Effluent Quality Assessment of

USN NAS Jacksonville WWTF

Duval County

NPDES # FL0000957

Sampled October 23, 25, and 27, 2017

January 2019

Biology Program

DEP Laboratory

Division of Environmental Assessment and Restoration

DEP Laboratory Quality Manual

NELAC Certification No. E31780

CONTENTS

Facility Overview

Methods

Results

Conclusion

Literature Cited

Tables

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

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

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

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

Appendices

Appendix A. Facility Summary

Appendix B. Explanation of measurements

Appendix C. Chemical Analyses of Effluent

EPA End Sheet

USN NAS Jacksonville WWTF, Naval Air Station Building 985, US Highway 17 North, Jacksonville, Duval County, Florida, 32212. NPDES #FL0000957.

Facility Overview

USN NAS Jacksonville WWTF is a domestic wastewater treatment plant which uses an activated sludge process to treat domestic wastewater. It receives a portion of secondary and basic disinfection treated effluent from JEA Southwest WWTF (Permit ID: FL0006468). See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO), and Discharge Monitoring Report (DMR) information.

Methods

Effluent timed proportioned composite samples for toxicity testing were collected on October 23, 25, and 27, 2017. Effluent grab samples for biological and chemical analyses for this facility were collected on October 23, 2017. All samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Nick Williams, Brittany Dion, and Paul Duff (FDEP Northeast District).

All field and laboratory methods followed FDEP Standard Operating Procedures (see http://www.dep.state.fl.us/labs/library/lab_sops.htm and http://www.dep.state.fl.us/water/sas/sop/sops.htm for details) and met DEP quality assurance/quality control standards (see http://www.dep.state.fl.us/water/sas/qa/index.htm). Explanations of specific methods and measurements can be found in Appendix B. References to Rule 62-302.530, F.A.C., are to the current applicable surface water quality criteria table with an effective date of 02/17/16 and a notice identification number of 18212543. The table includes new criteria for *Escherichia coli (E. coli)*, enterococci, and ammonia (total ammonia nitrogen) that were approved by EPA in July 2017.

> Please note that the human health-based water quality criteria (HHC) that were approved for adoption by the Environmental Regulation Commission (ERC) on July 26, 2016, are not yet in effect even though they are included in the version of Chapter 62-302 on the Department of State website. The rule revisions for the HHC have not been submitted to EPA due to an ongoing rule challenge, and cannot be used for Clean Water Act purposes until they have been approved by EPA.

Results

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

Receiving Waters for this facility fall within the Lower St. Johns River and Tributaries (predominantly marine) Estuary Nutrient Region, estuary segment, ENRBB1. The Numeric Nutrient Criteria (NNC) for the Lower St. Johns River and Tributaries are provided in subparagraph 62-302.532(1) (bb)1., F.A.C. The criterion for chlorophyll-a is 5.4 µg/L expressed as a long-term average of annual averages, total phosphorus is 722,834 kilograms per year expressed as annual load, and for total nitrogen 1,376,855 kilograms per year expressed as an annual load, per subsection 62-304.415(2), F.A.C. This FYI event can only provide single sample results; therefore, compliance should be determined with additional sampling events. Additionally, data are required to determine criteria attainment.

http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

- Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory. The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.043 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.
- Arsenic, cadmium, copper, fluoride, mercury, nickel, turbidity, and zinc were detected in the effluent at levels that comply with Class III Marine Water Quality Criteria (62-302.530, F.A.C.). Cyanide, iron, lead, and oils and greases were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).

Algal Growth Potential (See Table 4 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 145 A mg dry wt./L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum.* The analytical chemistry suggests that the effluent is nitrogen-limited (Miller et al. 1978).
- The measured salinity of the AGP sample was 0.41 ppt. Per the method, when freshwater effluent discharges into a marine waterbody, a freshwater and salinity adjusted test must be analyzed. Due to insufficient sample volume, a salinity adjusted effluent algal growth potential (AGP) was not performed on the saltwater species *Dunaliella tertiolecta.*

Toxicity Test Results (See Appendix C)

- Tests were performed October 24 through 31, 2017.
- Chronic bioassay results are reported as the 25% Inhibition Concentration (IC25) and the No Observed Effect Concentration (NOEC)*

Ceriodaphnia dubia 7-day chronic definitive bioassay – IC25: > 100%
No Observed Effect Concentration (NOEC) is 100%

Pimephales promelas 7-day chronic definitive bioassay – IC25: > 100%
No Observed Effect Concentration (NOEC) is 100%

* NOTE: A 25% inhibition concentration (IC25) is the effluent concentration causing a 25% reduction in a biological response such as biomass or reproduction when compared to a control population. An IC25 of less than 100% in a chronic test may constitute exceedances of 62-302.200(5), 62-302.530(20) 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(108) and/or facility permit limits.

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

Conclusion

The effluent samples collected from the EFD-1 NPDES sampling point for this facility on October 23, 25, and 27, 2017 were not chronically toxic to either test species during the 7-day chronic definitive bioassays. The analytical chemistry suggests that the effluent's algal growth potential is nitrogen-limited (Miller et al. 1978). Effluent water quality samples collected on October 23, 25, and 27, 2017 did not exceed any applicable water quality standards or any permit conditions.

