U	mg/L	1.00	0.00200	0.00400	10317257	EPA365.1	7723-14-0	07/27/16



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Quality Report

Quality Control Batch: 10316686		Analyst: VLB						
Blank	Result	Units						
TKN(as N)	0.200U	mg/L						
Laboratory Control Sample	Result	Units	Spike	%REC	%REC Lim			
TKN(as N)	2.85	mg/L	3.00	94.86	80.00-120.00			
Matrix Spike	Result	Units	Spike	%REC	%REC Lim	Sample		
TKN(as N)	2.76	mg/L	3.00	72.28	80.00-120.00	0.588		
Matrix Spike Duplicate	Result	Units	Spike	%REC	%REC Lim	Sample	RPD	RPD Lim
TKN(as N)	2.83	mg/L	3.00	74.62	80.00-120.00	0.588	2.51	20.00
Quality Control Batch: 10316867		Analyst: PCW						
Blank	Result	Units						
NO3+NO2(as N)	0.0200U	mg/L						
Laboratory Control Sample	Result	Units	Spike	%REC	%REC Lim			
NO3+NO2(as N)	1.89	mg/L	2.00	94.50	85.00-115.00			
Matrix Spike	Result	Units	Spike	%REC	%REC Lim	Sample		
NO3+NO2(as N)	6.71	mg/L	4.00	96.50	85.00-115.00	2.85		
Matrix Spike Duplicate	Result	Units	Spike	%REC	%REC Lim	Sample	RPD	RPD Lim
NO3+NO2(as N)	6.62	mg/L	4.00	94.25	85.00-115.00	2.85	1.35	20.00
Quality Control Batch: 10316868		Analyst: PCW						
Blank	Result	Units						
Ammonia (as N)	0.0100U	mg/L						



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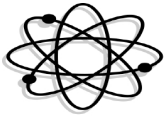
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Quality Control Batch: 10316868		Analyst: PCW							
Laboratory Control Sample		Result	Units	Spike	%REC	%REC Lim			
Ammonia (as N)		0.489	mg/L	0.500	97.80	85.00-115.00			
Matrix Spike		Result	Units	Spike	%REC	%REC Lim	Sample		
Ammonia (as N)		0.767	mg/L	0.780	98.33	85.00-115.00	0.0100U		
Matrix Spike Duplicate		Result	Units	Spike	%REC	%REC Lim	Sample	RPD	RPD Lim
Ammonia (as N)		0.672	mg/L	0.780	86.15	85.00-115.00	0.0100U	13.20	20.00
Quality Control Batch: 10317234		Analyst: TRB							
Blank		Result	Units						
Chlorophyll a		0.0200U	ug/L						
Quality Control Batch: 10317257		Analyst: VLB							
Blank		Result	Units						
Total Phosphorus(as P)		0.00200U	mg/L						
Laboratory Control Sample		Result	Units	Spike	%REC	%REC Lim			
Total Phosphorus(as P)		0.458	mg/L	0.500	91.56	85.00-115.00			
Matrix Spike		Result	Units	Spike	%REC	%REC Lim	Sample		
Total Phosphorus(as P)		0.185	mg/L	0.200	91.57	85.00-115.00	0.00200		
Matrix Spike Duplicate		Result	Units	Spike	%REC	%REC Lim	Sample	RPD	RPD Lim
Total Phosphorus(as P)		0.185	mg/L	0.200	91.52	85.00-115.00	0.00200	0.06	20.00



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Narrative Report

Sample Handling

Sample handling and holding time criteria were met for all samples. Samples collected by FCL. No unusual events occurred during analysis. Results are reported on a wet weight basis.

Quality Control

Enclosed analyses met method or FCL criteria, unless otherwise denoted on the sample results. Applied data qualifiers are defined below.

Attachments

Chain of Custody
Field Data

Qualifier	Meaning
U	Compound was analyzed for but not detected.
J	Estimated value; one or more QC components associated with this data value exceed current QC limits.
Q	Sample held beyond the accepted holding time.
L	Off-scale high; reported concentration exceeds the highest standard.
V	Analyte was detected in both the sample and the associated method blank.
W	The dissolved oxygen blank was above 0.2 mg/L but less than the MDL.
Z	Too numerous to count colonies on plate.
A	Absent
P	Present
T	Value reported is less than the statistical method detection limit. Reported for informational purposes only.
M	Value reported is greater than the statistical method detection limit, but less than the reported MDL.
G	The greatest of the dilutions performed did not yield sufficient oxygen depletion for valid data.
S	The least of the dilutions performed did not yield sufficient oxygen residual for valid data.
O	Result is greater than (over) the specified value.
I	Reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
B	Results based upon colony plate count outside ideal range.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.