

Effluent Quality Assessment of

City of Clewiston Wastewater Treatment Plant

Hendry County

NPDES # FL0040665

Sampled July 20, 2015

January 2016

Biology Program

Laboratories

Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual

NELAC Certification No. E31780

CONTENTS

Facility Overview

Methods

Results

Conclusion

Literature Cited

Tables

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

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

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

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.

Appendices

Appendix A. Facility Summary

Appendix B. Explanation of measurements

Appendix C. Chemical Analyses of Effluent

EPA End Sheet

City of Clewiston Wastewater Treatment Plant (WWTP), Feedlot Road, Clewiston, Hendry County, Florida. NPDES #FL0040665.

Facility Overview

City of Clewiston WWTP is an extended aeration process domestic wastewater treatment plant. See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO) and Discharge Monitoring Report (DMR) information.

Methods

Effluent grab samples for toxicity testing and chemical analyses and effluent composite samples for biological and chemical analyses for this facility were collected on July 20, 2015. All samples were collected from the EFF-01 NPDES sampling point for Outfall D-002 by Diane Loughlin, Thomas Ducato and Kevin Johnson (FDEP South District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 96-hour acute definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09 (see Appendix B).

Results

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

- Total residual chlorine total was not detected in the effluent. The total ammonia concentrations in the grab sample and the composite sample collected and preserved for chemical analysis, were, respectively, 1.0 mg/L and 1.7 mg N/L. Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia concentrations for both samples were < 0.02 mg/L.
- The effluent's dissolved oxygen, fecal coliform and mercury concentrations exceeded their respective Class III Freshwater Quality Criteria (62-302.530(30),(6), and (41), F.A.C., respectively) and/or permitted limits. Alkalinity, carbonaceous biochemical oxygen demand (CBOD), total nitrogen, total phosphorus, total suspended solids, turbidity, iron and nickel 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, total chromium, copper, selenium and total suspended solids (TSS) were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Turbidity was detected in the field blank.
- The organic constituents Ametryn and Atrazine were detected in the effluent grab sample.

Algal Growth Potential (See Table 4 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 39.4 A 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, which represents a "problem" threshold for fresh receiving waters, imply nutrient enrichment. The analytical chemistry suggests that the effluent is nitrogen–limited (Miller et al. 1978).

Toxicity Test Results (See Appendix C)

- Tests were performed July 21 - 25, 2015.

  Ceriodaphnia dubia 96-hour acute definitive bioassay – LC_{50} > 100%, 0%* mortality in 100% sample at 96 hours

  Pimephales promelas 96-hour acute definitive bioassay – LC_{50} > 100%, 0%* mortality in 100% sample at 96 hours

*NOTE: In a 96-hour acute definitive test of 100% effluent, mortality of <20% provides confidence that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1) (a) 4, F.A.C.). Mortality between 20-50% indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% indicates that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3) (a), F.A.C.).

- The bioassay samples were not acutely toxic to the test organisms

Conclusion

The effluent sample collected from the EFF-01 NPDES sampling point for this facility on July 20, 2015, was not acutely toxic to either test species during the 96-hour acute definitive bioassays. The effluent AGP result was greater than the "problem" threshold for fresh receiving waters suggesting that nutrient enrichment may be an issue. Effluent dissolved oxygen, fecal coliform and mercury exceeded Freshwater Water Quality criteria (62-302.530(30), (6), and (41), F.A.C., respectively) and/or permitted limits. Additional water quality samples collected on July 20, 2015, did not exceed any applicable water quality standards or violate 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.

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. Methods for measuring the acute toxicity of effluents to freshwater and marine organisms. 5th edition. EPA-821-R-02-012.

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

City of Clewiston Wastewater Treatment Plant	Units	Class III Criteria	Effluent Permit Limits	EFF-01 Grab 7/20/15	EFF-01 Comp 7/20/15
Sample Depth	m	-	-	0.3	8.0
Temperature	C	-	Report	26.6	26.2
pH	SU	6.0 - 8.5	6.0 - 8.5 s	7.6	6.7
Specific Conductance	umhos/cm	≤ 1,275	-	906	929
Salinity	PPTh	-	-	0.4 c	0.4 c
Dissolved Oxygen	% saturation	≥ 38	-	14.61 ec	14.88 ec
Dissolved Oxygen	mg/L	≥ 5.0	≥ 5.0 s	1.17 e	1.20 e
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01 s	0.0	0.0

