Effluent Quality Assessment of

Jasper WWTF

Hamilton County

NPDES # FL0027880

Sampled November 02, 2015

June 2016

Biology Program

FDEP Laboratory

Division of Environmental Assessment and Restoration

FDEP Laboratory Quality Manual

NELAC Certification No. E31780

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Jasper Wastewater Treatment Facility (WWTF), Baisden Lake Road, Jasper, Hamilton County, Florida, 32052. NPDES #FL0027880.

Facility Overview

Jasper WWTF is a conventional wastewater treatment facility which uses the Bardenpho 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 and grab samples for biological and chemical analyses were collected on November 02, 2015. All samples were collected from the EFD-01 NPDES sampling point for Outfall D-001 by Sharon Piltz, Patrick O'Connor, Jann Gruentzel, Brian Davis, Amy Kalmbacher (FDEP Northeast ROC) and Michael Eckles (FDEP Tallahassee ROC) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The algal growth potential test was performed following internal DEP SOPs 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 grab sample and in the composite sample collected and preserved for chemical analysis were 0.022 mg/L and 0.026 mg N/L, respectively. Based on the pH, salinity, and temperature of the effluent measured at the time of collection, the calculated unionized ammonia concentrations were < 0.02 mg/L.
- Alkalinity, carbonaceous biochemical oxygen demand (CBOD), copper, fluoride, total ammonia, total nitrogen, total phosphorus and turbidity were detected in the effluent at levels that comply with Class III Fresh Water Quality Criteria (62-302.530, F.A.C.) and/or permit limits. Arsenic, nickel and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Total ammonia and total phosphorus were detected in the equipment blank.

Algal Growth Potential (See Table 4, Appendix B and Appendix C)

- The effluent Algal Growth Potential (AGP) was 177 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Based on analytical chemistry, the ratio of total soluble inorganic nitrogen to ortho-phosphate (13.3) and the ratio of total nitrogen to total phosphorus (12.1) suggests that the effluent is co-limited by both nitrogen and phosphorus (Miller et al. 1978) (USEPA 2000).
- The effluent AGP result is greater than the AGP range (6.10 to 20.0 mg dry wt/L) suggested to be representative of high productivity for freshwater (Miller et al. 1978).
- The AGP result of 177 mg dry wt/L was greater than the predicted AGP values based on total nitrogen and total phosphorus concentrations. The reason for this discrepancy between the analyzed value and the predicted value(s) was not determined.

Toxicity Test Results

- Effluent samples for bioassay testing were not scheduled for this sampling event.

Conclusion

Effluent grab and composite samples for biological and chemical analyses were collected on November 2, 2015 from the EFD-01 NPDES sampling point for Outfall D-001 for this facility. Effluent samples for bioassay testing were not scheduled. The effluent AGP result is greater than the AGP range (6.10 - 20.0 mg dry wt/L) suggested to be representative of high productivity for freshwater (Miller et al. 1978). A reason for the discrepancy between the predicted AGP values based on nutrient chemistry and the measured AGP result was not determined.

Effluent water quality samples collected on November 02, 2015 complied with applicable water quality standards and 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

Manahan, S. E. 1994. Environmental Chemistry, 6th edition. Lewis Publishers, USA. 811 pp

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. 2000. Nutrient Criteria Technical Guidance Manual – River and Streams. EPA-822-B-00-002

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

Jasper WWTF	Units	Class III Criteria	Effluent Permit Limits	EFD-1 Grab	EFD-1 Comp
Sample Depth	m	-	-	0.3	-
Temperature	C	-	Report	26.3	4.1
pH	SU	6.0 - 8.5 s	6.0 - 8.5 s	7.29	-
Specific Conductance	µmhos/cm	≤ 1,275 s	Report	659	-
Salinity	ppth	-	-	0.31	-
Dissolved Oxygen	% saturation	≥ 34	-	94.6	-
Dissolved Oxygen	mg/L	-	≥ 4.0 s	7.62	-
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	-	-

A dash (-) indicates sample/measurement was not collected
or criterion/limit does not exist.
a - Annual average
s - Single sample