For additional information concerning this sampling event, including bioassay bench sheets and SRT data, please contact Amelia.Rankin@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.

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

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

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

USN NAS Jacksonville	Units	Class III Criteria	Effluent Permit Limits	NAS Composite	NAS Grab
Sample Depth	ft	-	-	-	1
Temperature	C	-	-	-	27.4
pH	SU	6.5 - 8.5	6.5 - 8.5	-	6.7
Specific Conductance	µmhos/cm	-	-	-	925
Salinity	ppt	-	-	-	0.4 c
Dissolved Oxygen	% saturation	≥ 42	-	-	76.5
Dissolved Oxygen	mg/L	-	≥ 5.0	-	6.04

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

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

USN NAS Jacksonville	Units	Class III Criteria	Effluent Permit Limits	NAS Composite	NAS Grab
Ortho-phosphate	mg P/L	-	-	-	1.5
Total Phosphorus	mg P/L	-	-	1.8	1.8
Total Ammonia	mg N/L	≤ 3.19 c	-	0.039	0.043
Un-ionized Ammonia (calculated salinity)	mg NH_3/L	-	-	-	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	10	10
Total Kjeldahl Nitrogen	mg N/L	-	-	0.71	0.67
Organic Nitrogen	mg N/L	-	-	0.67 c	0.63 c
Total Nitrogen	mg N/L	-	-	11 c	11 c
Total Organic Carbon	mg C/L	-	-	5.8	5.9 A
Chlorophyll *a* - Corrected	µg/L	-	-	-	0.55 U
Phaeophytin	µg/L	-	-	-	0.40 U
Chlorophyll *a*- Uncorrected	µg/L	-	-	-	0.40 U
CBOD, 5-day, N - inhibited	mg/L	-	-	1.4 I	-
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	< 0.03	-
Total Suspended Solids	mg/L	-	-	2 U	-
Turbidity	NTU	< 29 t	-	-	0.4
Color (true)	PCU	-	-	-	4.9 I
Alkalinity	mg CaCo3/L	≥ 20	-	-	85 A
Chloride	mg Cl/L	-	-	-	97
Cyanide	mg/L	≤ 1.0	-	-	0.0042 I
Fluoride	mg F/L	≤ 5.0	-	-	0.47
Sulfate	mg SO4/L	-	-	-	180
Oils and Greases	mg/L	≤ 5.0	-	-	2.0 I
Microbiology					
Fecal Coliforms [1, 2]	cfu/100 mL	-	-	-	100 B
Escherichia coli [1, 2]	MPN/100 mL	-	-	-	10 U
Toxicity (IC25, Chronic Definitive, % effluent)					
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

t - Shall not exceed 29 NTUs above background

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

B - Results based on colony counts outside the acceptance range

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

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

1 - Fecal coliform and Colilert analyses performed by ALS Environmental (Columbia) lab

2 - Class III Marine Water criteria are for enterococci; however, fecal coliforms and *E. coli* were tested.

Note: The former Class III Freshwater single sample limit for fecal coliforms is ≤ 400 cfu/100 mL and the Class III Freshwater single sample limit for *E. coli* is ≤ 410 MPN/100 mL.

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

USN NAS Jacksonville	Units	Class III Criteria	Effluent Permit Limits	NAS Composite	NAS Grab
Hardness	mg CaCO3/L	-	-	287 c	-
Aluminum	µg/L	≤ 1500	-	9.9 I	-
Arsenic	µg/L	≤ 50	-	1.38	-
Cadmium	µg/L	≤ 8.8	-	0.105	-
Calcium	mg/L	-	-	69.3	-
Chromium, Total [3]	µg/L	≤ 50	-	0.40 U	-
Copper	µg/L	≤ 3.7	-	2.51	-
Iron	µg/L	≤ 300	-	64 I	-
Lead	µg/L	≤ 8.5	-	0.055 I	-
Magnesium	mg/L	-	-	27.6	-
Mercury	ng/L	≤ 25	-	-	0.53
Nickel	µg/L	≤ 8.3	-	3.23	-
Potassium	mg/L	-	-	10	-
Selenium	µg/L	≤ 71	-	0.20 U	-
Silver	µg/L	≤ 2.3	-	0.010 U	-
Sodium	mg/L	-	-	69.1	-
Zinc	µg/L	≤ 86	-	30	-

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

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

3 - Class III Marine Water Quality Criterion (62-302.530(19)(b), F.A.C.) is for chromium-VI

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.