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
e - Value exceeds the Class III Water Quality Criteria or permit limits
s - Single sample

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

City of Clewiston Wastewater Treatment Plant	Units	Class III Criteria	Effluent Permit Limits	EFF-01 Grab 7/20/15	EFF-01 Comp 7/20/15
Analytical Organic and Pesticide Data					
Ametryn	ug/L	-	-	0.039 Q	-
Atrazine	ug/L	-	-	0.15 Q	-
Methylene Blue Active Substances	mg/L	-	≤ 0.5 s	-	0.12 U
Analytical Water Chemistry Data					
Ortho-phosphate	mg P/L	-	-	0.18	-
Total Phosphorus	mg P/L	-	≤ 1.4 s	0.24	0.39
Total Ammonia	mg N/L	-	Report	1.0	1.7
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	0.025	0.008 I
Total Kjeldahl Nitrogen	mg N/L	-	Report	2.5	3.1
Organic Nitrogen	mg N/L	-	-	1.5 c	1.4 c
Total Nitrogen	mg N/L	-	≤ 10.0 s	2.5 c	3.1 c
Total Organic Carbon	mg C/L	-	-	24	-
Chlorophyll *a* - Corrected	ug/L	-	-	2.8	-
Phaeophytin	ug/L	-	-	0.64 I	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60 s	-	2.2
Total Suspended Solids	mg/L	-	≤ 60 s	-	2 I
Total Dissolved Solids	mg/L	-	Report	-	538
Turbidity	NTU	< 29 t	-	1.0 [2]	-
Color (true)	PCU	-	-	130	-
Alkalinity	mg CaCO3/L	≥ 20	-	294	-
Chloride	mg Cl/L	-	-	96	-
Cyanide	ug/L	≤ 5.2	≤ 5.2 s	0.0050 U	-
Fluoride	mg F/L	≤ 10.0	-	0.21	-
Sulfate	mg SO4/L	-	-	17	-
Oils and Greases	mg/L	≤ 5.0	≤ 5.0 s	0.73 U	
Microbiology					
Fecal Coliforms [1]	cfu/100 mL	≤ 400 sx	-	9800 Be	-
Toxicity (Acute Definitive, percent LC50)					
Bioassay - Water flea *(Ceriodaphnia dubia)*	%	≥ 100	≥ 100 s	> 100	-
Bioassay - Fish *(Pimephales promelas)*	%	≥ 100	≥ 100 s	> 100	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
e - Value exceeds the Class III Water Quality Criteria or permit limits
s - Single sample

t - Shall not exceed 29 NTUs above background
x - If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)
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
1 - Fecal coliform analysis performed by Sanders Laboratory, Fort Myers
2 – Turbidity was detected above the MDL in the field blank

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

City of Clewiston Wastewater Treatment Plant	Units	Effluent Permit Limits	EFF-01 Grab 7/20/15 Class III Criteria	EFF-01 Grab 7/20/15	EFF-01 Comp 7/20/15 Class III Criteria	EFF-01 Comp 7/20/15
Hardness	mg/L	Report	-	-	-	279 c
Aluminum	ug/L	Report	-	-	-	27
Antimony	ug/L	≤ 4,300 s	≤ 4,300	-	≤ 4,300	0.25 U
Arsenic	ug/L	≤ 50 s	≤ 50	-	≤ 50	0.61 I
Cadmium	ug/L	-	-	-	≤ 0.579 b	0.050 U
Calcium	mg/L	-	-	-	-	87.9
Chromium, Total [3]	ug/L	-	-	-	≤ 200 b	0.92 I
Chromium-VI, Hexavalent	ug/L	≤ 11 s	≤ 11	-	≤ 11	3.00 U
Copper	ug/L	-	-	-	≤ 22.4 b	0.76 I
Iron	ug/L	≤ 1,000 s	≤ 1,000	-	≤ 1,000	140
Lead	ug/L	-	-	-	≤ 11.8 b	0.20 U
Magnesium	mg/L	-	-	-	-	14.5
Mercury	ug/L	≤ 0.012 s	0.012	0.88 e	0.012	-
Nickel	ug/L	-	-	-	≤ 124 b	1.44
Potassium	mg/L	-	-	-	-	41.2
Selenium	ug/L	-	≤ 5.0	-	≤ 5.0	0.21 I
Silver	ug/L	≤ 0.07 s	≤ 0.07	-	≤ 0.07	0.025 U
Sodium	mg/L	-	-	-	-	67.6
Zinc	ug/L	-	-	-	≤ 286 b	5.0 U