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

Jasper WWTF	Units	Class III Criteria	Effluent Permit Limits	EFD-1 Grab	EFD-1 Comp
Ortho-phosphate	mg P/L	-	-	0.22	-
Total Phosphorus	mg P/L	-	≤ 2.0 s	0.28	0.28
Total Ammonia	mg N/L	-	≤ 3.2 s	0.022	0.026
Un-ionized Ammonia	mg/L	≤ 0.02 s	≤ 0.07[2] s	< 0.02 c	-
Nitrate and Nitrite	mg N/L	-	-	2.9	3.7
Total Kjeldahl Nitrogen	mg N/L	-	-	0.50	0.57
Organic Nitrogen	mg N/L	-	-	0.48 c	0.54 c
Total Nitrogen	mg N/L	-	≤ 6.0 s	3.4 c	4.3 c
Total Organic Carbon	mg C/L	-	-	3.8 A	-
Chlorophyll *a* - Corrected	µg/L	-	-	1.1 I	-
Phaeophytin	µg/L	-	-	0.69 I	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 10.0 p	-	2.6 VJ
Total Suspended Solids	mg/L	-	≤ 10.0 p	-	2 U
Turbidity	NTU	< 29 t	-	0.45	-
Color (true)	PCU	-	-	3.1 I	-
Alkalinity	mg CaCO3/L	≥ 20 s	-	111 A	-
Chloride	mg Cl/L	-	-	49 A	-
Fluoride	mg F/L	≤ 10.0 s	-	0.19	-
Sulfate	mg SO4/L	-	-	120 A	-
Microbiology					
Fecal Coliforms [1]	cfu/100 mL	≤ 400 s[3]	≤ 800 s[3]	2 U	-

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

c - Value is calculated

p -16 hour flow proportioned composite

s - Single sample

t - Shall not exceed 29 NTUs above background

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

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

J - Estimated value

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

V - Analyte was detected in both sample and method blank

1 – Fecal coliform analysis performed by ALS Environmental, Jacksonville

2 - Consent order interim limit

3 - If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)

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

Jasper WWTF	Units	EFD-1 Grab Class III Criteria	Effluent Permit Limits	EFD-1 Grab
Hardness	-	-	-	234 c
Aluminum	µg/L	-	-	53
Arsenic	µg/L	≤ 50	-	0.55 I
Cadmium	µg/L	≤ 0.508 b	-	0.050 U
Calcium	mg/L	-	-	55.5
Chromium, Total [4]	µg/L	≤ 173 b	-	0.30 U
Copper	µg/L	≤ 19.3 b	-	2.02
Iron	µg/L	≤ 1,000	-	30 U
Lead	µg/L	≤ 9.4 b	-	0.20 U
Magnesium	mg/L	-	-	23.2
Nickel	µg/L	≤ 107 b	-	0.57 I
Potassium	mg/L	-	-	9.6
Selenium	µg/L	≤ 5.0	-	0.20 U
Silver	µg/L	≤ 0.07	-	0.025 U
Sodium	mg/L	-	-	33.6
Zinc	µg/L	≤ 246 b	-	18 I

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

4 - 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))

c - Value is calculated

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

Jasper WWTF								
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**
EFD-1 Grab	*Pseudokirchneriella subcapitata*	177	111 ± 22.2	94.6 ± 18.9	129.2 ± 25.8	120.4 ± 24.1	13.3	12.1

Appendix A

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Herndon Sims	**Contact Number:** (904) 256-1612
Facility Name (as it appears on permit): Jasper WWTF	**Former Names:** N/A
NPDES Permit Number: FL0027880	**Permit Expiration Date:** August 4, 2016
Physical Address: Baisden Lake Road, Jasper Fl 32052	
District: Northeast District	**County:** Hamilton
Function of Facility: Conventional Bardenpho domestic wastewater treatment facility	
Facility Type: Domestic Wastewater	**Permitted Capacity (MGD):** 1.2 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 0.65 MGD July 2014 – June 2015	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): NA	
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):

Outfall D-001:

EFA-1: Sample point immediately after disinfection
CAL-1: Calculated value
EFD-1**: Immediately after dechlorination**

WIM-01**: (Site A) Sample point at the wetland internal monitoring point A, immediately downstream of the point of discharge to the wetland**

WIM-02**: (Site C) Sample point at the wetland internal monitoring point BF2, in the approximate geographic middle of the wetland**

WIM-03**: (Site F) Sample point at the wetland internal monitoring point F, background site**

WEN-01**: (Site J) Background water quality sample point upstream of wetland located at Bell Creek and Highway 41, approximately located at 30° 29′ 46.9″ N 82° 56′ 0.7″ W**

WEP-01**: (Site E) Sample point at the wetland internal monitoring point E, in the vicinity of the point of discharge from the wetland Tiger Creek**

Description of Permitted Outfall(s):

Surface Water Discharge D-001: An existing 1.20 MGD annual average daily flow discharge to Baisden Swamp, which is approximate 250-acre receiving wetland, Class III fresh waters, (WBID # 3358). Final treated effluent flows by gravity through 400 feet of 18-inch diameter PVC pipe to the distribution main constructed along the northeastern wetland boundary. The point of discharge is located approximately at latitude 30°30' 14.63" N, longitude 82°56' 56.52" W.

