

Effluent Quality Assessment

Hastings Wastewater Treatment Facility

St. Johns County

NPDES #FL0042315

Sampled January 13, 2014

April 2014

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

CONTENTS

Facility Overview

Methods

Results

Conclusion

Literature Cited

Tables

Table 1 Effluent limits, Class III Freshwater Criteria and chemical data, microbiological data, and qualifiers

Appendices

Appendix A Facility Summary

Appendix B Explanation of measurements

Appendix C Chemical Analyses of Effluent

EPA End Sheet

Hastings Wastewater Treatment Facility (WWTF), 819 North Main Street, Hastings, St. Johns County, Florida, 32145. NPDES #FL0042315.

Facility Overview

Hastings WWTF is an advanced secondary treatment activated sludge domestic wastewater treatment facility which operates in the extended aeration mode with nitrification and de-nitrification 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 grab samples for toxicity testing were collected on January 13, 2014. Effluent grab and composite samples for biological and chemical analyses for this facility were collected on January 13, 2014. All samples were collected from the EFD-2 NPDES sampling point for Outfall D-001 by Sharon Piltz (FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The 96-hour acute definitive toxicity tests were performed following internal DEP SOPs TA07_01 and TA07_02 (see Appendix B).

Results

Chemistry Results (See Table 1 and Appendix C)

- The total ammonia concentration in the grab sample collected and preserved for chemical analysis was 0.028 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.
- Copper, nickel, total ammonia, total nitrogen and zinc were detected in the effluent at levels that comply with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and/or permitted limits. Aluminum, arsenic, carbonaceous biochemical oxygen demand (CBOD), iron, selenium, total suspended solids (TSS), were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Total ammonia was detected in the equipment blank.

Algal Growth Potential

- Not sampled/analyzed.

Toxicity Test Results (See Appendix C)

- Tests were performed January 14 - 18, 2014.

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

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

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

Conclusion

The effluent sample collected from the EFD-2 NPDES sampling point for this facility on January 13, 2014, was not acutely toxic to either test species during the 96-hour acute definitive bioassays. Effluent water quality samples collected on January 13, 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 Joseph.Faircloth@dep.state.fl.us and/or Diane.Power@dep.state.fl.us.

Literature Cited - None

Table 1. Effluent limits, Class III Freshwater Criteria and chemical and microbiological data.

Hastings WWTF	Class III Criteria	Effluent Limits	EFD2 Grab	EFD2 Composite
Organic Constituents (µg/L)				
None Detected	-	-	None Detected	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	7.3 I I	-
Arsenic	≤ 50	-	0.78 I	-
Cadmium	≤ 0.393 b	-	0.050 U	-
Calcium (mg/L)	-	-	49.3	-
Chromium, Total Ψ	≤ 130.2 b Ψ	-	0.30 U	-
Copper	≤ 14.3 b	-	1.29	-
Iron	≤ 1,000	-	34 I	-
Lead	≤ 6.04 b	-	0.20 U	-
Magnesium (mg/L)	-	-	10.3	-
Mercury	≤ 0.012	-	-	-
Nickel	≤ 79.8 b	-	1.32	-
Selenium	≤ 5.0	-	0.23 I	-
Silver	≤ 0.07	-	0.025 U	-
Sodium	-	-	52.1	-
Zinc	≤ 183.6 b	-	25	-
Nutrients (mg/L)				
Ortho-phosphate	-	Report	0.93	-
Total Phosphorus	-	Report	-	1.1 p
Total Ammonia	-	≤ 2.0 m	0.028	-
Un-ionized Ammonia	≤ 0.02 s	≤ 0.02 s	< 0.02 C	-
Nitrate and Nitrite	-	Report	-	12 A p
Total Kjeldahl Nitrogen	-	Report	-	0.90 J p
Organic Nitrogen	-	Report	-	-
Total Nitrogen	-	≤ 9.0 p	-	12.9 p
Total Organic Carbon	-	Report	6.7 A	-
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0 s	≥ 5.0 s	8.98	-
Dissolved Oxygen (% saturation)	≥ 67	-	97.0	-
pH (SU)	6.0 - 8.5 s	6.0 - 8.5 s	7.33	-
Specific Conductance (µmhos/cm)	≤ 1,275	-	641	-
Temperature (°C)	-	Report	19.06	-
Salinity	-	-	< 0.35	-
Sample Depth (m)	-	-	0.1	-
Total Residual Chlorine (mg/L)	≤ 0.01 s	≤ 0.01 s	< 0.03 UQ£	-
Total Suspended Solids (mg/L)	≤ 60.0	≤ 60.0 p	-	2 I p
Color (true, PCU)	-	-	9.3	-
Alkalinity (mg CaCO3/L)	-	-	63 A	-
CBOD, 5 day (mg/L), N - inhibited	≤ 10.0	≤ 10.0 p	-	0.63 I p
Chloride (mg/L)	-	-	66 A	-
Fluoride (mg/L)	≤ 10.0	-	0.14	-
Sulfate (mg/L)	-	-	81 A	-
Flow (MGD)	-	0.120 a	0.074 a	-
Hardness (mg $CaCO_3$)	-	-	165.5 c	-
Microbiology (Number of colony forming units/100ml)				
Fecal Coliforms ¥	≤ 400s #	≤ 800 s	2 U	-