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
b - Value is calculated based on hardness, (62-302.530(3))
c - Value is calculated
e - Value exceeds the Class III Water Quality Criteria or permit limits
s - Single sample
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
3 - Class III Freshwater Quality Criterion (62-302.530(19)(a), F.A.C.) is for chromium-III

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

City of Clewiston Wastewater Treatment Plant								
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**
EFF-01 Grab 7/20/15	*Pseudokirchneriella subcapitata*	39.4 A	39 ± 7.8	77.4 ± 15.5	96 ± 19.2	103.2 ± 20.6	5.7	10.5

Fresh - freshwater species *Pseudokirchneriella subcapitata*

A - Value reported is the mean of two or more determinations

Appendix A

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Diane Loughlin	**Contact Number:** 239-344-5641
Facility Name (as it appears on permit): City of Clewiston Wastewater Treatment Plant	**Former Names:**
NPDES Permit Number: FL0040665	**Permit Expiration Date:** March 24, 2016
Physical Address: Feedlot Road, Clewiston, FL	
District: South	**County:** Hendry
Function of Facility: Domestic wastewater treatment facility	
Facility Type: Domestic wastewater	**Permitted Capacity (MGD):** 1.5
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): The mean flow for the months of June 2014 through May 2015 was 1.395 MGD.	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): n/a	
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):

Monitoring Site Number	Description of Monitoring Site
FLW-1	Recording flow meters and totalizers record the discharge flow from outfall D-002 which discharges into Sugarland District Canal #3.
EFF-1	The discharge line after all treatment from the facility, just prior to discharing to the Sugarland Drainage District Canal #3.
SWA-1	Surface water downstream sample location, on mile north of the facility in Canal #3.
SWA-2	Surface water upstream sample location, at the road ½ mile south of EFF-1 in Canal #3.
SWA-3	Surface water background sample location, ½ mile south of SWA-2 in Canal #3.
EFA-1	The chlorine contact chamber wet well.
FLW-2	The parshall flume prior to chrloine contact chamber disinfection.
INF-1	The plant headworks prior to any side stream mixing.

Description of Permitted Outfall(s):

Surface Water Discharge D-002: The underdrains in R-001 discharge to Sugarland Drainage Ditch which drains into Canal Number 3 (Water Body Identification Number 3246). The receiving waters are Class III fresh waters. The outfall discharges above the ditch approximately at latitude 26° 43’ 04”N, longitude 80° 56’ 37” W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):

The facility is an extended aeration process domestic wastewater treatment plant. The permitted capacity for the annual average daily flow is 1.5 million gallons per day. The major units of the facility are one mechanical screen, one grit trap, one equalization tank, two 0.75-million gallon oxidation ditches, two 122,000-gallon clarifiers, one 69,000-gallon chlorine contact chamber, and a sodium hypochlorite disinfection feed system. The solids handling units are one 180,000-gallon aerobic digester, two 45,000-gallon thickening tanks, and one 38,000-gallon lime stabilization tank.

All treated effluent is discharged to a slow-rate restricted public access system. R-001 is a reuse system which consists of three storage ponds with a total storage volume of 15 million gallons, and 24 sprayfields with a total area of 193 acres. The permitted capacity for the reuse system is 1.5 million gallons per day, annual average daily flow. The fields are underdrained. R-001 is located immediately south of the treatment facility.

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)

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site Number**	**Notes**
Flow	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-1	See I.A.5
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 25.0 40.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFF-1	
BOD, Carbonaceous 5 day, 20C	lb/day	Max Max	Report Report	Annual Average Monthly Average	Monthly	Calculated	EFF-1	
CBOD, % Removal, 5-day	percent	Min	85	Monthly Average	Monthly	Calculated	EFF-1	
Solids, Total Suspended	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFF-1	
Solids, Total Suspended	lb/day	Max Max	Report Report	Annual Average Monthly Average	Monthly	Calculated	EFF-1	
Solids, Total Suspended, % Removal	percent	Min	85	Monthly Average	Monthly	Calculated	EFF-1	
Coliform, Fecal	#/100mL	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	Weekly	Grab	EFA-1	See I.A.6
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFF-1	See I.A.4
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Grab	EFF-1	
Nitrogen, Total	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFF-1	

