

Effluent Quality Assessment

Florida State Hospital Wastewater Treatment Plant

Gadsden County

NPDES #FL0031402

Sampled February 17, 19 and 21, 2014

June 2014

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration
2014 FDEP Bureau of Labs Quality Manual
NELAC Certification No. E31780

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Florida State Hospital Wastewater Treatment Plant (WTTP), Blackberry Lane, Chattahoochee, Gadsden County, Florida, 32324. NPDES #FL0031402.

Facility Overview

Florida State Hospital WWTP is a wastewater treatment facility which uses the extended aeration process to treat domestic wastewater. See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO) and Discharge Monitoring Report (DMR) information.

Methods

Effluent composite samples for toxicity testing were collected on February 17, 2014, February 19, 2014, and February 21, 2014. Effluent grab and composite samples for biological and chemical analyses for this facility were collected on February 17, 2014. All samples were collected from the EFD-01 NPDES sampling point for Outfall D-001 by Marcel Goss and Jennifer Weger (FDEP Water Compliance Assurance Program Tallahassee) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 7-day chronic definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_05, TA07_09, and TA08_01 through TA08_09 (see Appendix B).

Results

Chemistry Results (See Table 1, Table 2, Table 3 and Appendix C)

- The total ammonia concentrations in the composite sample and the grab sample collected and preserved for chemical analysis were 0.007 mg N/L and 0.030 mg N/L, respectively. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentrations were < 0.02 mg/L.
- Total phosphorus, total nitrogen, copper, fluoride, turbidity and zinc were detected in the effluent at levels that comply with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or permitted limits. Arsenic, carbonaceous biochemical oxygen demand (CBOD), iron, lead, nickel, selenium and TSS were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Total ammonia was detected in the field blank between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).

Algal Growth Potential (See Table 2a and 2b and Appendix C)

- The effluent Algal Growth Potential (AGP) was 17.3 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Schultz (1987) determined that AGP values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The ratio of inorganic nitrogen to ortho-phosphate suggests that the effluent is phosphorus limited; whereas, the ratio of total nitrogen to total phosphorus suggests that the effluent is co-limited by both nitrogen and phosphorus (Miller et al. 1978). To determine actual nutrient limitation, a limiting-nutrient algal growth potential test with associated nutrient chemistry should be performed (Miller et al. 1978).

Toxicity Test Results (See Appendix C)

- Tests were performed February 18 - 26, 2014

Ceriodaphnia dubia 7-day chronic definitive bioassay – IC25*: > 100%
NOEC: 100%

Pimephales promelas 7-day chronic definitive bioassay – IC25*: 11.5%
NOEC: 100%

*NOTE: A 25% inhibition concentration (IC25) is the effluent concentration causing a 25% reduction in a biological response such as biomass or reproduction when compared to a control population. An IC25 of less than 100% in a chronic test may constitute exceedances of 62-302.530(20), 62-302.530(61) and/or a potential exceedance of facility permit limits. A No Observed Effect Concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of 62-302.530(61) and/or a potential violation of facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

- The bioassay samples showed toxicity to the *Pimephales promelas* test organisms. The cause of toxicity was not determined; however, the pattern of mortality in the *P. promelas* test suggests possible pathogen interference (EPA, 2002). It is recommended that a concurrent pathogen interference screening protocol be considered for this facility if additional *P. promelas* tests show toxicity (as noted in the facility summary) within this permit cycle.

Conclusion

The effluent samples collected from the EFD-01 NPDES sampling point for this facility on February 17, 19 and 21, 2014, were chronically toxic to the *Pimephales promelas* test organisms during the 7-day chronic definitive bioassays. The cause of toxicity was not determined; however, it was thought that pathogen interference may have been a factor; and, use of the pathogen interference protocol was recommended if additional *P. promelas* tests show toxicity. The effluent AGP result was greater than the "problem" threshold for fresh receiving waters suggesting that nutrient enrichment may be an issue. Effluent water quality samples collected on February 17, 2014, did not exceed any applicable water quality standards or exceed any permit conditions.

For additional information concerning this sampling event, including bioassay bench sheets and SRT data, please contact Diane.Power@dep.state.fl.us and/or Joseph.Faircloth@dep.state.fl.us.