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

Wastewater Treatment System:

An existing 1.20 million gallons per day (MGD) annual average daily flow (AADF) permitted capacity Bardenpho wastewater treatment system consisting of:

- **Preliminary Treatment: The preliminary treatment system includes a Raptor Microstrainer with a manual bar screen for bypass.**
- **Biological Treatment: The biological treatment process is Bardenpho® BRN treatment system which include two parallel treatment trains, each consisting of first anoxic (197,498 gallons), nitrification (592,495 gallons), second anoxic (148,124 gallons), and re-aeration (44,886 gallons). Operating equipment includes following:**
  - **Floating mixers (2 in each first anoxic basin and 1 in each second anoxic basin);**
  - **Three (2 on line and 1 standby) 1,690 – ICFM, 7.5 – hp blowers serving the coarse bubble diffuser system in the nitrification and re-aeration basins;**
  - **Three (2 on line 1 standby) 10 – hp internal recirculation pumps;**
  - **Two 45 – foot diameter, center feed peripheral draw clarifiers**
  - **Three, multiple use, RAS/WAS pumps, each capable of delivering 100% recycle at the design flow.**
- **Chemical Addition: Alum feed system to provide the chemical precipitation and removal of phosphorus.**
- **Clarification System: Final sedimentation at the facility is performed at two secondary clarifiers (1547.5 square feet each).**
- **Filtration System: The effluent filters are shallow bed, down flow, traveling bridge sand filters with a surface area of 354 ft^2 and a volume of 16,328 gallons each.**
- **Disinfection System: Effluent is disinfected at a chlorine contact chamber (42,531 gallons) using chlorine gas from 150 lb cylinders.**
- **Dechlorination System: The effluent after disinfection is dechlorinated in the dechlorination basin (4,765 gallons) using sulfur dioxide.**
- **Post Aeration System: Effluent is conveyed to a post-aeration chamber (13,225 gallons) before discharged.**
- **Biosolids Treatment: The biosolids are stabilized using aerobic digestion which includes two (2) 78,375 – gallon digesters with oxygen supplied by diffused air and a 73,434 – gallon aerated holding tank using diffused aeration. The domestic wastewater biosolids are stabilized to meet Class B requirements and land applied.**

Modification of the Wastewater Treatment System: **None**

Permit Revision**:**

- Change the Statistical Basis for Total Phosphorus from single sample to annual average in the AO 149 NE in accordance with 62-611.450 F.A.C.
- Add a biosolids section to the AO to allow the facility extra time to get their new biosolids land application site permitted

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)

Surface Water Discharge D-001:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max	1.2	Annual Average	Continuous	Recording Flow Meter with Totalizer	EFA-1	
			Report	Monthly Average				
			Report	Quarterly Average				
Percent Capacity, (TMADF ÷ Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL-1	
BOD, Carbonaceous 5-day, 20ºC	mg/L	Max	5.0	Annual Average	Weekly	16-hr FPC	EFD-1	
			6.25	Monthly Average				
			7.5	Weekly Average				
			10.0	Single Sample				
Solids, Total Suspended	mg/L	Max	5.0	Annual Average	Weekly	16-hr FPC	EFD-1	
		Max	6.25	Monthly Average				
		Max	7.5	Weekly Average				
		Max	10.0	Single Sample				
pH	s.u.	Min	6.0	Single Sample	Continuous	Meter	EFD-1	
		Max	8.5	Single Sample				
Chlorine, Total Residual (for Disinfection)	mg/L	Min	0.5	Single Sample	Continuous	Meter	EFA-1	
Chlorine, Total Residual (for Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Grab	EFD-1	
Coliform, Fecal	#/100mL	Max	200	Annual Average	Weekly	Grab	EFD-1	
		Max	200	Monthly Geometric Mean				
		Max	800	Single Sample				
Oxygen, Dissolved (DO)	mg/L	Min	4.0	Single Sample	Daily; 24 hours	Meter	EFD-1	

Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Nitrogen, Total	mg/L	Max	3.0	Annual Average	Weekly	16-hr FPC	EFD-1	
		Max	3.75	Monthly Average				
		Max	4.5	Weekly Average				
		Max	6.0	Single Sample				
Nitrogen, Ammonia, Total (as N)	mg/L	Max	1.6	Annual Average	Weekly	Grab	EFD-1	
		Max	2.0	Monthly Average				
		Max	2.4	Weekly Average				
		Max	3.2	Single Sample				
Temperature (ºC), Water	Deg C	Max	Report	Single Sample	Weekly	Meter	EFD-1	
Nitrogen, Ammonia, Total unionized (as N)	mg/L	Max	0.02/***(0.072)**	Single Sample	Weekly	Calculated	CAL-1	
Phosphorus, Total (as P)	mg/L	Max	1.0/***(1.5)**	Annual Average	Weekly	16-hr FPC	EFD-1	
		Max	1.25/***(1.5)**	Monthly Average				
		Max	1.5	Weekly Average				
		Max	2.0	Single Sample				
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia & Pimephales promelas)	percent	Min	100	Single Sample	Semi-annually ***(Quarterly)**	24-hr FPC	EFD-1	
Temperature (ºC), Water	Deg C	Max	Report	Single Sample	Once every 5 years	Meter	WEN-01 WEP-01	
Oxygen, Dissolved (DO)	mg/L	Min	Report	Single Sample	Once every 5 years	Meter	WEN-01 WEP-01	
Temperature (ºC), Water	Deg C	Max	Report	Single Sample	Quarterly	Meter	WIM – 01 WIM – 02 WEN-01 WEP-01	
Oxygen, Dissolved (DO)	mg/L	Min	Report	Single Sample	Quarterly	Meter	WIM – 01 WIM – 02 WEN-01 WEP-01	

Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
pH	s.u.	Max	Report	Single Sample	Quarterly	Meter	WIM – 01 WIM – 02 WEN-01 WEP-01	
Specific Conductance	umhos/cm	Max	Report	Single Sample	Quarterly	Meter	WIM – 01 WIM – 02 WEN-01 WEP-01	
BOD, Carbonaceous 5-day, 20ºC	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	
Solids, Total Suspended	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01	
Phosphorus, Total (as P)	mg/L	Max	0.20/***(0.8)**	Annual Average	Quarterly	Grab	WEP-01	
		Max	Report	Single Sample				
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01	
Nitrogen, Total	mg/L	Max	3.0	Annual Average	Quarterly	Grab	WEP-01	
		Max	Report	Single Sample				
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	

Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Coliform, Fecal	#/100mL	Max	Report	Single Sample	Quarterly	Grab	WIM – 01 WIM – 02 WEN-01 WEP-01	
Wetland Biota	yes/no	Max	Report	Single Sample	Annually	Grab	WIM – 01 WIM – 02 WIM-03 WEP-01	
Stream Stage	ft	Max	Report	Single Sample	Quarterly	Meter	WEP-01	
Total Phosphorus (as P)	mg/L	Max	*Report	Single Sample	Monthly	Grab	SWB-1 SWD-1	AO 149
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	%	Min	*Report	Single Sample	Monthly	24-FPC	EFD-1	CO

* Consent Order Interim limit

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Baisden Swamp	Fresh water

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):

-For 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.

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

Monitoring Frequency:

-Routine toxicity tests shall be conducted once every six months

Sampling Requirements:

-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 EPA sampling protocol.

-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.

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. 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.

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

AO 149 NE was issued February for total phosphorous (annual average), WQBEL report and biosoilds application site. The interim limit for total phosphorous was 0.8 mg/L (Ann. Avg.). The AO expired December 2013.

CO 15-0414 was issued September 2015 for exceeding total phosphorous, total chlorine residual, total unionized ammonia nitrogen and chronic toxicity. The interim limits are noted in the table above. The facility is required to submit quarterly reports and prepare a compliance plan to meet the final permit effluent limits. All corrective actions and meeting the final effluent limits is to be completed by August 2021.

Facility Mixing Zone Details (if applicable): NA

-For 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.

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

Monitoring Frequency**:**

-Routine toxicity tests shall be conducted once every six months

Sampling Requirements**:**

-**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 EPA sampling protocol.**

-**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.**

5. **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.**
6. **The permittee shall conduct a daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test and a fathead minnow, *Pimephales promelas*, Larval Survival and Growth Test, concurrently.**
7. **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. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.**
8. **The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.2.3.**

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

AO 149 NE **was issued February for total phosphorous (annual average), WQBEL report and biosoilds application site. The interim limit for total phosphorous was 0.8 mg/L (Ann. Avg.). The AO expired December 2013.**

CO 15-0414 **was issued September 2015 for exceeding total phosphorous, total chlorine residual, total unionized ammonia nitrogen and chronic toxicity. The interim limits are noted in the table above. The facility is required to submit quarterly reports and prepare a compliance plan to meet the final permit effluent limits. All corrective actions and meeting the final effluent limits is to be completed by August 2021.**