USN NAS Jacksonville								
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**
NAS Grab	*Pseudokirchneriella subcapitata*	145 A	381.6 ± 76.3	645 ± 129	405.5 ± 81.1	774 ± 154.8	6.7	5.9

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: Nick Williams	Contact Number: 904-256-1608
Facility Name (as it appears on permit): USN NAS Jacksonville WWTF	Former Names: N/A
NPDES Permit Number: FL0000957	Permit Expiration Date: May 4, 2019
Physical Address: Naval Air Station Building 985, US Highway 17 North, Jacksonville, Florida 32212	
District: Northeast	County: Duval
Function of Facility: Domestic wastewater treatment plant	
Facility Type: Domestic Wastewater	Permitted Capacity (MGD): 3.0 MGD
Mean Flow for previous 12 months for all EXTERNAL outfall listed in permit (list date range including months): May 2016 – June 2016 D-001 – 0.599 MGD	
If applicable, Mean Flow for previous 12 months for REUSE outfall (list date range including months): N/A	
Description of type of Discharge: ☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify:	
Description of Sampling Locations - actual permit designation of permitted sampling points: EFD-1: Final effluent, immediately after dechlorination, but prior to discharge to St. Johns River PPI-1: Sampling point just upstream of the existing chlorine contact chamber in the junction box at the end of the 2125 LF 30-inch pipeline between the filters and the junction box CAL-1: Calculated percent removal of CBOD5 or TSS CAL-2: Calculated length of longest pH excursion.	

CAL-3: Calculated percent of time exceeding pH

CAL-4: Calculated total mass load of total nitrogen

CAL-9: Calculated number of days of discharge per month.

Description of Permitted Outfalls:

D-001: An existing 2.0 MGD AADF discharge to St. Johns River, Class III Marine waters, (WBID# 2213E) which is approximately 700 feet in length and discharges at a depth of approximately 4 feet. The point of discharge D – 001 is located approximately at latitude 30° 14' 29" N, longitude 81° 40' 33" W.

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

An existing 3.0 million gallons per day (MGD) annual average daily flow (AADF) design capacity activated sludge wastewater treatment facility (WWTF) comprised of the following:

- An influent headworks having two flow equalization basins each with a volume of 0.148 million gallon (MG), aerated by three 30-hp diffused air blowers;
- A mechanical bar screen with 0.5-inch bar spacing; one manual bar screen with 1inch spacing; and one grit removal unit;
- An aeration basin with a diameter of 146 ft, a side water depth of 13 ft, a surface area of 16,742 SF and a volume of 1.63 MG, provides a hydraulic detention time of 13 hr.;
- Two secondary clarifiers with a diameter of 60 ft., a weir length of 190 ft, a side water depth of 10 ft, a surface area of 2,827 SF and a volume of 0.236 MG each;
- Two tertiary filters (12.5 ft x 40 ft x 1.33 ft);
- Chlorine Contact: a 2,125 LF of 30-inch pipeline with a volume of 77,990 gallons and a chlorine contact chamber (CCC) with a volume of 66.838 gallons;
- Dechlorination following the CCC via sulfur dioxide;
- Biosolids will be treated by the on-site BCR CleanB modular system. Biosolids can be disposed of in a Class I solid waste landfill or beneficially used at land application sites listed on the approved Biosolids Management Plan.

USN NAS Jacksonville WWTF receives portion of secondary and basic disinfection treated effluent from JEA – Southwest WWTF (Permit ID: FL0026468) to make-up demanded reclaimed water during low flow condition at the USN NAS Jacksonville WWT. The treated effluent from JEA – Southwest WWTF shall be pumped to the headwork of USN NAS Jacksonville WWTF.

PART I: Continued										
List current Effluent Limits of Outfall 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, Surface Discharge to LSJR	MGD	Max	2.0	Report	-	-	Continuous	Recording Flow Meter with Totalizer	EFD-1	See I.A.4
Number of Days of Discharge from D-001	# Days/ Month	Max	-	Report	-	-	Daily (During Discharge)	Calculation	CAL-9	
BOD, Carbonaceous 5-day. 20°C	mg/L	Max	20.0	25.0	40.0	60.0	Weekly	16-hr FPC	PPI-1	
CBOD, % Removal, 5-day	percent	Min	-	85	-	-	Monthly	Calculated	CAL-1	See I.A.9
Solids, Total Suspended	mg/L	Max	20.0	30.0	45.0	60.0	Weekly	16-hr FPC	PPI-1	
Solids, Total Suspended, % Removal	percent	Min	-	85	-	-	Monthly	Calculated	CAL-1	See I.A.9

Coliform, Fecal	#/100mL	Max	200	200	-	800	Weekly	Grab	PPI-1	See I.A.5
pH	s.u.	Min Max	-	-	-	6.0 8.5	Continuous	Meter	EFD-1	See I.A.3
Length of Longest pH Excursion	min	Max	-	-	-	60.0	Monthly	Calculated	CAL-2	
% of Time Exceeding pH Limits	percent	Max	-	-	-	1.0	Monthly	Calculated	CAL-3	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	-	-	-	0.5	Continuous	Meter	PPI-1	See I.A.3 and I.A.6
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	-	-	-	0.01	Daily; 24 hours	Grab	EFD-1	See I.A.12
Oxygen, dissolved (DO)	mg/L	Min	-	-	-	5.0	Daily; 24 hours	Grab	EFD-1	See I.A.10
Oil and Grease	mg/L	Max	-	-	-	5.0	Monthly	Grab	PPI-1	
Surfactants (MBAS)	mg/L	Max	-	Report	-	0.5	Monthly	16-hr FPC	PPI-1	