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of**	**Sample Type**	**Monitoring Site Number**	**Notes**
Nitrogen, Total	lb/day	Max Max	Report Report	Annual Average Monthly Average	Monthly	Calculated	EFF-1	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	0.7 0.875 1.05 1.4	Annual Average Monthly Average Weekly Average Single Sample	Weekly	8-hr FPC	EFF-1	
Phosphorus, Total (as P)	lb/day	Max Max	Report Report	Annual Average Monthly Average	Monthly	Calculated	EFF-1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Monthly Average	Weekly	8-hr FPC	EFF-1	
Ammonia, Unionized (as NH3)	mg/L	Max	0.02	Single Sample	Weekly	Calculated	EFF-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Monthly Average	Weekly	8-hr FPC	EFF-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Monthly Average	Weekly	8-hr FPC	EFF-1	
Solids, Total Dissolved (TDS)	mg/L	Max Max Max	Report Report Report	Annual Average Monthly Average Single Sample	Weekly	8-hr FPC	EFF-1	
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Single Sample	Daily	Grab	EFF-1	
Temperature (F), Water	Deg F	Max	Report	Single Sample	Weekly	Grab	EFF-1	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Quarterly	24-hr FPC	EFF-1	See I.A.9
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	Quarterly	24-hr FPC	EFF-1	See I.A.9

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of**	**Sample Type**	**Monitoring Site Number**	**Notes**
Aluminum, Total Recoverable	mg/L	Max	Report	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Antimony, Total Recoverable	ug/L	Max	4,300	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Arsenic, Total Recoverable	ug/L	Max	50	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Chromium, Hexavalent Total Recoverable	ug/L	Max	11	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Copper, Total Recoverable	ug/L	Max	-	Single Sample	Every 9 months	8-hr FPC	EFF-1	See I.A.7
Coliform, Total	#/100mL	Max	Report	Single Sample	Every 9 months	Grab	EFF-1	
Iron, Total Recoverable	mg/L	Max	1.0	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Silver, Total Recoverable	ug/L	Max	0.07	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Zinc, Total Recoverable	ug/L	Max	-	Single Sample	Every 9 months	8-hr FPC	EFF-1	See I.A.7
Hardness, Total (as CaCO3)	mg/L	Max	Report	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Lead, Total Recoverable	ug/L	Max	-	Single Sample	Every 9 months	8-hr FPC	EFF-1	See I.A.7
Mercury, Total Recoverable	ug/L	Max	0.012	Single Sample	Every 9 months	Grab	EFF-1	
Cyanide	ug/L	Max	5.2	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Surfactants (MBAS)	mg/L	Max	0.5	Single Sample	Every 9 months	8-hr FPC	EFF-1	
Oil and Grease	mg/L	Max	5.0	Single Sample	Every 9 months	Grab	EFF-1	
Nitrogen, Total	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Solids, Total Suspended	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
BOD, Carbonaceous 5 day, 20C	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of**	**Sample Type**	**Monitoring Site Number**	**Notes**
Temperature (F), Water	Deg F	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Salinity	ppt	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Oxygen, Dissolved (DO)	mg/L	Min	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
pH	s.u.	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Turbidity	NTU	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Chlorophyll a	mg/L	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Coliform, Fecal	#/100mL	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	
Coliform, Total	#/100mL	Max	Report	Single Sample	Every 9 months	Grab	SWA-1, SWA-2, SWA-3	

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
Canal Number 3	Class III fresh waters

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-002.

a. Effluent Limitation

(1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) shall not be less than 100% effluent. *[62-302.530(61) and 62-4.241(1)(b),*

F.A.C.]

(2) For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test.

[62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]

b. Monitoring Frequency

(1) Routine toxicity tests shall be conducted once every three months, the first starting within 60 days of the issuance date of this permit and lasting for the duration of this permit.

(2) Upon completion of four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 9.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency to once every six months. The request shall include a summary of the data and the complete bioassay laboratory reports for each test used to demonstrate compliance.

The Department shall act on the request within 45 days of receipt. Reductions in monitoring shall only become effective upon the Department's written confirmation that the facility has completed four consecutive valid routine tests that demonstrate compliance with the effluent limitation in 9.a.(1)

above.