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

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average

b - Value is calculated based on hardness

c - Value is calculated

m - Monthly average

p - 8 hour flow proportioned composite

s - Single sample

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

Q - Sample held beyond normal holding time

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

¥ - Fecal coliform analysis performed by Columbia Analytical Services, Jacksonville

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

£ - measurement taken in the FDEP laboratory

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

Appendix A
Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Jim Orr	Contact Number: 904-256-1623
Facility Name (as it appears on permit): Hastings WWTF	Former Names: N/A
NPDES Permit Number: FL0042315	Permit Expiration Date: 12/1/2015
Physical Address: 819 North Main Street, Hastings, FL 32145	
District: Northeast	County: St. Johns
Function of Facility: Domestic Wastewater treatment.	
Facility Type: Domestic	Permitted Capacity (MGD): 0.120
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): The months from October 2012 to October 2013 the mean flow was roughly 0.074 MGD with monthly averages ranging plus/minus 0.03 MGD.	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):	
Description of type of Discharge: ☐ Continuous ☒ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify	

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):

Surface Water Discharges D-001

EFD-2 Sample point immediately after dechlorination

EFA-1 Sample point immediately after chlorine disinfection

Description of Permitted Outfall(s):

Surface Water Discharge D-001:

An existing 0.12 MGD annual average daily flow (AADF) permitted discharge to an unnamed man-made canal (D-001), connecting to a wetland bordered on the east by Deep Creek (a tributary of the St. Johns River) and west by Cracker Branch (a tributary of Deep Creek), to Cracker Branch (Class III fresh waters) at discharge location (D-001) which is about 4 feet in length and discharges at a depth of about 1 foot. The point of discharge is located approximately at latitude 29 ◦43' 34" N, longitude 81 ◦30' 28" W

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

To operate an existing a 0.120 million gallons per day (mgd) annual average daily flow (AADF) permitted capacity advanced secondary treatment activated sludge domestic wastewater treatment facility (WWTF) which operates in the extended aeration mode with nitrification and de-nitrification (with carbon-source chemical feed capability available for treatment assistance) providing advanced secondary treatment. Treatment units consist of the following main units:

One single static influent screen,
One 86,000 gallon equalization tank,
- Two biological treatment units (BTUs), each of which is divided into four (4) sequential stages: preanoxic (20,737 gallons), nitrification (131,000 gallons), post anoxic (50,037 gallons), first and second reaeration;

Two EIMCO secondary clarifiers (88,100 gallons, 25 feet in diameter),
One automatic backwash disc filter (120 SF, 0.7 gpm/ft2) with four (4) discs,
- One dual channel chlorine contact chamber (6,250 gallons) that uses sodium hypochlorite as disinfection agent,
- One dechlorination chamber (180 gallons) that uses sodium bisulfite for dechlorination,

Two aerobic digesters (15,400 gallons and 18,000 gallons) with waste sludge stabilized and operated in series,
- Two wedge wire sludge drying beds (400 square feet per each) treated biosolids dewatered on 30-cubic yard biosolids storage and loading facility.