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

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Stevenson, R. J. and L. L. Bahls. 1999. Periphyton protocols. Pp. 6.1-6.22 in: Rapid bioassessment protocols for use in wadeable streams and rivers. 2nd edition. By: M. T. Barbour, J. Gerritsen, B. D. Snyder and J. B. Stribling. EPA 841-B-99-002. U. S. Environmental Protection Agency, Office of Water, Washington, D. C.

USEPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 4th edition. EPA-821-R-02-013.

Table 1. Effluent limits, Class III Freshwater Criteria and field parameters

Florida State Hospital	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab
Sample Depth	m	-	-	0.15	0.3
Temperature	C	-	Report	18.39	16.37
pH	SU	6.0 - 8.5	6.0 - 8.5 s	7.16	7
Specific Conductance	umhos/cm	≤ 1,275	-	442	331
Salinity	ppth	-	-	0.25 c	0.2 c
Dissolved Oxygen Criteria- time of day corrected	% saturation	35.87	-	99.8	89.8
Dissolved Oxygen	mg/L	-	≥ 5.0	9.64	8.67
Flow	MGD	-	1.3 a	-	0.309 a
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01 s	< 0.03 QU£	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average

c - Value is calculated

U - Material analyzed for but not detected; value reported is the method detection limit

Q - Sample held beyond normal holding time

£ - measurement taken in the FDEP laboratory

Table 2. Effluent limits, Class III Freshwater Criteria and analytical water chemistry data

Florida State Hospital	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab
Ortho-phosphate	mg P/L	-	Report	0.006 I	1.3
Total Phosphorus	mg P/L	-	≤ 16.0 s	1.7	1.6
Total Ammonia	mg N/L	-	Report	0.007	0.030
Un-ionized Ammonia (calculated salinity)	mg N/L	≤ 0.02 s	≤ 0.02 s	< 0.02 c	< 0.02 c
Nitrate and Nitrite	mg N/L	-	Report	3.5	3.1
Total Kjeldahl Nitrogen	mg N/L	-	-	0.7	0.76
Organic Nitrogen	mg N/L	-	-	0.7 c	0.73 c
Total Nitrogen	mg N/L	-	≤ 25.0 s	4.2 c	3.9 c
Total Organic Carbon	mg C/L	-	-	5.2	2.3 A
Chlorophyll *a* - Corrected	ug/L	-	-	0.55 U	0.55 U
Phaeophytin	ug/L	-	-	0.40 U	0.40 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 40.0 s	1.4 IJQ	-
Hardness	mg/L	-	Report	123 c	c
Total Suspended Solids	mg/L	-	≤ 40.0 s	8 I	2 I
Turbidity	NTU	< 29 t	-	0.9	3.2 A
Color (true)	PCU	-	-	4.4 I	2.5 U
Alkalinity	mg CaCO3/L	-	-	93	89
Chloride	mg Cl/L	-	-	95	23 A
Fluoride	mg F/L	≤ 10.0	-	0.87	0.094 I
Sulfate	mg SO4/L	-	-	36	21 A
Microbiology					
Fecal Coliforms ¥	cfu/100 mL	≤ 400 s #	≤ 800 s #	1 U	2 B

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
Value exceeds the Class III Water Quality Criteria or permit limits
b - Value is calculated based on hardness
c - Value is calculated
s - Single sample
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptance range
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
¥ - Fecal coliform analysis performed by FDEP Central Lab
- If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)
£ - measurement taken in the FDEP laboratory

Table 3. Effluent limits, Class III Freshwater Criteria and analytical metals data

Florida State Hospital	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite Class III Criteria	Effluent Composite
Aluminum	ug/L	-	-	-	164
Arsenic	ug/L	≤ 50	-	-	0.56 I
Cadmium	ug/L	-	-	0.315 b	0.050 U
Calcium	mg/L	-	-	-	36.4
Chromium, Total [2]	ug/L	102 b	-	102 b	0.30 U
Copper	ug/L	11.1 b	Report	11.1 b	6.03
Iron	ug/L	≤ 1,000	-	≤ 1,000	120 I
Lead	ug/L	4.13 b	-	4.13 b	0.26 I
Magnesium	mg/L	-	-	-	7.75
Nickel	ug/L	62.1 b	-	62.1 b	0.59 I
Potassium	mg/L	-	-	-	5.5
Selenium	ug/L	≤ 5.0	-	≤ 5.0	0.57 I
Silver	ug/L	≤ 0.07	-	≤ 0.07	0.025 U
Sodium	mg/L	-	-	-	12.8
Zinc	ug/L	143 b	-	143 b	29

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.