(3) If a test within the sequence of the four is deemed invalid based on the acceptance criteria in EPA-

821-R-02-013, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency.

c. Sampling Requirements

(1) For each routine test or additional follow-up test conducted, a total of three flow proportional 24-hr composite samples of final effluent shall be collected and used **in** accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.

(2) The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.

(3) Samples for routine and additional follow-up tests shall not be collected on the same day.

d. Test Requirements

(1) 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.

(2) The permittee shall conduct a daphnid, Ceriodaphnia dubia, Survival and Reproduction Test and a fathead minnow, Pimephales promelas, Larval Survival and Growth Test, concurrently.

(3) All test species, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, EPA-821-R-02-013. Any deviation of the bioassay procedures outlined

herein shall be submitted in writing to the Department for review and approval prior to use. In the

event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-

013, Section 7.2.3.

e. Quality Assurance Requirements

(1) A standard reference toxicant (SRT) quality assurance (QA) chronic toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly chronic toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.

(2) If the mortality in the control (0% effluent) exceeds 20% for either species in any test or does not meet "test acceptability criteria", the test for that species (including the control) shall be invalidated and the test repeated. Test acceptability criteria for each species are defined in EPA-821-R-02-013, Section 13.12 **(Ceriodaphnia dubia) and** Section 11.11 (Pimephales promelas). The repeat test shall begin within 21 days after the last day of the invalid test.

(3) If 100% mortality occurs in all effluent concentrations for either test species prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.

(4) Routine and additional follow-up tests shall be evaluated for acceptability based on the observed dose- response relationship as required by EPA-821-R-02-013, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

f. Reporting Requirements

(1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:

(a) Routine and Additional Follow-up Test Results: The calculated IC25 for each test species shall be entered on the DMR.

(2) A bioassay laboratory report for each routine test shall be prepared according to EPA-821-R-02-013, Section 10, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-

821-R-02-013, Section 10, and mailed within 30 days after the last day of the second valid additional follow-up test.

(4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test. (5) The same bioassay data shall not be reported as the results of more than one test.

(6) All bioassay laboratory reports shall be sent to: Florida Department of Environmental Protection South District Office

P.O. Box 2549

Ft. Myers, Florida 33902-2549

g. Test Failures

(1) A test fails when the test results do not meet the limits in (2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 9.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 9.d.

(b) The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.

(c) The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5%, and 6.25% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be analyzed according to the procedures in EPA-821-R-02-013.

(3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12- month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.

(a) The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.

(b) The Department shall review and approve the plan before initiation.

(c) The plan shall be initiated within 30 days following the Department's written approval of the plan. (d) Progress reports shall be submitted quarterly to the Department at the address above.

(e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 9.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 9.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.

(f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 9.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.

(4) If chronic toxicity test results indicate greater than 50% mortality within 96 hours in an effluent concentration equal to or less than the effluent concentration specified as the acute toxicity limit in

9.a.(2), the Department may revise this permit to require acute definitive whole effluent toxicity testing.

(5) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity failures.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):

There have not been any Administrative or Consent Orders issued during the current permit cycle.

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:
A review of the DMRs revealed that no permit violations or plant upsets have occurred within the last year.

Describe previous FYI and WQBEL study:
The last FYI inspection was conducted at this facility on July 30, 2001.

Describe previous or current Enforcement Actions (including WLs):
No enforcement actions have been taking during the current permit cycle.

Describe any violations or problems noted in previous inspection:
Compliance Evaluation Inspections conducted on February 27, 2014 and August 6, 2014 identified the following violations:

- The scheduled items in Section VI(4) of the permit had not been completed.
- Copies of required reports were not maintained on site.
- Failure to report spills and abnormal events.
- Structural integrity issues observed with oxidation ditches, digesters and chlorine storage building.
- Wastewater discharged onto ground from leaks in tanks.
- Large volume or sand and grit accumulated in the bottom of treatment tanks.
- Clarifier weirs were not level.
- Flow measurement device was not working properly.
- Records indicate that the facility receives high flows during summer months, indicating possible inflow and infiltration issues may exist.

Discuss whether DMR trends within previous five years are improving or declining:
DMR trends appear to be improving. A number of effluent exceedances were reported on the 2012 and 2013 DMRs. No effluent exceedances have been reported thus far on the 2014 and 2015 DMRs.

