Iron Bridge Regional Water Reclamation Facility

Seminole County

NPDES # FL0037966

Sampled October 6, 2014

December 2014

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual

NELAC Certification No. E31780

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Iron Bridge Regional Water Reclamation Facility (WRF), 601 Iron Bridge Circle, Oviedo, Seminole County, Florida, 32765-8283. NPDES #FL0037966.

Facility Overview

Iron Bridge Regional WRF is a domestic wastewater treatment facility. 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 biological and chemical analyses for this facility were collected on October 6, 2014. All samples were collected from the EFD-01 NPDES sampling point for Outfall D-001 by Phil Kane, Jenny Farrell and David Smicherko (FDEP Central District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 48-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 Tables 1, 2, 3 and Appendix C)

- The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.029 mg N/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L. Total ammonia was also detected in the field blank between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).
- Total Phosphorus, total Kjeldahl nitrogen, total nitrogen, turbidity, alkalinity, fluoride, copper, and zinc were detected in the effluent at levels that comply with Class III Fresh Water Quality Criteria (62-302.530, F.A.C.). Carbonaceous biochemical oxygen demand (CBOD), total suspended solids, arsenic, total chromium, iron, nickel and selenium were detected between the MDL and PQL.
- Total organic carbon was detected in the field blank.

Algal Growth Potential (See Table 4 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 39.2 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 October 7 - 9, 2014.

Ceriodaphnia dubia 48-hour acute definitive bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours
Pimephales promelas 48-hour acute definitive bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 48 hours

*NOTE: In a 48-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 EFA-01 NPDES sampling point for this facility on October 6, 2014, was not acutely toxic to either test species during the 48-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 water quality samples collected on October 6, 2014, 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.

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

Iron Bridge Regional WRF	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab 10/6/14
Temperature	°C	-	Report	25.7
pH	SU	6.0 - 8.5	6.0 - 8.5[1]	7.23
Specific Conductance	umhos/cm	≤ 1,275	-	515.1
Salinity	ppth	-	-	0.2 c
Dissolved Oxygen	% saturation	≥ 38	-	91.07
Dissolved Oxygen	mg/L	≥ 5.0	≥ 6.1 c[2]	7.42
Flow (8/1/2013 - 7/31/2014)	MGD	-	≤ 28 r	7.74
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	0.00[3]

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
r - Annual average
1 - Permit sampling point is EFD-3
2 - The limit is a daily average of three samples taken approximately (8) hours apart.
3 - Measurement taken at site location EFD-4

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

Iron Bridge Regional WRF	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab 10/6/14	Field Blank 10/6/14
Ortho-phosphate	mg P/L	-	-	0.45	0.004 U
Total Phosphorus	mg P/L	-	≤ 1.88 s	0.51	0.002 U
Total Ammonia	mg N/L	-	-	0.029	0.004 I
Un-ionized Ammonia (calculated salinity)	mg/L	≤ 0.02 s	-	< 0.02 c	-
Nitrate and Nitrite	mg N/L	-	-	0.64	0.004 U
Total Kjeldahl Nitrogen	mg N/L	-	≤ 4.28 s	0.69	0.080 U
Organic Nitrogen	mg N/L	-	-	0.66 c	0.04 c
Total Nitrogen	mg N/L	-	≤ 6.16 s	1.33 c	0.04 c
Total Organic Carbon	mg C/L	-	-	7.9 A	0.60 I
Chlorophyll *a* - Corrected	ug/L	-	-	0.81 I	-
Phaeophytin	ug/L	-	-	0.40 U	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 8.56 s	1.4 IJ	-
Total Suspended Solids	mg/L	-	≤ 34.4 s	3 I	-
Turbidity	NTU	< 29 t	-	0.75	0.10 U
Color (true)	PCU	-	-	12	2.5 U
Alkalinity	mg CaCO3/L	≥ 20	-	107 A	0.65 U
Chloride	mg Cl/L	-	-	65	0.20 U
Cyanide	ug/L	≤ 5.2	-	-	-
Fluoride	mg F/L	≤ 10.0	-	0.37	0.035 U
Sulfate	mg SO4/L	-	-	33	0.20 U
Toxicity (Acute Definitive, % LC50)					
Bioassay - Water flea *(Ceriodaphnia dubia)*	%	≥ 100	-	> 100	-
Bioassay - Fish *(Pimephales promelas)*	%	≥ 100	-	> 100	-