Nitrogen, Total (as N)	mg/L	Max	Report	Report	-	Report	Weekly	16-hr FPC	PPI-1	
Nitrogen, Total Load (as N)	lb/yr lb/month	Max	Report	Report	-	-	Monthly	Calculated	CAL-4	See I.A.11
Phosphorus, Total (as P)	mg/L	Max	Report	Report	-	Report	Monthly	16-hr FPC	PPI-1	
Phosphorus, Total Load (as P)	lb/yr lb/month	Max	Report	Report	-	-	Monthly	Calculated	CAL-4	See I.A.11
Cyanide, Total (as CN)	µg/L	Max	-	-	-	1.0	Monthly	Grab	PPI-1	See I.A.12
Copper, Total Recoverable *(within the mixing zone area)*	µg/L	Max	-	-	-	14.0	Monthly	16-hr FPC	PPI-1	See I.A.13
Nickel, Total Recoverable	µg/L	Max	-	-	-	8.3	Quarterly	16-hr FPC	PPI-1	
Lead, Total Recoverable	µg/L	Max	-	-	-	8.5	Quarterly	16-hr FPC	PPI-1	
Nitrogen, Organic, Total (as N)	mg/L	Max	-	-	-	Report	Quarterly	16-hr FPC	PPI-1	

Nitrogen, Ammonia, Total (as N)	mg/L	Max	-	-	-	Report	Quarterly	Grab	PPI-1	See I.A.12
Temperature, Water	Deg C	Max	-	-	-	Report	Quarterly	Meter	PPI-1	See I.A.12
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	-	-	-	Report	Quarterly	16-hr FPC	PPI-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	-	-	-	Report	Quarterly	16-hr FPC	PPI-1	
Phosphate, Ortho (as P)	mg/L	Max	-	-	-	Report	Quarterly	Grab	PPI-1	
Mercury, Total Recoverable	µg/L	Max	-	-	-	Report	Annually	Grab	PPI-1	See I.A.19
Chronic and Acute Whole Effluent Toxicity	percent	Min	-	-	-	100	Semi-Annually; twice per year	24-hr FPC	EFD-1	See I.A.7 and I.A.8

PART I: Continued	
Receiving Waters: St. Johns River	Classification (indicate whether fresh or marine): Class III Freshwater

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

7. **Chronic Whole Effluent Toxicity Monitoring:** When the discharge from Outfall D – 001 to the St. Johns River exceeds five (5) consecutive days or a total of fifteen (15) days in a month within a six months period (semi-annually), the permittee shall comply with the following test requirements to evaluate chronic whole effluent toxicity. Routine tests will not be required more than once for each half of the year.

   a. Effluent Limitation

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

      (2) For acute whole effluent toxicity, the 96-hour LC_{50} shall not be less than 100% effluent in any test. *[Rule 62-302.500(1) (a) 4. and 62-4.241(1) (a), F.A.C.]*

   b. Monitoring Frequency

      (1) Routine toxicity tests shall be conducted once every 6 months starting within 6 months of the most recent test, and lasting for the duration of the permit.

   c. Sampling Requirements

      (1) For each test conducted, a total of three *grab* samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.

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

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

   d. Test Requirements

      (1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: 100%, 50%, 25%, 12.5% and 6.25%final effluent.

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

      (3) All test species, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th ed., EPA-821-R-02-013. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.

      (4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.

   e. Quality Assurance Requirements

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

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

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

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

f. Reporting Requirements

(1) Results from all required tests shall be entered on the Discharge Monitoring Report (DMR) as the calculated IC_{25} for each test species.

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

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-013, Section 10, and e-mailed or mailed within 30 days after the last day of the second valid additional follow-up test.

(4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.

(5) The same bioassay data shall not be reported as the results of more than one test.

(6) All bioassay laboratory reports shall be e-mailed or mailed within 30 days to Jacksonville *only*:

g. Test Failures

(1) A test fails when the test results do not meet the limits in 7.a.

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 7.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 12.d.

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

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

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

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

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

(c) The plan shall be initiated within 30 days following the Department's written approval of the plan.

(d) Progress reports shall be submitted quarterly to the Department at the address above.

(e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 7.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 7.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.

(f) Upon completion of four consecutive, valid routine tests that demonstrate compliance with the effluent limitation in 7.a. (1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive valid routine whole effluent toxicity tests.

(g) If a test within the sequence of the four is deemed invalid but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, then the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of terminating the plan.

(4) If chronic toxicity test results indicate greater than 50% mortality within 96 hours in an effluent concentration equal to or less than the effluent concentration specified as the acute toxicity limit in 7. (a)(2), then the Department may revise this permit to require acute definitive whole effluent toxicity testing.

(5) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for acute or chronic whole effluent toxicity test failures. *[62-4.241, 62-620.620(3)]*

8. **Acute Whole Effluent Toxicity Monitoring**: When the discharge from Outfall D – 001 to the St. Johns River does not meet the sampling criteria listed in Condition I.A.7 for evaluating *chronic* whole effluent toxicity, the permittee shall comply with the following to evaluate *acute* whole effluent toxicity. Routine tests will not be required more than once for each half of the year.