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

PART II: Sampling Event Information

Date(s) sample collected: 7/20/2015	**Sampler(s):** Diane Loughlin, Tom Ducato, Kevin Johnson
Temperature (Deg C): 26.6	**pH (SU):** 7.6
Dissolved Oxygen (mg/L): 1.17	**Conductivity (umhos/cm):** 906
Total Residual Chlorine (mg/L): 0.0	**Total Residual Chlorine - after Disinfection (mg/L):** 3.00
Method of Chlorination: Liquid sodium hypochlorite	**Method of De-chlorination:** none

Flow During Sample Collection for each outfall(MGD): 0 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): The mean flow for the months of June 2014 through May 2015 was 1.395 MGD.
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: Due to facility layout and equipment limitations, effluent composite samples were collected as an 8-hour time composite, instead of an 8-hour flow proportional composite.

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.dep.state.fl.us/labs/library/lab_sops.htm and/or http://www.dep.state.fl.us/water/sas/sop/sops.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 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 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 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 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) Chlorophyll *a* Content

Chlorophyll *a* content is an estimate 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..

(6) 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 10.0 mg dry weight/L represents a “problem” threshold for marine 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 in a low salinity sample 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 (EPA-822-B-00-002). 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. Expected AGP is not calculated for marine samples incubated with *Dunaliella*.

(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 analysis of effluent

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:20	EFF-01 - Grab	AGP/LN	Algal Growth Potential	39.4 A	mg DryWt/L	0.3	0.9
7/20/2015 8:20	EFF-01 - Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.64 I	ug/L	0.4	1.2
7/20/2015 8:20	EFF-01 - Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.8	ug/L	0.55	1.7
7/20/2015 8:20	EFF-01 - Grab	Overflow	Fecal Coliforms-Membrane Filter	9800 B	cfu/100 mL	100	100
7/20/2015 8:20	EFF-01 - Grab	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	100 L	LC50		
7/20/2015 8:20	EFF-01 - Grab	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100 L	LC50		
7/20/2015 8:20	EFF-01 - Grab	Metals	Mercury	0.88	ng/L	0.1	0.4
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Alkalinity	294	mg CaCO3/L	0.65	2.5
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Chloride	96	mg Cl/L	0.4	1
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Organic Carbon	24	mg C/L	0.5	1
7/20/2015 8:20	EFF-01 - Grab	Nutrients	O-Phosphate-P	0.18	mg P/L	0.02	0.05
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Color (true)	130	PCU	2.5	6
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Turbidity	1.0	NTU	0.1	0.1
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Total-P	0.24	mg P/L	0.005	0.05
7/20/2015 8:20	EFF-01 - Grab	Nutrients	NO2NO3-N	0.025	mg N/L	0.004	0.01
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Ammonia-N	1.0	mg N/L	0.02	0.05
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Sulfate	17	mg SO4/L	0.4	1
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Fluoride	0.21	mg F/L	0.035	0.1
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Kjeldahl Nitrogen	2.5	mg N/L	0.08	0.2
7/20/2015 8:20	EFF-01 - Grab	Overflow	Cyanide	0.0050 U	mg/L	0.005	0.01
7/20/2015 8:20	EFF-01 - Grab	Overflow	HEM	0.73 U	mg/L	0.73	2.6
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Atrazine	0.15 Q	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Azinphos Methyl	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Disulfoton	0.0047 UQJ	ug/L	0.0047	0.019
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Ethoprop	0.0047 UQ	ug/L	0.0047	0.019
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Fonofos	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Carbamazepine	0.0088	ug/L	0.0004	0.002
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Alachlor	0.057 UQ	ug/L	0.057	0.23
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Metolachlor	0.057 UQ	ug/L	0.057	0.23
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Sucralose	3.0	ug/L	0.05	0.25
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Ametryn	0.039 Q	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Atrazine Desethyl	0.0095 UQ	ug/L	0.0095	0.038