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	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max Max	0.120 Report Report	Annual Average Monthly Average Quarterly Average	Continuous	Recording Flow Meter with Totalizer	EFD-2	See I.A.3
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL-1	
BOD, Carbonaceous 5-day, 20ºC	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average** Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Solids, Total Suspended	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average** Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Solids, Total Suspended, % Removal	percent	Min	85	Monthly Average	Bi-weekly; every 2 weeks	Calculated	CAL-1	
Coliform, Fecal	#/100mL	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	Bi-weekly; every 2 weeks	Grab	EFD-2	See I.A.4
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	5 Days/Week	Grab	EFD-2	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	5 Days/Week	Grab	EFA-1	See I.A.5

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Bi-weekly; every 2 weeks	Grab	EFD-2	
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Weekly Average	5 Days/Week	Grab	EFD-2	
Nitrogen, Total	mg/L	Max Max Max Max	4.5 5.63 6.75 9.0	Annual Average Monthly Average Weekly Average** Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Nitrogen, Total	Lbs/yr	Max	**1,640.4**	Annual Total	Monthly	Calculated	CAL-1	See I.A.7
Nitrogen, Total	Lbs/month	Max	Report	Monthly Total	Monthly	Calculated	CAL-1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	2.0	Monthly Average	Bi-weekly; every 2 weeks	Grab	EFD-2	
Temperature (°C), Water	Deg °C	Max	Report	Single Sample	Bi-weekly; every 2 weeks	Meter	EFD-2	
Nitrogen, Ammonia, Total unionized (as N)	mg/L	Max	0.02	Single Sample	Bi-weekly; every 2 weeks	Calculated	EFD-2	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Bi-weekly; every 2 weeks	8-hr FPC	EFD-2	
Phosphorus, Total (as P)	Lbs/yr	Max	**527.4**	Annual Average	Monthly	Calculated	CAL-1	See I.A.7
Phosphorus, Total (as P)	Lbs/month	Max	Report	Single Sample	Monthly	Calculated	CAL-1	
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	8-hr FPC	EFD-2	

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Quarterly	Filtered - Grab	EFD-2	
Acute Whole Effluent Toxicity, 96-Hr LC50 (*Ceriodaphnia dubia*)	percent	Min	100	Single Sample	Annually	Grab	EFD-2	See I.A.6
Acute Whole Effluent Toxicity, 96-Hr LC50 (*Cyprinella leedsi*)	percent	Min	100	Single Sample	Annually	Grab	EFD-2	See I.A.6

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
Deep Creek (a tributary of the St. Johns River) and Cracker Branch (a tributary of Deep Creek).	**Class III fresh waters.**

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
See Permit Condition I.A.6

a. Effluent Limitation

(1) In any routine or additional follow-up test for acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent. [Rules 62-302.200(1), 62-302.500(1)(a)4., 62-4.244(3)(a), and 62-4.241, F.A.C.]

b. Monitoring Frequency

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

c. Sampling Requirements

(1) All tests shall be conducted on a single grab sample of final effluent.

d. Test Requirements

(1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent.

(2) The permittee shall conduct 96-hour acute static renewal multi-concentration toxicity tests using the daphnid, *Ceriodaphnia dubia*, and the bannerfin shiner, *Cyprinella leedsi*, concurrently.

(3) All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, EPA-821-R-02-012. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct acute 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-02-012, Table 7.

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

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

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

None noted.

Describe previous FYI and WQBEL study:

A Effluent Quality Assessment report submitted in May 2010 concluded the following:

"The effluent sample collected from the EFA-1 NPDES sampling point for Outfall D-001 for this facility on February 22, 2010, was acutely toxic to both test species during the 96-hour acute screening bioassays with effluent containing 0.93 mg/L residual chlorine, but was not acutely toxic to either test species during the 96-hour acute definitive bioassays with dechlorinated effluent. The effluent AGP result was greater than the "problem" threshold for fresh receiving waters suggesting nutrient enrichment may be an issue. The effluent TRC (0.93 mg/L; limit ≤0.01 mg/L, 62-302.500 (18), F.AC. and permit # FL0042315) exceeded both the Class III criteria for fresh water and the permit limitation; however, this was likely a temporary excursion caused by equipment being turned off to facilitate flow measurements. Additional effluent water quality samples collected on February 22, 2010, did not exceed applicable water quality standards or permit conditions."