1 -Value exceeds the Class III Water Quality Criteria or permit limits

2 - Class III Freshwater Quality Criterion (62-302.530(19)(a), F.A.C.) is for chromium-III

b - Value is calculated based on hardness, (62-302.530(3))

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

U - Material analyzed for but not detected; value reported is the method detection limit

Table 4. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN), ortho-phosphate (OP), total nitrogen (TN) and total phosphorus (TP) limitation and ratios of nitrogen to phosphorus

Florida State Hospital								
Location	**Test Species**	**AGP (measured)**	**Predicted AGP (TSIN) ± 20%**	**Predicted AGP (OP) ± 20%**	**Predicted AGP (TN) ± 20%**	**Predicted AGP (TP) ± 20%**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent Grab	*Pseudokirchneriella subcapitata*	17.3	14.7 ± 2.9	2.6 ± 0.5	39.9 ± 8	26.7 ± 5.3	64.5	16.9

Appendix A
Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Marcel Goss	**Contact Number:** (850) 245-2950
Facility Name (as it appears on permit): Florida State Hospital WWTP	**Former Names:**
NPDES Permit Number: FL0031402	**Permit Expiration Date:** November 15, 2016
Physical Address: Blackberry Lane Chattahoochee, FL 32324	
District: NWD	**County:** Gadsden County
Function of Facility: Hospital Wastewater Treatment Plant	
Facility Type: Domestic Wastewater	**Permitted Capacity (MGD):** 1.300 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 0.319 MGD 01/01/2013 to 01/31/2014	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):	
Description of type of Discharge: ☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify	

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):
FLW-01- Effluent Flow Metering: Fisher Porter Ultrasonic Meter located in the effluent parshall flume just outside the south wall of the chlorine contact chamber.
EFD-01- Final Effluent Sampling at Effluent Transfer Pump Basin: Auto Sampler at Pump Holding Basin or Sampling Port in discharge pipe
EFA-01 - Sampling after Chlorination: samples are collected in chlorine contact chamber.
OTH-01- Sampling after Dechlorination: Un-ionized Ammonia Monitoring Point at EFD-01 (WWTP discharge @ v-notch on the discharge side of the Chlorine Contact Chamber).
CAL-01- Calculated Value: Percent Capacity
SWA-01- Test Site located approximately 10m downstream the confluence of the unnamed tributary and North Mosquito Creek and ending 110m downstream.
SWB-02- Control Site (Background Ambient Monitoring Station) located in Mosquito Creek beginning approximately 20m upstream from the confluence of the unnamed tributary and North Mosquito Creek and ending approximately 120m upstream.

Description of Permitted Outfall(s):
Effluent discharges by way of a concrete lined drainage ditch and discharges at a depth of approximately 0 feet. The point of discharge into North Mosquito Creek is located approximately at latitude 30°42' 06.4" N, longitude 84°49' 58.8" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):
Florida State Hospital wastewater treatment plant (WWTP) is an existing treatment plant with a treatment capacity of 1.3 MGD annual average daily flow (AADF). The WWTP operates in the extended aeration mode. The WWTP includes a bar screen (4 MGD capacity), a grit Chamber (3.7 peak factor @ 1.3 MGD AADF), two (2) - primary clarifiers (59,400 gallons, each), two (2) - aeration tanks (in series @ 225,000 gallons, each), two (2) - final clarifiers (110,600 gallons, each), a chlorine contact chamber (27,300 gallons), a dechlorination tank (700 gallons), two (2) - anaerobic digesters (159,380 and 99,650 gallons), two (2) - aerobic digesters (70,500 and 73,300 gallons), eight (8) biosolids drying beds (total area of 17,040 ft2.), and a spare tank currently empty (72,590 gallons) which could be used to supplement either aeration tanks/digesters. Biosolids will be landfilled pursuant to the permit conditions.