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 once every 6 months starting within 6 months of the most recent test, and lasting for the duration of the 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.

e. Quality Assurance Requirements

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

(2) If the mortality in the control (0% effluent) exceeds 10% for either species in any test, then the test for that species (including the control) shall be invalidated and the test repeated. The repeat test shall begin within 14 days after the last day of the invalid test.

(3) If 100% mortality occurs in all effluent concentrations for either species prior to the end of any test and the control mortality is less than 10% at that time, then the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.

(4) Routine and additional follow-up tests shall be evaluated for acceptability based on the concentration-response relationship, as required by EPA-821-R-02-012, Section 12.2.6.2., and included with the bioassay laboratory reports.

f. Reporting Requirements

(1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as the calculated LC50 effluent concentration for that species.

(2) A bioassay laboratory report for the routine test shall be prepared according to EPA-821-R-02-012, Section 12, Report Preparation and Test Review, and mailed or emailed to the Department at the address below within 30 days after the last day of the test.

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-012, Section 12, and mailed or emailed within 30 days after the last day of the second valid additional follow-up test.

(4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.

(5) The same bioassay data shall not be reported as the results of more than one test.

(6) All bioassay laboratory reports shall be mailed or emailed to Jacksonville only:

g. Test Failures

(1) A test fails when the test results do not meet the limits in 8.a.(1).

(2) Additional Follow-up Tests:

a) If a routine test does not meet the acute toxicity discharge limit in 8.a.(1) above, then the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 13.d.

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

c) The additional follow-up tests shall be conducted using a control and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent. The permittee may modify the dilution series in the additional follow-up tests to more accurately bracket the toxicity such that at least two dilutions

above and two dilutions below the target concentration and a control are run. All test results shall be statistically analyzed according to the procedures in EPA-821-R-02-012.

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

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

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

c) The plan shall be initiated within 30 days following the Department's written approval of the plan.

d) Progress reports shall be submitted quarterly to the Department at the address above.

e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 8.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 8.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-012, a repeat test shall be initiated within 14 days after the last day of the invalid routine test.

f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 8.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests.

g) If a test within the sequence of the four is deemed invalid but is replaced by a repeat valid test initiated within 14 days after the last day of the invalid test, then the invalid test will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.

(4) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for whole effluent toxicity failures. *[62-4.241, 62-620.620(3)]*

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

CO 14-0408: US Navy Aggregate Permit for Total Nitrogen (for plants NAS Jax FL0000957 and NS Mayport FL0000922). Original CO was executed 4/25/15. The amended CO was executed 3/17/17. Interim limits were set for TN, total aggregate mass load for the combined plants. Interim limits were not set for the individual plants. All due dates are associated with NS Mayport.

Facility Mixing Zone Details (if applicable):

A mixing zone for copper in the effluent discharged through the existing outfall D-001 to St. Johns River has been established. The mixing zone is a parallelogram measuring 250 meters in the shore parallel direction and 240 meters perpendicular to the shoreline. The zone is centered over the outfall diffuser perpendicular to the shore and extends 100 meters up-river and 140 meters down-river from the diffuser. The mixing zone area is 60,000 m2 and at a permitted capacity of 2.0 MGD annual average daily flow (AADF). The limit concentration of copper (total recoverable) within the mixing zone area is 14.0µg/L. The mixing zone for concentration of copper is subject to evaluate at least every five years during the facilities permit renewal cycle.

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

Date	Parameter and Units	Limit	Result
10/31/2016	Chlorine, Total Residual (mg/L)	0.5	0.0

Describe previous FYI and WQBEL study: 8/29/2012 – CSI/XSI/CBI – In-Compliance
Describe previous or current Enforcement Actions (including WLs): No open enforcement actions. Previous enforcement actions include WL issued on August 11, 2010 for exceedances related to surfactants. A draft CO was prepared, but the exceedances were determined to be due to lab error and the case was dropped.
Describe any violations or problems noted in previous inspection: The most recent CEI completed on 7/19/2016 found minor issues with compliance schedule items not being completed, the location of the continuous sampler return line, and a missing section in the facility's reclaimed water SOP on alarm set points for turbidity and chlorine residual. Also, the report detailed four exceedances for Copper, two exceedances for IC25 – Toxicity, two for pH, and one for Total Chlorine Residual. All deficiencies in the report were corrected by the facility and the exceedances were non-repeating.
Discuss whether DMR trends within previous five years are improving or declining: Facility has had the most issues with Copper over the five-year period. There have been seven exceedances, but it does appear to be improving as the value has gone from 21 µg/L at the last exceedance in May 2016 to a most recent value under 7 µg/L. Other parameter values are relatively stable with some fluctuation in values through a yearly cycle.
Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse): N/A

PART II: Sampling Event Information	
Date(s) sample collected:	Sampler(s):
Temperature (Deg C):	pH (SU):
Dissolved Oxygen (mg/L):	Conductivity (µmhos/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) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62.302.200(1), F.A.C., and 62-302.500(1)a, F.A.C., 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 62-302.200(5), F.A.C., and 62-302.530(20), F.A.C., 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(108), F.A.C., and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

High levels of fecal coliform bacteria may constitute an exceedance of facility permit limits. Class III Water Quality Criteria are based on *Eschericia coli* and enterococci levels (F.A.C. 62-302.530(11)(c) and (d)).