Facility Mixing Zone Details (if applicable): **NA**

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:			
Date	**Parameter and Units**	**Result**	**Limit**
3/31/14	Phosphorus, Total (as P) (mg/L) (Annl Avg)	0.438	0.2
4/30/14	Nitrogen, Total (mg/L) (Mo Avg)	6.03	6
	Nitrogen, Ammonia Total (as N)(mg/L) (Max)	3.58	3.2
6/30/14	Phosphorus, Total (as P) (mg/L) (Annl Avg)	0.48	0.2
8/31/14	Chlorine, Total Residual (mg/L) (Min)	<0.5	0.5
9/30/14	Chlorine, Total Residual (mg/L) (Min)	0.2	0.5
	Phosphorus, Total (as P) (mg/L) (Annl Avg)	0.479	0.2
10/31/14	Chlorine, Total Residual (mg/L) (Min)	0.3	0.5
	IC25 Statre 7 Day Chr Ceriodaphania (%) (Min)	70	100
	IC25 Statre 7 Day Chr Ceriodaphania (%) (Min)	38	100
12/31/14	Nitrogen, Total (mg/L) (Max)	9.39	6.0
	Nitrogen, Total (mg/L) (Mo Avg)	4.96	3.75
	Nitrogen, Ammonia Total Unionized (as N)(mg/L) (Max)	0.0802	0.02
	Phosphorus, Total (as P) (mg/L) (Annl Avg)	0.389	0.2
	Nitrogen, Ammonia Total (as N)(mg/L) (Max)	6.69	3.2
	Nitrogen, Ammonia Total (as N)(mg/L) (Mo Avg)	2.52	2.0
1/31/15	Nitrogen, Ammonia Total Unionized (as N)(mg/L) (Max)	0.0347	0.02

	Chlorine, Total Residual (mg/L) (Min)	0.4	0.5
2/28/15	Nitrogen, Ammonia Total Unionized (as N)(mg/L) (Max)	0.0701	0.02
3/31/15	Phosphorus, Total (as P) (mg/L) (Annl Avg)	0.33	0.2
4/30/15	Nitrogen, Ammonia Total Unionized (as N)(mg/L) (Max)	0.0227	0.02
5/31/15	Phosphorus, Total (as P) (mg/L) (Mo Avg)	1.26	1.25
	Chlorine, Total Residual (mg/L) (Min)	0.2	0.5
6/30/15	Phosphorus, Total (as P) (mg/L) (Mo Avg)	1.26	1.25
	Chlorine, Total Residual (mg/L) (Min)	0.3	0.5
	Chlorine, Total Residual (mg/L) (Max)	1.01	0.01
7/31/15	Nitrogen, Total (mg/L) (Max)	6.68	6.0
	Nitrogen, Total (mg/L) (Mo Avg)	4.53	3.75

Plant upsets: Facility had several SSO's between April 2014 and May 2014. No plant upsets were noted from the file.

Describe previous FYI and WQBEL study:

WQBEL: The facility had to sampled and prepare a WQBEL to change the permit limit (0.2 mg/L) for total phosphorus discharged from the wetland to Tiger Creek. A water quality monitoring plan was implemented with five monitoring sites. Baisden Swamp was identified as nitrogen limited by the TN:TP ratios and the algal growth potential **(**AGP) test. Based on the completed study, the facility requested the Department to waived the 0.2 mg TP / liter for wetland discharges, based on four findings: 1) TN:TP ratio indicates TP is not the limiting nutrient, 2) the AGP test was interpreted as indicating nitrogen limitation, and 3) higher levels of TP entering the swamp indicate local geology is the probable source of levels exceeding 0.2 mg TP / liter when water exits the swamp, and 3) the Suwannee River TMDL (FDEP 2008) indicates that there was no evidence of an adverse impact of TP concentrations on water quality in the downstream waters of the Suwannee River. The lack of evidence for phosphorus limitation within Baisden Swamp and the Suwannee River was most likely due to the phosphorus-rich geology within the County.

FYI: The last sampling inspection was conducted in 2010. The sampling data is not on file.

Describe previous or current Enforcement Actions (including WLs):

The facility was issued a CO September 2015 for exceeding total phosphorous, total chlorine residual, total unionized ammonia nitrogen and chronic toxicity. Currently, the facility has not decided if it will pay the enforcement penalty or do an in-kind project.

Describe any violations or problems noted in previous inspection:
The last inspection was conducted November 2013. The following non-compliance issues were noted and now corrected: non submittal of WQBEL report, laboratory thermometers not been properly checked, operators log book not being used, chlorine alarm not working, and (TP, ammonia, toxicity) exceedances/violations.

Discuss whether DMR trends within previous five years are improving or declining:
During the past five years, the facility exceeded the limits for TN, TP, toxicity, ammonia and total residual chlorine to the wetland. Based on the recently issued CO, the facility has to prepare a compliance plan and meet the above parameter limits by 2021. Based on the DMR trends, the facility is consistently having problems with TN, TP, toxicity and ammonia.