PART I: Continued

List <u>current</u> Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under
(Leave cell blank if not applicable)

			Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Flow to D-001	MGD	Max Max	1.3 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-01	See I.A.4
			Report	Quarterly Average				
BOD, Carbonaceous 5-day, 20C	mg/L	Max Max Max Max	20.0 25.0 30.0 40.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Solids, Total Suspended	mg/L	Max Max Max Max	20.0 25.0 30.0 40.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Nitrogen, Total	mg/L	Max Max Max Max	12.5 16.0 18.75 25.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	8.0 10.0 12.0 16.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-01	
Coliform, Fecal	#/ 100mL	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	Weekly	Grab	EFD-01	See I.A.5
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Continuous	EFD-01	
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Single Sample	Daily; 7 days/Week	Grab	EFD-01	
Chlorine Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Daily; 7 days/Week	Grab	EFA-01	See I.A.3 and I.A.6
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 7 days/Week	Grab	EFD-01	
Copper, Total Recoverable	ug/L	Max	See I.A.8	Single Sample	Monthly	16-hr FPC	EFD-01	
Hardness, Total (as CaCO3)	mg/L	Max	Report	Single Sample	Monthly	16-hr FPC	EFD-01	
Nitrogen, Ammonia, Total as N	mg/L	Max	Report	Single Sample	Weekly	Grab	OTH-01	See Cond. I.A.7
Un-ionized Ammonia as NH3	mg/L	Max	0.02	Single Sample	Weekly	Grab	OTH-01	See Cond. I.A.7
Temperature	deg C	Max	Report	Single Sample	Weekly	Grab	OTH-01	See Cond. I.A.7
pH	SU	Max	Report	Single Sample	Weekly	Grab	OTH-01	See Cond. I.A.7
Copper, Total Recoverable	ug/L	NA	Report	Single Sample	Monthly	16-hr FPC	EFD-01	AO

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
North Mosquito Creek	Fresh

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-001. Routine toxicity tests shall be conducted once every six months, the first starting within the next six month period following the last routine test and lasting for the duration of this permit. The permittee shall conduct a daphnid, **Ceriodaphnia dubia**, Survival and Reproduction Test and a fathead minnow, **Pimephales promelas**, Larval Survival and Growth Test, concurrently. Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%**, **50%**, **25%**, **12.5%**, and **6.25%** final effluent.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):
Administrative Order AO078NW is in effect until July 1, 2014, which requires Florida State Hospital to submit to the Department quarterly reports outlining progress toward compliance with the time frames specified in paragraphs III.2, 3 & 4 of the AO. The permittee is also is required to submit for review and approval, a plan of study (POS) to meet the Total Recoverable Copper criteria for Class III fresh water by December 31, 2013.

Facility Mixing Zone Details (if applicable):
N/A

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:

Month	Parameter	Data	Limit	Statistical Base	Units
3/31/2013	IC25 Statre 7Day Chr Pimephales	<6.25%	100%	Minimum	Percent

Describe previous FYI and WQBEL study:
N/A

Describe previous or current Enforcement Actions (including WLs):
Consent Order, OGC 09-0378A-23-DW, effective July 31, 2009, compliance schedule with interim limits for total Nitrogen. Compliance schedule and Interim Limits extended until August 31, 2014.

Describe any violations or problems noted in previous inspection:
A review of the DMRs for the period from 02/01/2013 through 01/01/2014 indicated an exceedance of IC25 Statre 7Day Chr Pimephales.

Discuss whether DMR trends within previous five years are improving or declining:

Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information

Date(s) sample collected:	**Sampler(s):**
Temperature (Deg C):	**pH (SU):**
Dissolved Oxygen (mg/L):	**Conductivity (umhos/cm):**
Total Residual Chlorine (mg/L):	**Total Residual Chlorine - after Disinfection (mg/L):**
Method of Chlorination:	**Method of De-chlorination:**
Flow During Sample Collection for each outfall(MGD): .309 MGD	
Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):	
Describe Discharge during Sampling Event: ☐ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**	
Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:	

Appendix B
Explanation of measurements

(1) Quality Assurance and Quality Control

FDEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (FDEP SOPs). Methods for all analyses are on file at the FDEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.floridadep.org/labs/sop/index.htm and/or http://www.floridadep.org/labs/qa/index.htm.

(2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following FDEP SOPs. The results from these analyses were compared with Water Quality Criteria (62-302, F.A.C.) and facility permit limits.