Describe previous or current Enforcement Actions (including WLs): **There is no active enforcement going on with this facility.**
Describe any violations or problems noted in previous inspection: **The last inspection done in May 2013 was found in-compliance.**
Discuss whether DMR trends within previous five years are improving or declining: **No noticeable trend in the DMR data.**
Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information

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

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:

Appendix B
Explanation of measurements

(1) Quality Assurance and Quality Control

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

(2) Chemical Analyses of the Effluent

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

(3) Toxicity Bioassays

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

(4) Bacteriological Testing

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

(5) Chlorophyll *a* Content

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

(7) Definition of Qualifiers

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

B - Results based on colony counts outside the acceptable range.

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

J - Estimated value

K - Actual value is known to be less than value given

L - Actual value is known to be greater than value given

N - Presumptive evidence of presence of material.

O - Sampled, but analysis lost or not performed.

Q - Sample held beyond normal holding time.

T - Value reported is less than the criterion of detection.

U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.

V - Analyte was detected in both sample and method blank.

X - Too few individuals to calculate SCI value.

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Z - Colonies were too numerous to count (TNTC)

Appendix C
Chemical Analyses of Effluent

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 10:20	EFD2 Grab	Overflow	Fecal Coliforms-Membrane Filter	2	U	cfu/100 mL	2	
1/13/2014 10:20	EFD2 Grab	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100	L	LC50		
1/13/2014 10:20	EFD2 Grab	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	100	L	LC50		
1/13/2014 10:20	EFD2 Grab	Metals	Iron	34	I	ug/L	30	120
1/13/2014 10:20	EFD2 Grab	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
1/13/2014 10:20	EFD2 Grab	Metals	Copper	1.29		ug/L	0.5	1
1/13/2014 10:20	EFD2 Grab	Metals	Magnesium	10.3		mg/L	0.04	0.16
1/13/2014 10:20	EFD2 Grab	Metals	Calcium	49.3		mg/L	0.075	0.3
1/13/2014 10:20	EFD2 Grab	Metals	Nickel	1.32		ug/L	0.25	1
1/13/2014 10:20	EFD2 Grab	Metals	Potassium	8.1		mg/L	0.3	1.2
1/13/2014 10:20	EFD2 Grab	Metals	Zinc	25		ug/L	5	20
1/13/2014 10:20	EFD2 Grab	Metals	Sodium	52.1		mg/L	0.5	2
1/13/2014 10:20	EFD2 Grab	Metals	Selenium	0.23	I	ug/L	0.2	0.8
1/13/2014 10:20	EFD2 Grab	Metals	Lead	0.20	U	ug/L	0.2	0.8
1/13/2014 10:20	EFD2 Grab	Metals	Aluminum	7.3	I	ug/L	5	20
1/13/2014 10:20	EFD2 Grab	Metals	Silver	0.025	U	ug/L	0.025	0.1
1/13/2014 10:20	EFD2 Grab	Metals	Arsenic	0.78	I	ug/L	0.25	1
1/13/2014 10:20	EFD2 Grab	Metals	Chromium	0.30	U	ug/L	0.3	1.2
1/13/2014 10:20	EFD2 Grab	Nutrients	Fluoride	0.14		mg F/L	0.035	0.1
1/13/2014 10:20	EFD2 Grab	Nutrients	Organic Carbon	6.7	A	mg C/L	0.5	1
1/13/2014 10:20	EFD2 Grab	Nutrients	O-Phosphate-P	0.93		mg P/L	0.04	0.1
1/13/2014 10:20	EFD2 Grab	Nutrients	Chloride	66	A	mg Cl/L	4	10
1/13/2014 10:20	EFD2 Grab	Nutrients	Ammonia-N	0.028		mg N/L	0.002	0.005
1/13/2014 10:20	EFD2 Grab	Nutrients	Sulfate	81	A	mg SO4/L	4	10
1/13/2014 10:20	EFD2 Grab	Nutrients	Alkalinity	63	A	mg CaCO3/L	0.65	2.5
1/13/2014 10:20	EFD2 Grab	Nutrients	Color (true)	9.3		PCU	2.5	6
1/13/2014 10:20	EFD2 Grab	Pesticides	Demeton	0.025	UJ	ug/L	0.025	0.098
1/13/2014 10:20	EFD2 Grab	Pesticides	Mevinphos	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Simazine	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Ametryn	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Chlorpyrifos Ethyl	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Disulfoton	0.0051	U	ug/L	0.0051	0.02
1/13/2014 10:20	EFD2 Grab	Pesticides	Metribuzin	0.020	U	ug/L	0.02	0.082