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

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):

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.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) 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.

(4) 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..

(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. 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*.

(6) 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	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 10:55	EFD-1 Grab	AGP/LN	Algal Growth Potential	177	mg DryWt/L	0.3	0.9
11/2/2015 10:55	EFD-1 Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.69 I	ug/L	0.4	1.2
11/2/2015 10:55	EFD-1 Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	1.1 I	ug/L	0.55	1.7
11/2/2015 10:55	EFD-1 Grab	Microbiology	Fecal Coliforms-Membrane Filter	2 U	cfu/100 mL	2	2
11/2/2015 10:55	EFD-1 Grab	Metals	Aluminum	53	ug/L	5	20
11/2/2015 10:55	EFD-1 Grab	Metals	Potassium	9.6	mg/L	0.3	1.2
11/2/2015 10:55	EFD-1 Grab	Metals	Nickel	0.57 I	ug/L	0.25	1
11/2/2015 10:55	EFD-1 Grab	Metals	Calcium	55.5	mg/L	0.075	0.3
11/2/2015 10:55	EFD-1 Grab	Metals	Magnesium	23.2	mg/L	0.04	0.16
11/2/2015 10:55	EFD-1 Grab	Metals	Silver	0.025 U	ug/L	0.025	0.1
11/2/2015 10:55	EFD-1 Grab	Metals	Chromium	0.30 U	ug/L	0.3	1.2
11/2/2015 10:55	EFD-1 Grab	Metals	Zinc	18 I	ug/L	5	20
11/2/2015 10:55	EFD-1 Grab	Metals	Copper	2.02	ug/L	0.5	1
11/2/2015 10:55	EFD-1 Grab	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
11/2/2015 10:55	EFD-1 Grab	Metals	Sodium	33.6	mg/L	0.5	2
11/2/2015 10:55	EFD-1 Grab	Metals	Selenium	0.20 U	ug/L	0.2	0.8
11/2/2015 10:55	EFD-1 Grab	Metals	Lead	0.20 U	ug/L	0.2	0.8
11/2/2015 10:55	EFD-1 Grab	Metals	Arsenic	0.55 I	ug/L	0.25	1
11/2/2015 10:55	EFD-1 Grab	Metals	Iron	30 U	ug/L	30	120
11/2/2015 10:55	EFD-1 Grab	Nutrients	Ammonia-N	0.022	mg N/L	0.002	0.005
11/2/2015 10:55	EFD-1 Grab	Nutrients	Total-P	0.28	mg P/L	0.005	0.05
11/2/2015 10:55	EFD-1 Grab	Nutrients	Kjeldahl Nitrogen	0.50	mg N/L	0.08	0.2
11/2/2015 10:55	EFD-1 Grab	Nutrients	Fluoride	0.19	mg F/L	0.035	0.1
11/2/2015 10:55	EFD-1 Grab	Nutrients	O-Phosphate-P	0.22	mg P/L	0.08	0.2
11/2/2015 10:55	EFD-1 Grab	Nutrients	Sulfate	120 A	mg SO4/L	0.4	1
11/2/2015 10:55	EFD-1 Grab	Nutrients	Color (true)	3.1 I	PCU	2.5	6
11/2/2015 10:55	EFD-1 Grab	Nutrients	Turbidity	0.45	NTU	0.1	0.1
11/2/2015 10:55	EFD-1 Grab	Nutrients	Organic Carbon	3.8 A	mg C/L	0.5	1
11/2/2015 10:55	EFD-1 Grab	Nutrients	NO2NO3-N	2.9	mg N/L	0.08	0.2
11/2/2015 10:55	EFD-1 Grab	Nutrients	Total Alkalinity	111 A	mg CaCO3/L	0.65	2.5
11/2/2015 10:55	EFD-1 Grab	Nutrients	Chloride	49 A	mg Cl/L	0.4	1
11/2/2015 10:55	EFD-1 Grab	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 10:55	EFD-1 Grab	Pesticides	Hexazinone	0.030 U	ug/L	0.03	0.12
11/2/2015 10:55	EFD-1 Grab	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Metolachlor	0.060 U	ug/L	0.06	0.24
11/2/2015 10:55	EFD-1 Grab	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Carbamazepine	0.11	ug/L	0.0004	0.002
11/2/2015 10:55	EFD-1 Grab	Pesticides	Alachlor	0.060 U	ug/L	0.06	0.24
11/2/2015 10:55	EFD-1 Grab	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Ethoprop	0.0050 U	ug/L	0.005	0.02
11/2/2015 10:55	EFD-1 Grab	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Naled	0.040 U	ug/L	0.04	0.16
11/2/2015 10:55	EFD-1 Grab	Pesticides	Prometon	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Fenuron	0.0080 U	ug/L	0.008	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
11/2/2015 10:55	EFD-1 Grab	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Phorate	0.0050 U	ug/L	0.005	0.02
11/2/2015 10:55	EFD-1 Grab	Pesticides	Sucralose	9.9	ug/L	0.1	0.5
11/2/2015 10:55	EFD-1 Grab	Pesticides	Acetaminophen	0.0040 U	ug/L	0.004	0.016
11/2/2015 10:55	EFD-1 Grab	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
11/2/2015 10:55	EFD-1 Grab	Pesticides	Butylate	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Imidacloprid	0.012 I	ug/L	0.004	0.016
11/2/2015 10:55	EFD-1 Grab	Pesticides	Atrazine Desisopropyl	0.015 U	ug/L	0.015	0.06
11/2/2015 10:55	EFD-1 Grab	Pesticides	Demeton	0.024 U	ug/L	0.024	0.096
11/2/2015 10:55	EFD-1 Grab	Pesticides	Disulfoton	0.0050 U	ug/L	0.005	0.02
11/2/2015 10:55	EFD-1 Grab	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
11/2/2015 10:55	EFD-1 Grab	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.08
11/2/2015 10:55	EFD-1 Grab	Pesticides	Fluridone	4.0E-04 U	ug/L	0.0004	0.002
11/2/2015 10:55	EFD-1 Grab	Pesticides	Linuron	0.0040 U	ug/L	0.004	0.02
11/2/2015 10:55	EFD-1 Grab	Pesticides	Primidone	0.092	ug/L	0.008	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Atrazine Desethyl	0.015 U	ug/L	0.015	0.06