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
s - Single sample
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
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

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

Iron Bridge Regional WRF	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab 10/6/14
Hardness	mg CaCO3/L	100 c	-	-
Aluminum	ug/L	-	-	16 I
Arsenic	ug/L	≤ 50	-	0.40 I
Cadmium	ug/L	≤ 0.3 b	-	0.050 U
Calcium	mg/L	-	-	39.7
Chromium, Total [4]	ug/L	≤ 100 b	-	0.32 I
Copper	ug/L	≤ 10 b	-	1.42
Iron	ug/L	≤ 1,000	-	71 I
Lead	ug/L	≤ 4 b	-	0.20 U
Magnesium	mg/L	-	-	7
Nickel	ug/L	≤ 60 b	-	0.85 I
Potassium	mg/L	-	-	8.6
Selenium	ug/L	≤ 5.0	-	0.23 I
Silver	ug/L	≤ 0.07	-	0.025 U
Sodium	mg/L	-	-	47.3
Zinc	ug/L	≤ 100 b	-	24

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
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
4 - 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

Iron Bridge Regional WRF								
Location	**Test Species**	**AGP (measured)**	**Predicted AGP (TSIN) ± 20%**	**Predicted AGP (OP) ± 20%**	**Predicted AGP (TN) ± 20%**	**Predicted AGP (TP) ± 20%**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent Grab 10/6/14	*Pseudokirchneriella subcapitata*	39.2 A	25.4 ± 5.1	193.5 ± 38.7	50.5 ± 10.1	219.3 ± 43.9	1.5	2.6

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: JEF	**Contact Number:** 407-897-4173
Facility Name (as it appears on permit): Iron Bridge Regional WRF	**Former Names:** N/A
NPDES Permit Number: FL0037966	**Permit Expiration Date:** February 23, 2015
Physical Address: 601 Iron Bridge Circle, Oviedo, FL 32765-8283	
District: Central	**County:** Seminole
Function of Facility: Domestic Wastewater Treatment Plant	
Facility Type: Municipal	**Permitted Capacity (MGD):** 40.0
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): D-001 outfall flow: 7.74 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period). D-002 outfall flow: 17.86 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period). D-003 outfall flow: 0.00 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period).	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): R-001 flow: 13.55 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period. R-002 flow: 3.50 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period.	
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):
The sampling location of D-001 is EFD-1, located at the sample point after post aeration basin. CBOD, TSS, TKN, TN, TP, and UOD are sampled at this location. EFD-3, is the analyzer after post aeration basin, which analyzes for pH. EFA-1 is the analyzer at the end of the CCC, TRC is monitored at this location. EFA-3 is the final effluent junction box, FC is sampled at this location. EFD-4, is the analyzer located just before the concrete channel outfall, dechlorination is analyzed at this location. CAL-2, is calculated using the daily average of 3 samples taken 8 hours apart (taken at EFD-4), calculated for DO and Temperature.

Description of Permitted Outfall(s):
Surface Water Discharge D-001 is a 28 MGD annual average daily flow discharge approximately 670 feet in length and discharges at a depth of approximately 2.5 feet. The point of discharge is located approximately at latitude 28°37' 4" N, longitude 81°13' 2" W.

Reuse System and Surface Water Discharge R-001, D-002 and D-003: An existing 35.0 mgd AADF permitted capacity created treatment/reuse wetland system (R-001) consisting of 1,640± acres, including berms and buffer zones (1,220± acres wetted area) and consisting of seventeen (17) cells. Reclaimed water from wetland system R-001 overflows via two 48-inch reinforced concrete pipes (outfalls D-002 and D-003) to an unnamed ditch thence to the St. Johns River (Class III fresh waters, WBID 28931), or sheet flows across an adjacent 640± acre natural wetlands (Seminole Ranch) thence to the St. Johns River, in accordance with Condition I.A.18. of this permit. No chemical dechlorination is applied to the reclaimed water. Reclaimed water is pumped through a 48-inch forcemain for approximately 16 miles from the wastewater treatment facility to the influent structure of the created wetlands. Outfall D-002 is approximately 118 feet in length and discharges at a depth of approximately 2.5 feet, to an unnamed ditch thence to the St. Johns River. The point of discharge is located approximately at latitude 28°35' 02" N, longitude 81°0' 17" W. Outfall D-003 is approximately 118 feet in length and discharges at a depth of approximately 2.5 feet, to an unnamed ditch thence to the St. Johns River. The point of discharge is located approximately at latitude 28°35' 02" N, longitude 81°00' 16" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):
An existing 40 mgd annual average daily flow (AADF) wastewater treatment facility consisting of mechanical influent screening, grit removal, flow equalization, two (2) 20 mgd AADF biological nutrient removal (5-stage Bardenpho) treatment units with chemical feed facilities, secondary clarification, tertiary filtration, disinfection, dechlorination and post aeration facilities, with storage, thickening and dewatering of residuals followed by lime stabilization.