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Chlorpyrifos Ethyl	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Metalaxyl	0.038 UQJ	ug/L	0.038	0.15
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Mevinphos	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Norflurazon	0.028 UQ	ug/L	0.028	0.11
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Prometryn	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Acetaminophen	0.0020 U	ug/L	0.002	0.01
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Atrazine Desisopropyl	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Demeton	0.023 UQ	ug/L	0.023	0.091
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Diazinon	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Naled	0.038 UQJ	ug/L	0.038	0.15
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Chlorpyrifos Methyl	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Malathion	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Parathion Ethyl	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Prometon	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Simazine	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Ethion	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Butylate	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Fenamiphos	0.028 UQ	ug/L	0.028	0.11
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Bromacil	0.038 UQ	ug/L	0.038	0.15
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Hexazinone	0.028 UQJ	ug/L	0.028	0.11
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Metribuzin	0.019 UQ	ug/L	0.019	0.076
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Parathion Methyl	0.0095 UQ	ug/L	0.0095	0.038
7/20/2015 8:20	EFF-01 - Grab	Pesticides	Phorate	0.0047 UQ	ug/L	0.0047	0.019
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Pentachlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:20	EFF-01 - Grab	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	57
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Total Residual Chlorine	0.00	mg/L		
7/20/2015 8:20	EFF-01 - Grab	Nutrients	pH	7.6			
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Dissolved Oxygen	1.17	mg/L		
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Specific Conductance	906	umhos/cm		
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Temperature	26.6	C		
7/20/2015 8:20	EFF-01 - Grab	Nutrients	Sample Depth	0.3	m		
7/20/2015 15:40	EFF-01 Composite	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.2	mg/L	0.2	2
7/20/2015 15:40	EFF-01 Composite	Metals	Copper	0.76 I	ug/L	0.5	1
7/20/2015 15:40	EFF-01 Composite	Metals	Calcium	87.9	mg/L	0.075	0.3
7/20/2015 15:40	EFF-01 Composite	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
7/20/2015 15:40	EFF-01 Composite	Metals	Magnesium	14.5	mg/L	0.04	0.16
7/20/2015 15:40	EFF-01 Composite	Metals	Chromium	0.92 I	ug/L	0.3	1.2
7/20/2015 15:40	EFF-01 Composite	Metals	Lead	0.20 U	ug/L	0.2	0.8
7/20/2015 15:40	EFF-01 Composite	Metals	Selenium	0.21 I	ug/L	0.2	0.8
7/20/2015 15:40	EFF-01 Composite	Metals	Sodium	67.6	mg/L	0.5	2
7/20/2015 15:40	EFF-01 Composite	Metals	Potassium	41.2	mg/L	1.5	6
7/20/2015 15:40	EFF-01 Composite	Metals	Arsenic	0.61 I	ug/L	0.25	1
7/20/2015 15:40	EFF-01 Composite	Metals	Antimony	0.25 U	ug/L	0.25	1
7/20/2015 15:40	EFF-01 Composite	Metals	Hardness	279	mg/L	0.35	1.4
7/20/2015 15:40	EFF-01 Composite	Metals	Iron	140	ug/L	30	120
7/20/2015 15:40	EFF-01 Composite	Metals	Silver	0.025 U	ug/L	0.025	0.1
7/20/2015 15:40	EFF-01 Composite	Metals	Nickel	1.44	ug/L	0.25	1
7/20/2015 15:40	EFF-01 Composite	Metals	Zinc	5.0 U	ug/L	5	20
7/20/2015 15:40	EFF-01 Composite	Metals	Aluminum	27	ug/L	5	20
7/20/2015 15:40	EFF-01 Composite	Nutrients	NO2NO3-N	0.008 I	mg N/L	0.004	0.01
7/20/2015 15:40	EFF-01 Composite	Nutrients	Kjeldahl Nitrogen	3.1	mg N/L	0.08	0.2
7/20/2015 15:40	EFF-01 Composite	Nutrients	TSS	2 I	mg/L	2	10
7/20/2015 15:40	EFF-01 Composite	Nutrients	Total-P	0.39	mg P/L	0.005	0.05
7/20/2015 15:40	EFF-01 Composite	Nutrients	TDS	538	mg/L	15	25