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 10:55	EFD-1 Grab	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04
11/2/2015 10:55	EFD-1 Grab	Pesticides	Norflurazon	0.030 U	ug/L	0.03	0.12
11/2/2015 10:55	EFD-1 Grab	Pesticides	Diuron	0.0020 U	ug/L	0.002	0.01
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2-Nitrophenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Isophorone	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Diethyl phthalate	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,4-Dimethylphenol	9.6 U	ug/L	9.6	38
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	58
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Pentachlorophenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Hexachlorobenzene	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	58
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	12
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	12

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	12
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzidine	96 U	ug/L	96	380
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Di-n-butyl phthalate	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	12
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	1,4-Dioxane	0.26	ug/L	0.02	0.1
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Dimethyl phthalate	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	12
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	12
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	2-Chlorophenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.77
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.7
11/2/2015 10:55	EFD-1 Grab	Priority Organic Pollutants	Phenol	0.96 U	ug/L	0.96	3.8
11/2/2015 10:55	EFD-1 Grab	Nutrients	Temperature	26.3	C		
11/2/2015 10:55	EFD-1 Grab	Nutrients	Dissolved Oxygen	7.62	mg/L		
11/2/2015 10:55	EFD-1 Grab	Nutrients	Specific Conductance	659	umhos/cm		
11/2/2015 10:55	EFD-1 Grab	Nutrients	Sample Depth	0.3	m		
11/2/2015 10:55	EFD-1 Grab	Nutrients	pH	7.29			
11/2/2015 9:00	EFD-1 Comp	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.6 VJ	mg/L	0.2	2
11/2/2015 9:00	EFD-1 Comp	Nutrients	Kjeldahl Nitrogen	0.57	mg N/L	0.08	0.2
11/2/2015 9:00	EFD-1 Comp	Nutrients	NO2NO3-N	3.7	mg N/L	0.08	0.2
11/2/2015 9:00	EFD-1 Comp	Nutrients	TSS	2 U	mg/L	2	10
11/2/2015 9:00	EFD-1 Comp	Nutrients	Total-P	0.28	mg P/L	0.005	0.05
11/2/2015 9:00	EFD-1 Comp	Nutrients	Ammonia-N	0.026	mg N/L	0.002	0.005
11/2/2015 9:00	EFD-1 Comp	Nutrients	Temperature	4.1	C		