(5) Chlorophyll *a* Content

Chlorophyll *a* content is an estimate algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may constitute exceedances of 62-302.530(89), F.A.C. 62-302.530(90)(a), F.A.C., and/or 62-302.530(90)(b), F.A.C.

(6) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. The AGP range of 6.10 to 20.0 mg dry wt./L is suggested to be representative of high productivity for freshwater (Miler et al. 1978). High AGP values may constitute exceedances of 62-302.530(89), F.A.C., 62-302.530(90)(a), F.A.C. and/or 62-302.530(90)(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(108) F.A.C. Expected AGP is not calculated for marine samples incubated with *Dunaliella*.

(7) Definition of Qualifiers

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.

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

Appendix C

Chemical analysis of effluent

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS COMP	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day, N-Inhib	1.4 I	mg/L	0.2	2
10/23/2017	NAS COMP	Toxicology	Bioassay-Chron-Def-FW-C. dubia, IC25	100 L	IC25		
10/23/2017	NAS COMP	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	100 L	IC25		
10/23/2017	NAS COMP	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	100	NOEC		
10/23/2017	NAS COMP	Toxicology	Bioassay-Chron-Def-FW-C. dubia, NOEC	100	NOEC		
10/23/2017	NAS COMP	Metals	Nickel	3.23	µg/L	0.2	0.8
10/23/2017	NAS COMP	Metals	Selenium	0.20 U	µg/L	0.2	0.8
10/23/2017	NAS COMP	Metals	Chromium	0.40 U	µg/L	0.4	1.6
10/23/2017	NAS COMP	Metals	Lead	0.055 I	µg/L	0.05	0.2
10/23/2017	NAS COMP	Metals	Zinc	30	µg/L	5	20
10/23/2017	NAS COMP	Metals	Arsenic	1.38	µg/L	0.05	0.2
10/23/2017	NAS COMP	Metals	Magnesium	27.6	mg/L	0.04	0.16
10/23/2017	NAS COMP	Metals	Aluminum	9.9 I	µg/L	3	12
10/23/2017	NAS COMP	Metals	Calcium	69.3	mg/L	0.075	0.3
10/23/2017	NAS COMP	Metals	Silver	0.010 U	µg/L	0.01	0.04
10/23/2017	NAS COMP	Metals	Copper	2.51	µg/L	0.2	0.8
10/23/2017	NAS COMP	Metals	Cadmium	0.105	µg/L	0.02	0.08
10/23/2017	NAS COMP	Metals	Sodium	69.1	mg/L	0.5	2
10/23/2017	NAS COMP	Metals	Potassium	10	mg/L	0.3	1.2
10/23/2017	NAS COMP	Metals	Iron	64 I	µg/L	30	120
10/23/2017	NAS COMP	Nutrients	Kjeldahl Nitrogen	0.71	mg N/L	0.16	0.4
10/23/2017	NAS COMP	Nutrients	Ammonia-N	0.039	mg N/L	0.002	0.005
10/23/2017	NAS COMP	Nutrients	Organic Carbon	5.8	mg C/L	1	2
10/23/2017	NAS COMP	Nutrients	TSS	2 U	mg/L	2	10
10/23/2017	NAS COMP	Nutrients	Total-P	1.8	mg P/L	0.025	0.25
10/23/2017	NAS COMP	Nutrients	NO2NO3-N	10	mg N/L	0.4	1
10/23/2017	NAS COMP	Overflow	MBAS	0.10 U	mg/l	0.1	0.2
10/23/2017	NAS GRAB	AGP/LN	Algal Growth Potential	145 A	mg DryWt/L	0.3	0.9
10/23/2017	NAS GRAB	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.40 U	µg/L	0.4	1.2
10/23/2017	NAS GRAB	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55 U	µg/L	0.55	1.7
10/23/2017	NAS GRAB	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	µg/L	0.4	1.2
10/23/2017	NAS GRAB	Overflow	Fecal Coliforms-Membrane Filter	100 B	cfu/100 mL	1.6	1.6