PART I: Continued

List current 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	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow	**MGD**	**Maximum**	**28**	**Report**	**-**	**-**	**Continuous**	**Recording flow meters and totalizers**	**FLW-1**	**See Cond. I.A.4.**
BOD, Carbonaceous 5 day, 20C	**MG/L**	**Maximum**	**4.28**	**4.28**	**6.42**	**8.56**	**Daily; 24 hrs**	**24-hr FPC**	**EFD-1**	
Solids, Total Suspended	**MG/L**	**Maximum**	**17.2**	**17.2**	**25.8**	**34.4**	**Daily; 24 hrs**	**24-hrs FPC**	**EFD-1**	
pH	**SU**	**Range**	**-**	**-**	**-**	**6.0 to 8.5**	**Continuous**	**Meter**	**EFD-3**	**See Cond. I.A.3.**
Coliform, Fecal	**#/100 ML**	**Maximum**	**200**	**200**	**-**	**800**	**Daily; 24 hrs**	**Grab**	**EFA-3**	**See I.A.5**
Total Residual Chlorine (For Disinfection)	**MG/L**	**Minimum**	**-**	**-**	**-**	**0.5**	**Continuous**	**Meter**	**EFA-1**	**See Cond. I.A.3.,6.**
Total Residual Chlorine (For Dechlorination)	**MG/L**	**Maximum**	**-**	**-**	**-**	**0.01**	**Continuous**	**Meter**	**EFD-4**	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	**%**	**Min**	**-**	**-**	**-**	**100**	**Semi-Annual; twice per year**	**24-hr TPC**	**EFD-1**	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	**%**	**Min**	**-**	**-**	**-**	**100**	**Semi-Annual; twice per year**	**24-hr TPC**	**EFD-1**	
Nitrogen, Total	**MG/L**	**Maximum**	**3.08**	**3.08**	**4.62**	**6.16**	**Daily; 24 hrs**	**24-hrs FPC**	**EFD-1**	
Nitrogen, Kjeldahl, Total (as N)	**MG/L**	**Maximum**	**2.14**	**2.14**	**3.21**	**4.28**	**Daily; 24 hrs**	**24-hrs FPC**	**EFD-1**	
Phosphorus, Total (as P)	**MG/L**	**Maximum**	**0.94**	**0.94**	**1.41**	**1.88**	**Daily; 24 hrs**	**24-hrs FPC**	**EFD-1**	
Oxygen, Dissolved (DO)	**MG/L**	**Minimum**	**-**	**-**	**-**	**6.1**	**Daily; 24 hrs**	**Calculated**	**CAL-2**	**See I.A.20**
Temperature (C), Water	**Deg C**	**Maximum**	**-**	**-**	**-**	**Report**	**Daily; 24 hrs**	**Calculated**	**CAL-2**	
Oxygen demand, Ultimate (UOD)	**LB/Day**	**Maximum**	**-**	**3718**	**-**	**-**	**Monthly**	**Calculated**	**EFD-1**	

PART I: Continued	
Receiving Waters: Little Econlockhatchee River (for D-001) and an un-named ditch to the St. Johns River (for D-002 & D-003)	**Classification (indicate whether fresh or marine):** Class III Fresh Water (WBID 3001

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
See Attachment #1

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.): Not Applicable

Facility Mixing Zone Details (if applicable):
Not Applicable

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

Date	Parameter and Units	Limit	Result
January 2013 (R-002)	**% FC Non-Detect; %**	**75**	**35.5**

Describe previous FYI and WQBEL study:
Iron Bridge WRF had a Third Year Inspection on December 12, 2011. The following results were reached: The effluent sample collected 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. The effluent water quality samples collected did not exceed any applicable water quality standards or violate any permit conditions.