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 10:20	EFD2 Grab	Pesticides	Parathion Methyl	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Phorate	0.0051	U	ug/L	0.0051	0.02
1/13/2014 10:20	EFD2 Grab	Pesticides	Atrazine	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Diazinon	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Ethion	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Fonofos	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Metolachlor	0.061	U	ug/L	0.061	0.25
1/13/2014 10:20	EFD2 Grab	Pesticides	Naled	0.041	U	ug/L	0.041	0.16
1/13/2014 10:20	EFD2 Grab	Pesticides	Atrazine Desethyl	0.018	U	ug/L	0.018	0.074
1/13/2014 10:20	EFD2 Grab	Pesticides	Atrazine Desisopropyl	0.014	U	ug/L	0.014	0.057
1/13/2014 10:20	EFD2 Grab	Pesticides	Fenamiphos	0.031	U	ug/L	0.031	0.12
1/13/2014 10:20	EFD2 Grab	Pesticides	Parathion Ethyl	0.020	U	ug/L	0.02	0.082
1/13/2014 10:20	EFD2 Grab	Pesticides	Prometryn	0.020	U	ug/L	0.02	0.082
1/13/2014 10:20	EFD2 Grab	Pesticides	Butylate	0.020	U	ug/L	0.02	0.082
1/13/2014 10:20	EFD2 Grab	Pesticides	Chlorpyrifos Methyl	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Pesticides	Ethoprop	0.0051	U	ug/L	0.0051	0.02
1/13/2014 10:20	EFD2 Grab	Pesticides	Norflurazon	0.031	U	ug/L	0.031	0.12
1/13/2014 10:20	EFD2 Grab	Pesticides	Azinphos Methyl	0.020	U	ug/L	0.02	0.082
1/13/2014 10:20	EFD2 Grab	Pesticides	Bromacil	0.041	U	ug/L	0.041	0.16
1/13/2014 10:20	EFD2 Grab	Pesticides	Hexazinone	0.031	U	ug/L	0.031	0.12
1/13/2014 10:20	EFD2 Grab	Pesticides	Metalaxyl	0.041	U	ug/L	0.041	0.16
1/13/2014 10:20	EFD2 Grab	Pesticides	Prometon	0.020	U	ug/L	0.02	0.082
1/13/2014 10:20	EFD2 Grab	Pesticides	Alachlor	0.061	U	ug/L	0.061	0.25
1/13/2014 10:20	EFD2 Grab	Pesticides	Malathion	0.010	U	ug/L	0.01	0.041
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.7
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Naphthalene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.7
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,4-Dinitrophenol	14	UJ	ug/L	14	58
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96	U	ug/L	0.96	3.8

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Hexachlorobenzene	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	U	ug/L	38	150
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.7
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	58
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9	U	ug/L	1.9	7.7
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Diethyl phthalate	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Dimethyl phthalate	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Isophorone	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,4-Dimethylphenol	9.6	U	ug/L	9.6	38
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2-Nitrophenol	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.77
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Di-n-butyl phthalate	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Hexachlorobutadiene	2.9	UJ	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.7
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Phenol	0.96	U	ug/L	0.96	3.8
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	2-Chlorophenol	0.96	U	ug/L	0.96	3.8