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(1)(a) and/or a potential violation of facility permit limits. A 25% inhibition concentration (IC25) is the effluent concentration causing a 25% reduction in a biological response such as biomass or reproduction when compared to a control population. An IC25 of less than 100% in a chronic test may constitute exceedances of 62-302.530(20), 62-302.530(61) and/or a potential violation of facility permit limits. A no observed effect concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of 62-302.530(61) and/or a potential violation of facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

High levels of fecal coliform bacteria may constitute an exceedance of 62-302.530(6) and/or a potential violation of facility permit limits. Fecal coliform and enterococci results often are based on colony counts outside the acceptable range (B-qualifier). The dilutions performed on the sample did not yield results within the method acceptable range of 20- 60 colony forming units per plate. The B-qualifier does not affect data quality.

(5) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a “problem” threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C.

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N: P) is less than 10:1, nitrogen limitation of algal production is likely. When the N: P ratio is 20:1 or greater, phosphorus limitation is likely (USEPA 2000). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedance of 62-302.530(61), F.A.C.

(6) Chlorophyll *a* Content

Chlorophyll a content is an estimate of algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may constitute exceedances of 62-302.530(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(b) F.A.C.

(7) Definition of Qualifiers

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
V - Analyte was detected in both sample and method blank.
X - Too few individuals to calculate SCI value.
Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate
Z - Colonies were too numerous to count (TNTC)

Appendix C
Chemical Analyses of Effluent

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 0100	Effluent Composite	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.4 IJQ	mg/L	0.2	2
02/17/2014 0100	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100 L	IC25		
02/17/2014 0100	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	11.5 JQ	IC25		
02/17/2014 0100	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	100 JQ	NOEC		
02/17/2014 0100	Effluent Composite	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100	NOEC		
02/17/2014 0100	Effluent Composite	Metals	Nickel	0.59 I	ug/L	0.25	1
02/17/2014 0100	Effluent Composite	Metals	Copper	6.03	ug/L	0.5	1
02/17/2014 0100	Effluent Composite	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
02/17/2014 0100	Effluent Composite	Metals	Iron	120 I	ug/L	30	120
02/17/2014 0100	Effluent Composite	Metals	Silver	0.025 U	ug/L	0.03	0.1
02/17/2014 0100	Effluent Composite	Metals	Aluminum	164	ug/L	5	20
02/17/2014 0100	Effluent Composite	Metals	Arsenic	0.56 I	ug/L	0.25	1
02/17/2014 0100	Effluent Composite	Metals	Selenium	0.57 I	ug/L	0.2	0.8
02/17/2014 0100	Effluent Composite	Metals	Lead	0.26 I	ug/L	0.2	0.8
02/17/2014 0100	Effluent Composite	Metals	Zinc	29	ug/L	5	20
02/17/2014 0100	Effluent Composite	Metals	Sodium	12.8	mg/L	0.5	2
02/17/2014 0100	Effluent Composite	Metals	Calcium	36.4	mg/L	0.08	0.3
02/17/2014 0100	Effluent Composite	Metals	Hardness	123	mg/L	0.4	1.6
02/17/2014 0100	Effluent Composite	Metals	Magnesium	7.75	mg/L	0.04	0.2
02/17/2014 0100	Effluent Composite	Metals	Chromium	0.30 U	ug/L	0.3	1.2
02/17/2014 0100	Effluent Composite	Metals	Potassium	5.5	mg/L	0.3	1.2
02/17/2014 0100	Effluent Composite	Nutrients	Kjeldahl Nitrogen	0.7	mg N/L	0.08	0.2
02/17/2014 0100	Effluent Composite	Nutrients	NO2NO3-N	3.5	mg N/L	0.04	0.1
02/17/2014 0100	Effluent Composite	Nutrients	Total-P	1.7	mg P/L	0.03	0.3
02/17/2014 0100	Effluent Composite	Nutrients	TSS	8 I	mg/L	2	10
02/17/2014 1215	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	ug/L	0.55	1.7
02/17/2014 1215	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
02/17/2014 1215	Effluent Grab	Microbiology	Fecal Coliforms-Membrane Filter	2 B	cfu/100 mL	2	2
02/17/2014 1215	Effluent Grab	Nutrients	Color (true)	2.5 U	PCU	2.5	6
02/17/2014 1215	Effluent Grab	Nutrients	Total-P	1.6	mg P/L	0.03	0.3
02/17/2014 1215	Effluent Grab	Nutrients	Organic Carbon	2.3 A	mg C/L	0.5	1