Describe previous or current Enforcement Actions (including WLs):
This facility has received three Enforcement Actions since 1999:
1999: An annex collection system was put into use without DEP approval.
2005: A force main ruptured, resulting in a 250,000 gallon spill of raw sewage into Lake Seay.
2006: A spill from the collection system resulted in a discharge to state waters.
All Enforcement Actions have been closed.

Describe any violations or problems noted in previous inspection:
Permit limit effluent exceedances for TN (D001) and fecal coliform % non-detect (R002). These exceedances appear to be under control now based on the most recent DMR review.

Discuss whether DMR trends within previous five years are improving or declining:
For the last five years: TSS has been up and down but there has been a recent decline since 2013, TKN has been gradually trending down, flow has trended up in the last year, CBOD has been trending down recently, TN has been trending down, TP has been trending up, and fecal coliform has been up and down but recently has been trending down.

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

Over the past two years the flows to the D-001 have increased and remained constant to D-002. The flows to D-003 have been suspended since early 2011. There has been a slight decrease in flows to R-001 and slight increase in flows to R-002 since the beginning of 2011.

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):

D-001 outfall flow: 7.74 MGD AADF, as reported on the July 2014 DMR (August 2013 through July 2014 reporting period).

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) 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) 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. 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*.

(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 Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:20	IRON	AGP/LN	Algal Growth Potential	39.2 A	mg DryWt/L	0.3	0.9
10/6/2014 8:20	IRON	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.81 I	ug/L	0.55	1.7
10/6/2014 8:20	IRON	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
10/6/2014 8:20	IRON	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.4 IJ	mg/L	0.2	2
10/6/2014 8:20	IRON	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	100 L	LC50		
10/6/2014 8:20	IRON	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100 L	LC50		
10/6/2014 8:20	IRON	Metals	Sodium	47.3	mg/L	0.5	2
10/6/2014 8:20	IRON	Metals	Zinc	24	ug/L	5	20
10/6/2014 8:20	IRON	Metals	Magnesium	7	mg/L	0.04	0.16
10/6/2014 8:20	IRON	Metals	Selenium	0.23 I	ug/L	0.2	0.8
10/6/2014 8:20	IRON	Metals	Calcium	39.7	mg/L	0.075	0.3
10/6/2014 8:20	IRON	Metals	Iron	71 I	ug/L	30	120
10/6/2014 8:20	IRON	Metals	Arsenic	0.40 I	ug/L	0.25	1
10/6/2014 8:20	IRON	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/6/2014 8:20	IRON	Metals	Aluminum	16 I	ug/L	5	20
10/6/2014 8:20	IRON	Metals	Copper	1.42	ug/L	0.5	1
10/6/2014 8:20	IRON	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/6/2014 8:20	IRON	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/6/2014 8:20	IRON	Metals	Nickel	0.85 I	ug/L	0.25	1
10/6/2014 8:20	IRON	Metals	Chromium	0.32 I	ug/L	0.3	1.2
10/6/2014 8:20	IRON	Metals	Potassium	8.6	mg/L	0.3	1.2
10/6/2014 8:20	IRON	Nutrients	Organic Carbon	7.9 A	mg C/L	1	2
10/6/2014 8:20	IRON	Nutrients	TSS	3 I	mg/L	2	10
10/6/2014 8:20	IRON	Nutrients	Kjeldahl Nitrogen	0.69	mg N/L	0.08	0.2
10/6/2014 8:20	IRON	Nutrients	Turbidity	0.75	NTU	0.1	0.1
10/6/2014 8:20	IRON	Nutrients	O-Phosphate-P	0.45	mg P/L	0.02	0.05
10/6/2014 8:20	IRON	Nutrients	Fluoride	0.37	mg F/L	0.035	0.1
10/6/2014 8:20	IRON	Nutrients	Color (true)	12	PCU	2.5	6
10/6/2014 8:20	IRON	Nutrients	Ammonia-N	0.029	mg N/L	0.002	0.005