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 10:20	EFD2 Grab	Priority Organic Pollutants	Benzidine	96	U	ug/L	96	380
1/13/2014 10:20	EFD2 Grab	Field Parameter	pH	7.33				
1/13/2014 10:20	EFD2 Grab	Field Parameter	Dissolved Oxygen	8.98		mg/L		
1/13/2014 10:20	EFD2 Grab	Field Parameter	Sample Depth	0.1		m		
1/13/2014 10:20	EFD2 Grab	Field Parameter	Specific Conductance	641		umhos/cm		
1/13/2014 10:20	EFD2 Grab	Field Parameter	Temperature	19.06		C		
1/13/2014 9:00	EFD2 Composite	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.63	I	mg/L	0.2	2
1/13/2014 9:00	EFD2 Composite	Nutrients	Kjeldahl Nitrogen	0.90	J	mg N/L	0.16	0.4
1/13/2014 9:00	EFD2 Composite	Nutrients	Total-P	1.1		mg P/L	0.025	0.25
1/13/2014 9:00	EFD2 Composite	Nutrients	TSS	2	I	mg/L	2	10
1/13/2014 9:00	EFD2 Composite	Nutrients	NO2NO3-N	12	A	mg N/L	0.4	1
1/13/2014 9:00	EFD2 Composite	Field Parameter	Temperature	2.7		C		
1/13/2014 9:55	Field Blank	Metals	Arsenic	0.25	U	ug/L	0.25	1
1/13/2014 9:55	Field Blank	Metals	Zinc	5.0	U	ug/L	5	20
1/13/2014 9:55	Field Blank	Metals	Chromium	0.30	U	ug/L	0.3	1.2
1/13/2014 9:55	Field Blank	Metals	Aluminum	5.0	U	ug/L	5	20
1/13/2014 9:55	Field Blank	Metals	Silver	0.025	U	ug/L	0.025	0.1
1/13/2014 9:55	Field Blank	Metals	Sodium	0.50	U	mg/L	0.5	2
1/13/2014 9:55	Field Blank	Metals	Calcium	0.075	U	mg/L	0.075	0.3
1/13/2014 9:55	Field Blank	Metals	Potassium	0.30	U	mg/L	0.3	1.2
1/13/2014 9:55	Field Blank	Metals	Magnesium	0.040	U	mg/L	0.04	0.16
1/13/2014 9:55	Field Blank	Metals	Nickel	0.25	U	ug/L	0.25	1
1/13/2014 9:55	Field Blank	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
1/13/2014 9:55	Field Blank	Metals	Iron	30	U	ug/L	30	120
1/13/2014 9:55	Field Blank	Metals	Copper	0.50	U	ug/L	0.5	1
1/13/2014 9:55	Field Blank	Metals	Selenium	0.20	U	ug/L	0.2	0.8
1/13/2014 9:55	Field Blank	Metals	Lead	0.20	U	ug/L	0.2	0.8
1/13/2014 9:55	Field Blank	Nutrients	Organic Carbon	0.50	U	mg C/L	0.5	1
1/13/2014 9:55	Field Blank	Nutrients	Sulfate	0.20	U	mg SO4/L	0.2	0.5
1/13/2014 9:55	Field Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
1/13/2014 9:55	Field Blank	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
1/13/2014 9:55	Field Blank	Nutrients	Chloride	0.20	U	mg Cl/L	0.2	0.5
1/13/2014 9:55	Field Blank	Nutrients	Color (true)	2.5	U	PCU	2.5	6
1/13/2014 9:55	Field Blank	Nutrients	Ammonia-N	0.003	I	mg N/L	0.002	0.005
1/13/2014 9:55	Field Blank	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
1/13/2014 9:55	Field Blank	Pesticides	Fonofos	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Prometon	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Atrazine	0.0096	U	ug/L	0.0096	0.038