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1215	Effluent Grab	Nutrients	O-Phosphate-P	1.3	mg P/L	0.16	0.4
02/17/2014 1215	Effluent Grab	Nutrients	Turbidity	3.2 A	NTU	0.1	0.1
02/17/2014 1215	Effluent Grab	Nutrients	Chloride	23 A	mg Cl/L	0.4	1
02/17/2014 1215	Effluent Grab	Nutrients	Fluoride	0.094 I	mg F/L	0.04	0.1
02/17/2014 1215	Effluent Grab	Nutrients	Sulfate	21 A	mg SO4/L	0.4	1
02/17/2014 1215	Effluent Grab	Nutrients	Alkalinity	89	mg CaCO3/L	0.65	2.5
02/17/2014 1215	Effluent Grab	Nutrients	Nitrite-N	0.002 U	mg N/L	0	0
02/17/2014 1215	Effluent Grab	Nutrients	Ammonia-N	0.03	mg N/L	0	0
02/17/2014 1215	Effluent Grab	Nutrients	NO2NO3-N	3.1	mg N/L	0.04	0.1
02/17/2014 1215	Effluent Grab	Nutrients	Kjeldahl Nitrogen	0.76	mg N/L	0.08	0.2
02/17/2014 1215	Effluent Grab	Pesticides	Atrazine Desisopropyl	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Hexazinone	0.029 UJ	ug/L	0.03	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Metribuzin	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Ametryn	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Diazinon	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Malathion	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Metolachlor	0.057 U	ug/L	0.06	0.2
02/17/2014 1215	Effluent Grab	Pesticides	Prometon	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Prometryn	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Bromacil	0.038 U	ug/L	0.04	0.2
02/17/2014 1215	Effluent Grab	Pesticides	Fenamiphos	0.029 U	ug/L	0.03	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Fonofos	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Norflurazon	0.029 U	ug/L	0.03	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Atrazine	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Butylate	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Ethion	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Ethoprop	0.0048 U	ug/L	0	0
02/17/2014 1215	Effluent Grab	Pesticides	Naled	0.038 UJ	ug/L	0.04	0.2
02/17/2014 1215	Effluent Grab	Pesticides	Parathion Methyl	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Simazine	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Atrazine Desethyl	0.012 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Demeton	0.023 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Metalaxyl	0.038 U	ug/L	0.04	0.2

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1215	Effluent Grab	Pesticides	Alachlor	0.057 U	ug/L	0.06	0.2
02/17/2014 1215	Effluent Grab	Pesticides	Disulfoton	0.0048 U	ug/L	0	0
02/17/2014 1215	Effluent Grab	Pesticides	Mevinphos	0.0095 U	ug/L	0.01	0
02/17/2014 1215	Effluent Grab	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.02	0.1
02/17/2014 1215	Effluent Grab	Pesticides	Phorate	0.0048 U	ug/L	0	0
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	11
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
02/17/2014 1215	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
02/17/2014 1215	Effluent Grab	Nutrients	Sample Depth	0.3	m		
02/17/2014 1215	Effluent Grab	Nutrients	pH	7			
02/17/2014 1215	Effluent Grab	Nutrients	Dissolved Oxygen	8.67	mg/L		
02/17/2014 1215	Effluent Grab	Nutrients	Temperature	16.37	C		
02/17/2014 1215	Effluent Grab	Nutrients	Specific Conductance	331	umhos/cm		
02/17/2014 1115	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.2
02/17/2014 1115	Field Blank	Metals	Silver	0.025 U	ug/L	0.03	0.1
02/17/2014 1115	Field Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
02/17/2014 1115	Field Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
02/17/2014 1115	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
02/17/2014 1115	Field Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
02/17/2014 1115	Field Blank	Metals	Zinc	5.0 U	ug/L	5	20
02/17/2014 1115	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
02/17/2014 1115	Field Blank	Metals	Calcium	0.075 U	mg/L	0.08	0.3