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 11:50	Equip Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
11/2/2015 11:50	Equip Blank	Nutrients	Total-P	0.003 I	mg P/L	0.002	0.005
11/2/2015 11:50	Equip Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
11/2/2015 11:50	Equip Blank	Nutrients	Ammonia-N	0.006	mg N/L	0.002	0.005
11/2/2015 11:50	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
11/2/2015 11:50	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
11/2/2015 11:50	Field Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
11/2/2015 11:50	Field Blank	Metals	Copper	0.50 U	ug/L	0.5	1
11/2/2015 11:50	Field Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
11/2/2015 11:50	Field Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
11/2/2015 11:50	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
11/2/2015 11:50	Field Blank	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
11/2/2015 11:50	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
11/2/2015 11:50	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
11/2/2015 11:50	Field Blank	Metals	Silver	0.025 U	ug/L	0.025	0.1
11/2/2015 11:50	Field Blank	Metals	Aluminum	5.0 U	ug/L	5	20
11/2/2015 11:50	Field Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
11/2/2015 11:50	Field Blank	Metals	Iron	30 U	ug/L	30	120
11/2/2015 11:50	Field Blank	Metals	Zinc	5.0 U	ug/L	5	20
11/2/2015 11:50	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
11/2/2015 11:50	Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
11/2/2015 11:50	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
11/2/2015 11:50	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
11/2/2015 11:50	Field Blank	Nutrients	Ammonia-N	0.003 I	mg N/L	0.002	0.005
11/2/2015 11:50	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
11/2/2015 11:50	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
11/2/2015 11:50	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
11/2/2015 11:50	Field Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
11/2/2015 11:50	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
11/2/2015 11:50	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
11/2/2015 11:50	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
11/2/2015 11:50	Field Blank	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
11/2/2015 11:50	Field Blank	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.081

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 11:50	Field Blank	Pesticides	Prometon	0.020 U	ug/L	0.02	0.081
11/2/2015 11:50	Field Blank	Pesticides	Fenuron	0.0080 U	ug/L	0.008	0.04
11/2/2015 11:50	Field Blank	Pesticides	Imidacloprid	0.0040 U	ug/L	0.004	0.016
11/2/2015 11:50	Field Blank	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.081
11/2/2015 11:50	Field Blank	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Ethoprop	0.0050 U	ug/L	0.005	0.02
11/2/2015 11:50	Field Blank	Pesticides	Acetaminophen	0.0040 U	ug/L	0.004	0.016
11/2/2015 11:50	Field Blank	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Primidone	0.0080 U	ug/L	0.008	0.04
11/2/2015 11:50	Field Blank	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Norflurazon	0.030 U	ug/L	0.03	0.12
11/2/2015 11:50	Field Blank	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
11/2/2015 11:50	Field Blank	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Diuron	0.0020 U	ug/L	0.002	0.01
11/2/2015 11:50	Field Blank	Pesticides	Butylate	0.020 U	ug/L	0.02	0.081
11/2/2015 11:50	Field Blank	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
11/2/2015 11:50	Field Blank	Pesticides	Hexazinone	0.030 U	ug/L	0.03	0.12
11/2/2015 11:50	Field Blank	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
11/2/2015 11:50	Field Blank	Pesticides	Phorate	0.0050 U	ug/L	0.005	0.02
11/2/2015 11:50	Field Blank	Pesticides	Carbamazepine	4.0E-04 U	ug/L	0.0004	0.002
11/2/2015 11:50	Field Blank	Pesticides	Fluridone	4.0E-04 U	ug/L	0.0004	0.002
11/2/2015 11:50	Field Blank	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.24
11/2/2015 11:50	Field Blank	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.24
11/2/2015 11:50	Field Blank	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Linuron	0.0040 U	ug/L	0.004	0.02
11/2/2015 11:50	Field Blank	Pesticides	Demeton	0.024 U	ug/L	0.024	0.097
11/2/2015 11:50	Field Blank	Pesticides	Naled	0.040 U	ug/L	0.04	0.16
11/2/2015 11:50	Field Blank	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.081
11/2/2015 11:50	Field Blank	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
11/2/2015 11:50	Field Blank	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.081

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 11:50	Field Blank	Pesticides	Disulfoton	0.0050 U	ug/L	0.005	0.02
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Pentachlorophenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Phenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Diethyl phthalate	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	59
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	59
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12

Date	Field ID	Analysis	Component	Result	Units	MDL	PQL
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzidine	99 U	ug/L	99	400
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	7.9
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Isophorone	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.9 U	ug/L	9.9	40
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	1,4-Dioxane	0.11	ug/L	0.02	0.1
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.99 U	ug/L	0.99	4
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.79
11/2/2015 11:50	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.79

Effluent from Jasper WWTF for bioassay testing was not collected on November 2, 2015. NPDES #FL0027880.

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	3	FL0027880	11 12	151102	18 **B**	19 **S**	20 1

Remarks

Samples for bioassay not collected

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The Priority Pollutants Analysis of Jasper WWTF effluent sampled on November 2, 2015. NPDES #FL0027880.

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	3	FL0027880	11 12	151102	18 **X**	19 **S**	20 1

Remarks

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Biological Analyses of Jasper WWTF effluent sampled on November 2, 2015. NPDES #FL0027880.

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	3	FL0027880	11 12	151102	18 **S**	19 **S**	20 1

Remarks

66