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 9:55	Field Blank	Pesticides	Butylate	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Metalaxyl	0.038	U	ug/L	0.038	0.15
1/13/2014 9:55	Field Blank	Pesticides	Mevinphos	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Naled	0.038	U	ug/L	0.038	0.15
1/13/2014 9:55	Field Blank	Pesticides	Chlorpyrifos Methyl	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Parathion Methyl	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.11
1/13/2014 9:55	Field Blank	Pesticides	Simazine	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Metolachlor	0.057	U	ug/L	0.057	0.23
1/13/2014 9:55	Field Blank	Pesticides	Bromacil	0.038	U	ug/L	0.038	0.15
1/13/2014 9:55	Field Blank	Pesticides	Ethoprop	0.0048	U	ug/L	0.0048	0.019
1/13/2014 9:55	Field Blank	Pesticides	Ethion	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Disulfoton	0.0048	U	ug/L	0.0048	0.019
1/13/2014 9:55	Field Blank	Pesticides	Demeton	0.023	UJ	ug/L	0.023	0.092
1/13/2014 9:55	Field Blank	Pesticides	Parathion Ethyl	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.11
1/13/2014 9:55	Field Blank	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.11
1/13/2014 9:55	Field Blank	Pesticides	Azinphos Methyl	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Atrazine Desethyl	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Phorate	0.0048	U	ug/L	0.0048	0.019
1/13/2014 9:55	Field Blank	Pesticides	Diazinon	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Prometryn	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Metribuzin	0.019	U	ug/L	0.019	0.077
1/13/2014 9:55	Field Blank	Pesticides	Malathion	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Atrazine Desisopropyl	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Pesticides	Alachlor	0.057	U	ug/L	0.057	0.23
1/13/2014 9:55	Field Blank	Pesticides	Ametryn	0.0096	U	ug/L	0.0096	0.038
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.8
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9	U	ug/L	1.9	7.8
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9	UJ	ug/L	2.9	12

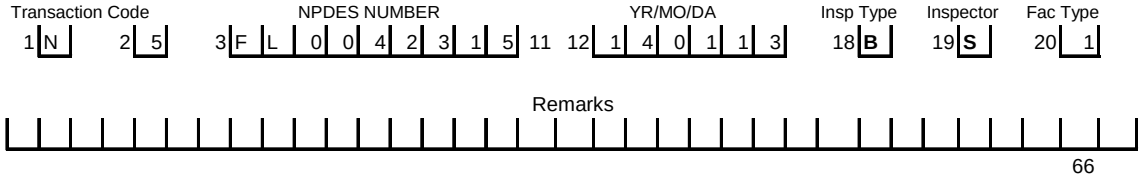
Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	58
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzidine	97	U	ug/L	97	390
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.8
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.8
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Naphthalene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	58
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	U	ug/L	39	160
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.8
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.7	U	ug/L	9.7	39
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97	U	ug/L	0.97	3.9

Date Sampled	Field ID	Analytic Group	Components	Result	Qualifier	Units	MDL	PQL
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Isophorone	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.78
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Phenol	0.97	U	ug/L	0.97	3.9
1/13/2014 9:55	Field Blank	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.78
1/13/2014 12:43	Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.080	U	mg N/L	0.08	0.2
1/13/2014 12:43	Equipment Blank	Nutrients	Total-P	0.002	U	mg P/L	0.002	0.005
1/13/2014 12:43	Equipment Blank	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01

EPA End Sheet

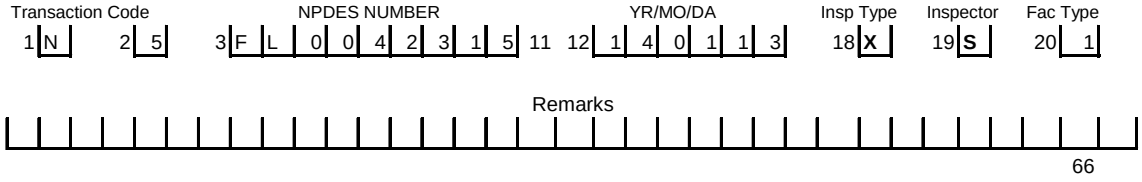
The Bioassay of Hastings WWTF effluent sampled on January 13, 2014. NPDES #FL0042315.

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



The Priority Pollutants Analysis of Hastings WWTF effluent sampled on January 13, 2014. NPDES #FL0042315.

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



Biological Analyses of Hastings WWTF effluent sampled on January 13, 2014. NPDES #FL0042315.

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