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS GRAB	Overflow	Escherichia Coli-Quanti-Tray	10 U	MPN/100 mL	10	10
10/23/2017	NAS GRAB	Metals	Mercury	0.53	ng/L	0.1	0.3
10/23/2017	NAS GRAB	Nutrients	Kjeldahl Nitrogen	0.67	mg N/L	0.16	0.4
10/23/2017	NAS GRAB	Nutrients	Organic Carbon	5.9 A	mg C/L	1	2
10/23/2017	NAS GRAB	Nutrients	Chloride	97	mg Cl/L	2	5
10/23/2017	NAS GRAB	Nutrients	Turbidity	0.4	NTU	0.1	0.13
10/23/2017	NAS GRAB	Nutrients	Color (true)	4.9 I	PCU	2.5	6
10/23/2017	NAS GRAB	Nutrients	O-Phosphate-P	1.5	mg P/L	0.04	0.1
10/23/2017	NAS GRAB	Nutrients	Ammonia-N	0.043	mg N/L	0.002	0.005
10/23/2017	NAS GRAB	Nutrients	Fluoride	0.47	mg F/L	0.035	0.1
10/23/2017	NAS GRAB	Nutrients	Sulfate	180	mg SO4/L	2	5
10/23/2017	NAS GRAB	Nutrients	Total Alkalinity	85 A	mg CaCO3/L	0.65	2.5
10/23/2017	NAS GRAB	Nutrients	Total-P	1.8	mg P/L	0.025	0.25
10/23/2017	NAS GRAB	Nutrients	NO2NO3-N	10	mg N/L	0.4	1
10/23/2017	NAS GRAB	Overflow	Cyanide	0.0042 I	mg/L	0.0025	0.01
10/23/2017	NAS GRAB	Overflow	HEM	2.0 I	mg/L	1.4	4.9
10/23/2017	NAS GRAB	Pesticides	Atrazine Desethyl	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Parathion Methyl	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Metribuzin	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Pesticides	Phorate	0.0048 U	µg/L	0.0048	0.019
10/23/2017	NAS GRAB	Pesticides	Acetaminophen	0.0080 U	µg/L	0.008	0.032
10/23/2017	NAS GRAB	Pesticides	Naled	0.039 U	µg/L	0.039	0.15
10/23/2017	NAS GRAB	Pesticides	Azinphos Methyl	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Pesticides	Prometryn	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Pesticides	Sucralose	30	µg/L	0.01	0.04
10/23/2017	NAS GRAB	Pesticides	Prometon	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Pesticides	Bromacil	0.039 U	µg/L	0.039	0.15
10/23/2017	NAS GRAB	Pesticides	Ametryn	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Chlorpyrifos Ethyl	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Chlorpyrifos Methyl	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Disulfoton	0.0048 U	µg/L	0.0048	0.019
10/23/2017	NAS GRAB	Pesticides	Carbamazepine	0.044 Q	µg/L	0.0004	0.0016
10/23/2017	NAS GRAB	Pesticides	Atrazine	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Demeton	0.023 U	µg/L	0.023	0.092
10/23/2017	NAS GRAB	Pesticides	Malathion	0.0096 U	µg/L	0.0096	0.039

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS GRAB	Pesticides	Alachlor	0.058 U	µg/L	0.058	0.23
10/23/2017	NAS GRAB	Pesticides	Fenamiphos	0.029 UJ	µg/L	0.029	0.12
10/23/2017	NAS GRAB	Pesticides	Atrazine Desisopropyl	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Butylate	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Pesticides	Hexazinone	0.029 U	µg/L	0.029	0.12
10/23/2017	NAS GRAB	Pesticides	Simazine	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Mevinphos	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Ethoprop	0.0048 U	µg/L	0.0048	0.019
10/23/2017	NAS GRAB	Pesticides	Ethion	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Diazinon	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Metalaxyl	0.039 U	µg/L	0.039	0.15
10/23/2017	NAS GRAB	Pesticides	Norflurazon	0.029 U	µg/L	0.029	0.12
10/23/2017	NAS GRAB	Pesticides	Metolachlor	0.058 UJ	µg/L	0.058	0.23
10/23/2017	NAS GRAB	Pesticides	Fonofos	0.0096 U	µg/L	0.0096	0.039
10/23/2017	NAS GRAB	Pesticides	Parathion Ethyl	0.019 U	µg/L	0.019	0.077
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,4-Dichlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzo (g, h, i) perylene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Dimethyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	N-Nitroso diphenylamine/ Diphenylamine	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	µg/L	14	56
10/23/2017	NAS GRAB	Priority Organic Pollutants	Acenaphthylene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzidine	93 U	µg/L	93	370
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Di-n-octyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Hexachloroethane	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	N-Nitroso dimethylamine	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	4-Nitrophenol	14 U	µg/L	14	56
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Bis(2-chloroisopropyl) ether	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	Chrysene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Isophorone	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Phenanthrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.93 U	µg/L	0.93	3.7

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS GRAB	Priority Organic Pollutants	Acenaphthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Di-n-butyl phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Diethyl phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	Fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,4-Dimethylphenol	9.3 U	µg/L	9.3	37
10/23/2017	NAS GRAB	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	Naphthalene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	2-Nitrophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Pentachlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,4-Dinitrotoluene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	2-Chlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Anthracene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Bis(2-chloroethyl) ether	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Butyl benzyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Hexachlorobenzene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Indeno(1,2,3-cd) pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	2,6-Dinitrotoluene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	2-Chloronaphthalene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	3,3'-Dichlorobenzidine	37 U	µg/L	37	150
10/23/2017	NAS GRAB	Priority Organic Pollutants	Bis(2-chloroethoxy) methane	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Priority Organic Pollutants	Bis(2-ethylhexyl) phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	Fluorene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS GRAB	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	µg/L	2.8	11
10/23/2017	NAS GRAB	Priority Organic Pollutants	Nitrobenzene	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS GRAB	Priority Organic Pollutants	Phenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS GRAB	Nutrients	Sample Depth	1	ft		
10/23/2017	NAS GRAB	Nutrients	pH	6.7			