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:20	IRON	Nutrients	Alkalinity	107 A	mg CaCO3/L	0.65	2.5
10/6/2014 8:20	IRON	Nutrients	Chloride	65	mg Cl/L	2	5
10/6/2014 8:20	IRON	Nutrients	Total-P	0.51	mg P/L	0.005	0.05
10/6/2014 8:20	IRON	Nutrients	Sulfate	33	mg SO4/L	2	5
10/6/2014 8:20	IRON	Nutrients	NO2NO3-N	0.64	mg N/L	0.004	0.01
10/6/2014 8:20	IRON	Pesticides	Bromacil	0.038 U	ug/L	0.038	0.15
10/6/2014 8:20	IRON	Pesticides	Simazine	0.021 I	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Prometon	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Diazinon	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Mevinphos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Carbamazepine	0.081	ug/L	0.002	0.01
10/6/2014 8:20	IRON	Pesticides	Ametryn	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Ethion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Naled	0.038 U	ug/L	0.038	0.15
10/6/2014 8:20	IRON	Pesticides	Phorate	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:20	IRON	Pesticides	Butylate	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Metolachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 8:20	IRON	Pesticides	Fonofos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Atrazine Desethyl	0.017 U	ug/L	0.017	0.067
10/6/2014 8:20	IRON	Pesticides	Atrazine Desisopropyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
10/6/2014 8:20	IRON	Pesticides	Disulfoton	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:20	IRON	Pesticides	Ethoprop	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:20	IRON	Pesticides	Malathion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Parathion Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Sucralose	17	ug/L	0.2	1
10/6/2014 8:20	IRON	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 8:20	IRON	Pesticides	Demeton	0.023 UJ	ug/L	0.023	0.092
10/6/2014 8:20	IRON	Pesticides	Acetaminophen	0.0020 UJ	ug/L	0.002	0.01

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:20	IRON	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.077
10/6/2014 8:20	IRON	Pesticides	Norflurazon	0.029 UJ	ug/L	0.029	0.12
10/6/2014 8:20	IRON	Pesticides	Chlorpyrifos Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Chlorpyrifos Ethyl	0.0096 UJ	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Atrazine	0.037 I	ug/L	0.0096	0.038
10/6/2014 8:20	IRON	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
10/6/2014 8:20	IRON	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
10/6/2014 8:20	IRON	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
10/6/2014 8:20	IRON	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	57
10/6/2014 8:20	IRON	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
10/6/2014 8:20	IRON	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
10/6/2014 8:20	IRON	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:20	IRON	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
10/6/2014 8:20	IRON	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
10/6/2014 8:20	IRON	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
10/6/2014 8:20	IRON	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:20	IRON	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
10/6/2014 8:20	IRON	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:20	IRON	Nutrients	Specific Conductance	515.5	umhos/cm		
10/6/2014 8:20	IRON	Nutrients	Temperature	25.7	C		
10/6/2014 8:20	IRON	Nutrients	Dissolved Oxygen	7.42	mg/L		
10/6/2014 8:20	IRON	Nutrients	pH	7.23			

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:51	FIELD BLANK	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/6/2014 8:51	FIELD BLANK	Metals	Calcium	0.075 U	mg/L	0.075	0.3
10/6/2014 8:51	FIELD BLANK	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/6/2014 8:51	FIELD BLANK	Metals	Aluminum	5.0 U	ug/L	5	20
10/6/2014 8:51	FIELD BLANK	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
10/6/2014 8:51	FIELD BLANK	Metals	Iron	30 U	ug/L	30	120
10/6/2014 8:51	FIELD BLANK	Metals	Sodium	0.50 U	mg/L	0.5	2
10/6/2014 8:51	FIELD BLANK	Metals	Nickel	0.25 U	ug/L	0.25	1
10/6/2014 8:51	FIELD BLANK	Metals	Copper	0.50 U	ug/L	0.5	1
10/6/2014 8:51	FIELD BLANK	Metals	Zinc	5.0 U	ug/L	5	20
10/6/2014 8:51	FIELD BLANK	Metals	Potassium	0.30 U	mg/L	0.3	1.2
10/6/2014 8:51	FIELD BLANK	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/6/2014 8:51	FIELD BLANK	Metals	Arsenic	0.25 U	ug/L	0.25	1
10/6/2014 8:51	FIELD BLANK	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/6/2014 8:51	FIELD BLANK	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/6/2014 8:51	FIELD BLANK	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
10/6/2014 8:51	FIELD BLANK	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
10/6/2014 8:51	FIELD BLANK	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
10/6/2014 8:51	FIELD BLANK	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
10/6/2014 8:51	FIELD BLANK	Nutrients	Ammonia-N	0.004 I	mg N/L	0.002	0.005
10/6/2014 8:51	FIELD BLANK	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
10/6/2014 8:51	FIELD BLANK	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
10/6/2014 8:51	FIELD BLANK	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
10/6/2014 8:51	FIELD BLANK	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
10/6/2014 8:51	FIELD BLANK	Nutrients	Organic Carbon	0.60 I	mg C/L	0.5	1
10/6/2014 8:51	FIELD BLANK	Nutrients	Color (true)	2.5 U	PCU	2.5	6
10/6/2014 8:51	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
10/6/2014 8:51	FIELD BLANK	Pesticides	Chlorpyrifos Ethyl	0.0096 UJ	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Disulfoton	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:51	FIELD BLANK	Pesticides	Ethion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Fenamiphos	0.029 U	ug/L	0.029	0.12
10/6/2014 8:51	FIELD BLANK	Pesticides	Metribuzin	0.019 U	ug/L	0.019	0.077