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1115	Field Blank	Metals	Aluminum	5.0 U	ug/L	5	20
02/17/2014 1115	Field Blank	Metals	Iron	30 U	ug/L	30	120
02/17/2014 1115	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
02/17/2014 1115	Field Blank	Metals	Hardness	0.40 U	mg/L	0.4	1.6
02/17/2014 1115	Field Blank	Metals	Copper	0.50 U	ug/L	0.5	1
02/17/2014 1115	Field Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
02/17/2014 1115	Field Blank	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
02/17/2014 1115	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
02/17/2014 1115	Field Blank	Nutrients	Ammonia-N	0.002 I	mg N/L	0	0
02/17/2014 1115	Field Blank	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
02/17/2014 1115	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
02/17/2014 1115	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0	0
02/17/2014 1115	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
02/17/2014 1115	Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.04	0.1
02/17/2014 1115	Field Blank	Nutrients	TSS	2 U	mg/L	2	10
02/17/2014 1115	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0	0
02/17/2014 1115	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
02/17/2014 1115	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
02/17/2014 1115	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0	0
02/17/2014 1115	Field Blank	Nutrients	Nitrite-N	0.002 U	mg N/L	0	0
02/17/2014 1115	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
02/17/2014 1115	Field Blank	Pesticides	Alachlor	0.063 U	ug/L	0.06	0.3
02/17/2014 1115	Field Blank	Pesticides	Ametryn	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Disulfoton	0.0052 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Ethoprop	0.0052 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Hexazinone	0.031 UJ	ug/L	0.03	0.1
02/17/2014 1115	Field Blank	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Metolachlor	0.063 U	ug/L	0.06	0.3
02/17/2014 1115	Field Blank	Pesticides	Phorate	0.0052 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Prometon	0.021 U	ug/L	0.02	0.1
02/17/2014 1115	Field Blank	Pesticides	Simazine	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Atrazine	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Azinphos Methyl	0.021 U	ug/L	0.02	0.1

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1115	Field Blank	Pesticides	Prometryn	0.021 U	ug/L	0.02	0.1
02/17/2014 1115	Field Blank	Pesticides	Bromacil	0.042 U	ug/L	0.04	0.2
02/17/2014 1115	Field Blank	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Butylate	0.021 U	ug/L	0.02	0.1
02/17/2014 1115	Field Blank	Pesticides	Fenamiphos	0.031 U	ug/L	0.03	0.1
02/17/2014 1115	Field Blank	Pesticides	Malathion	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Ethion	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Fonofos	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Metalaxyl	0.042 U	ug/L	0.04	0.2
02/17/2014 1115	Field Blank	Pesticides	Metribuzin	0.021 U	ug/L	0.02	0.1
02/17/2014 1115	Field Blank	Pesticides	Diazinon	0.010 U	ug/L	0.01	0
02/17/2014 1115	Field Blank	Pesticides	Norflurazon	0.031 U	ug/L	0.03	0.1
02/17/2014 1115	Field Blank	Pesticides	Parathion Ethyl	0.021 U	ug/L	0.02	0.1
02/17/2014 1115	Field Blank	Pesticides	Demeton	0.025 U	ug/L	0.03	0.1
02/17/2014 1115	Field Blank	Pesticides	Naled	0.042 UJ	ug/L	0.04	0.2
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
02/17/2014 1115	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6

Date Sampled	Field ID	Analyses Group	Component	Result	Remark	MDL	PQL
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
02/17/2014 1115	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
02/17/2014 1115	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
02/17/2014 1115	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
02/17/2014 1115	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8

The Bioassay of Florida State Hospital WWTP effluent sampled on February 17, 19 and 21, 2014. NPDES #FL0031402.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER										YR/MO/DA						Insp Type		Inspector		Fac Type	
1	N	2	5	3	F	L	0	0	3	1	4	0	2	11 12	1	4	0	2	1	7	18	**B**	19	**S**	20	1

Remarks

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The Priority Pollutants Analysis of Florida State Hospital WWTP effluent sampled on February 17, 19 and 21, 2014. NPDES #FL0031402.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER										YR/MO/DA						Insp Type		Inspector		Fac Type	
1	N	2	5	3	F	L	0	0	3	1	4	0	2	11 12	1	4	0	2	1	7	18	**X**	19	**S**	20	1

Remarks

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Biological Analyses of Florida State Hospital WWTP effluent sampled on February 17, 19 and 21, 2014. NPDES #FL0031402.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code		NPDES NUMBER										YR/MO/DA						Insp Type		Inspector		Fac Type	
1	N	2	5	3	F	L	0	0	3	1	4	0	2	11 12	1	4	0	2	1	7	18	**S**	19	**S**	20	1

Remarks

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