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 15:40	EFF-01 Composite	Nutrients	Ammonia-N	1.7	mg N/L	0.02	0.05
7/20/2015 15:40	EFF-01 Composite	Overflow	MBAS	0.12 U	mg/l LAS	0.12	0.2
7/20/2015 15:40	EFF-01 Composite	Overflow	Hexavalent Chromium	3.00 U	ug/L	3	
7/20/2015 15:40	EFF-01 Composite	Nutrients	Specific Conductance	929	umhos/cm		
7/20/2015 15:40	EFF-01 Composite	Nutrients	Total Residual Chlorine	0.0	mg/L		
7/20/2015 15:40	EFF-01 Composite	Nutrients	Temperature	26.2	C		
7/20/2015 15:40	EFF-01 Composite	Nutrients	Dissolved Oxygen	1.20	mg/L		
7/20/2015 15:40	EFF-01 Composite	Nutrients	pH	6.7			
7/20/2015 15:40	EFF-01 Composite	Nutrients	Sample Depth	8	ft		
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Zinc	5.0 U	ug/L	5	20
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Silver	0.025 U	ug/L	0.025	0.1
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Copper	0.50 U	ug/L	0.5	1
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Iron	30 U	ug/L	30	120
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Aluminum	5.0 U	ug/L	5	20
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Antimony	0.25 U	ug/L	0.25	1
7/20/2015 16:00	EFF-01-Equipment Blank	Metals	Hardness	0.35 U	mg/L	0.35	1.4
7/20/2015 16:00	EFF-01-Equipment Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
7/20/2015 16:00	EFF-01-Equipment Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
7/20/2015 16:00	EFF-01-Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
7/20/2015 16:00	EFF-01-Equipment Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
7/20/2015 16:00	EFF-01-Equipment Blank	Overflow	Hexavalent Chromium	3.00 U	ug/L	3	
7/20/2015 16:00	EFF-01-Equipment Blank	Overflow	MBAS	0.12 U	mg/l LAS	0.12	0.2
7/20/2015 8:25	EFF-01-Field Blank	Metals	Mercury	0.10 U	ng/L	0.1	0.4
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Turbidity	0.25	NTU	0.1	0.1
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
7/20/2015 8:25	EFF-01-Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
7/20/2015 8:25	EFF-01-Field Blank	Overflow	Cyanide	0.0050 U	mg/L	0.005	0.01
7/20/2015 8:25	EFF-01-Field Blank	Overflow	HEM	0.72 U	mg/L	0.72	2.6
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Fonofos	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Alachlor	0.059 UQ	ug/L	0.059	0.23
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Atrazine	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Chlorpyrifos Ethyl	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Metalaxyl	0.039 UQJ	ug/L	0.039	0.16
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Parathion Methyl	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Acetaminophen	0.0020 U	ug/L	0.002	0.01
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Carbamazepine	4.0E-04 U	ug/L	0.0004	0.002
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Norflurazon	0.029 UQ	ug/L	0.029	0.12
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Ethion	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Ethoprop	0.0049 UQ	ug/L	0.0049	0.02
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Malathion	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Naled	0.039 UQJ	ug/L	0.039	0.16
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Prometon	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Bromacil	0.039 UQ	ug/L	0.039	0.16
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Butylate	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Demeton	0.023 UQ	ug/L	0.023	0.094
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Diazinon	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Simazine	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Parathion Ethyl	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Fenamiphos	0.029 UQ	ug/L	0.029	0.12
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Atrazine Desisopropyl	0.0098 UQ	ug/L	0.0098	0.039

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Atrazine Desethyl	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Azinphos Methyl	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Metribuzin	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Hexazinone	0.029 UQJ	ug/L	0.029	0.12
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Chlorpyrifos Methyl	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Ametryn	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Metolachlor	0.059 UQ	ug/L	0.059	0.23
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Disulfoton	0.0049 UQJ	ug/L	0.0049	0.02
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Mevinphos	0.0098 UQ	ug/L	0.0098	0.039
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Phorate	0.0049 UQ	ug/L	0.0049	0.02
7/20/2015 8:25	EFF-01-Field Blank	Pesticides	Prometryn	0.020 UQ	ug/L	0.02	0.078
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.6
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Phenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	57
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.6
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.76

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Isophorone	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.5 U	ug/L	9.5	38
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzidine	95 U	ug/L	95	380
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.6
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	11
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.76
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.6
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Pentachlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.95 U	ug/L	0.95	3.8
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.6
7/20/2015 8:25	EFF-01-Field Blank	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.76

EPA End Sheet

The Bioassay of City of Clewiston WWTP effluent sampled on July 20, 2015. NPDES #FL0040665.

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 FL0040665	11 12 150720	18 B	19 S	20 1

Remarks

66

The Priority Pollutants Analysis of City of Clewiston WWTP effluent sampled on July 20, 2015. NPDES #FL0040665.

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 FL0040665	11 12 150720	18 X	19 S	20 1

Remarks

66

Biological Analyses of City of Clewiston WWTP effluent sampled on July 20, 2015. NPDES #FL0040665.

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 FL0040665	11 12 150720	18 S	19 S	20 1

Remarks

66