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:51	FIELD BLANK	Pesticides	Norflurazon	0.029 UJ	ug/L	0.029	0.12
10/6/2014 8:51	FIELD BLANK	Pesticides	Malathion	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Mevinphos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Parathion Ethyl	0.019 U	ug/L	0.019	0.077
10/6/2014 8:51	FIELD BLANK	Pesticides	Ametryn	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Atrazine Desisopropyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Butylate	0.019 U	ug/L	0.019	0.077
10/6/2014 8:51	FIELD BLANK	Pesticides	Fonofos	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Hexazinone	0.029 UJ	ug/L	0.029	0.12
10/6/2014 8:51	FIELD BLANK	Pesticides	Acetaminophen	0.0020 UJ	ug/L	0.002	0.01
10/6/2014 8:51	FIELD BLANK	Pesticides	Carbamazepine	0.0020 U	ug/L	0.002	0.01
10/6/2014 8:51	FIELD BLANK	Pesticides	Chlorpyrifos Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Demeton	0.023 UJ	ug/L	0.023	0.092
10/6/2014 8:51	FIELD BLANK	Pesticides	Ethoprop	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:51	FIELD BLANK	Pesticides	Metolachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 8:51	FIELD BLANK	Pesticides	Prometon	0.019 U	ug/L	0.019	0.077
10/6/2014 8:51	FIELD BLANK	Pesticides	Prometryn	0.019 U	ug/L	0.019	0.077
10/6/2014 8:51	FIELD BLANK	Pesticides	Simazine	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Bromacil	0.038 U	ug/L	0.038	0.15
10/6/2014 8:51	FIELD BLANK	Pesticides	Naled	0.038 U	ug/L	0.038	0.15
10/6/2014 8:51	FIELD BLANK	Pesticides	Parathion Methyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
10/6/2014 8:51	FIELD BLANK	Pesticides	Atrazine Desethyl	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Diazinon	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Metalaxyl	0.038 U	ug/L	0.038	0.15
10/6/2014 8:51	FIELD BLANK	Pesticides	Phorate	0.0048 U	ug/L	0.0048	0.019
10/6/2014 8:51	FIELD BLANK	Pesticides	Alachlor	0.058 U	ug/L	0.058	0.23
10/6/2014 8:51	FIELD BLANK	Pesticides	Atrazine	0.0096 U	ug/L	0.0096	0.038
10/6/2014 8:51	FIELD BLANK	Pesticides	Azinphos Methyl	0.019 U	ug/L	0.019	0.077
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Pentachlorophenol	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57

Date Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	14 U	ug/L	14	57
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
10/6/2014 8:51	FIELD BLANK	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380

The Bioassay of Iron Bridge Regional WRF effluent sampled on October 6, 2014. NPDES #FL0037966.

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	FL0037966		141006		B	S	1

Remarks

66

The Priority Pollutants Analysis of Iron Bridge Regional WRF effluent sampled on October 6, 2014. NPDES #FL0037966.

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	FL0037966		141006		X	S	1

Remarks

66

Biological Analyses of Iron Bridge Regional WRF effluent sampled on October 6, 2014. NPDES #FL0037966.

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	FL0037966		141006		S	S	1

Remarks

66