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS GRAB	Nutrients	Dissolved Oxygen	6.04	mg/L		
10/23/2017	NAS GRAB	Nutrients	Specific Conductance	925	µmhos/cm		
10/23/2017	NAS GRAB	Nutrients	Temperature	27.4	C		
10/23/2017	NAS BLANK	Metals	Mercury	0.10 U	ng/L	0.1	0.3
10/23/2017	NAS BLANK	Nutrients	Color (true)	2.5 U	PCU	2.5	6
10/23/2017	NAS BLANK	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
10/23/2017	NAS BLANK	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
10/23/2017	NAS BLANK	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
10/23/2017	NAS BLANK	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
10/23/2017	NAS BLANK	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
10/23/2017	NAS BLANK	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
10/23/2017	NAS BLANK	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
10/23/2017	NAS BLANK	Nutrients	Turbidity	0.10 U	NTU	0.1	0.13
10/23/2017	NAS BLANK	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
10/23/2017	NAS BLANK	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
10/23/2017	NAS BLANK	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
10/23/2017	NAS BLANK	Overflow	HEM	1.4 U	mg/L	1.4	4.8
10/23/2017	NAS BLANK	Overflow	Cyanide	0.0025 U	mg/L	0.0025	0.01
10/23/2017	NAS BLANK	Pesticides	Disulfoton	0.0047 U	µg/L	0.0047	0.019
10/23/2017	NAS BLANK	Pesticides	Chlorpyrifos Ethyl	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Fonofos	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Metalaxyl	0.038 U	µg/L	0.038	0.15
10/23/2017	NAS BLANK	Pesticides	Parathion Methyl	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Prometryn	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Atrazine Desisopropyl	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Malathion	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Naled	0.038 U	µg/L	0.038	0.15
10/23/2017	NAS BLANK	Pesticides	Norflurazon	0.028 U	µg/L	0.028	0.11
10/23/2017	NAS BLANK	Pesticides	Phorate	0.0047 U	µg/L	0.0047	0.019
10/23/2017	NAS BLANK	Pesticides	Alachlor	0.057 U	µg/L	0.057	0.23
10/23/2017	NAS BLANK	Pesticides	Diazinon	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Metolachlor	0.057 UJ	µg/L	0.057	0.23
10/23/2017	NAS BLANK	Pesticides	Sucralose	0.010 U	µg/L	0.01	0.04
10/23/2017	NAS BLANK	Pesticides	Atrazine Desethyl	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Ethoprop	0.0047 U	µg/L	0.0047	0.019

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS BLANK	Pesticides	Bromacil	0.038 U	µg/L	0.038	0.15
10/23/2017	NAS BLANK	Pesticides	Demeton	0.023 U	µg/L	0.023	0.091
10/23/2017	NAS BLANK	Pesticides	Hexazinone	0.028 U	µg/L	0.028	0.11
10/23/2017	NAS BLANK	Pesticides	Simazine	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Carbamazepine	4.0E-04 UQ	µg/L	0.0004	0.0016
10/23/2017	NAS BLANK	Pesticides	Chlorpyrifos Methyl	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Ethion	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Fenamiphos	0.028 UJ	µg/L	0.028	0.11
10/23/2017	NAS BLANK	Pesticides	Metribuzin	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Mevinphos	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Parathion Ethyl	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Acetaminophen	0.0080 U	µg/L	0.008	0.032
10/23/2017	NAS BLANK	Pesticides	Azinphos Methyl	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Butylate	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Prometon	0.019 U	µg/L	0.019	0.076
10/23/2017	NAS BLANK	Pesticides	Ametryn	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Pesticides	Atrazine	0.0095 U	µg/L	0.0095	0.038
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	9.3 U	µg/L	9.3	37
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	37 U	µg/L	37	150
10/23/2017	NAS BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzo (g, h, I) perylene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Bis(2-chloroethyl) ether	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Diethyl phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy) methane	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Dimethyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	Acenaphthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl) ether	2.8 U	µg/L	2.8	11
10/23/2017	NAS BLANK	Priority Organic Pollutants	Dibenzo (a, h)anthracene	0.19 U	µg/L	0.19	0.75

Date Sampled	Site ID	Analyses Group	Component	Result	Units	MDL	PQL
10/23/2017	NAS BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	µg/L	2.8	11
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd) pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Isophorone	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	N-Nitroso diphenylamine/ Diphenylamine	2.8 U	µg/L	2.8	11
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	µg/L	14	56
10/23/2017	NAS BLANK	Priority Organic Pollutants	4-Nitrophenol	14 U	µg/L	14	56
10/23/2017	NAS BLANK	Priority Organic Pollutants	Anthracene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl) phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	N-Nitroso dimethylamine	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	Nitrobenzene	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	Phenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Acenaphthylene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Chrysene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Hexachlorobenzene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Naphthalene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	2-Chlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	2-Nitrophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Benzidine	93 U	µg/L	93	370
10/23/2017	NAS BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	1.9 U	µg/L	1.9	7.5
10/23/2017	NAS BLANK	Priority Organic Pollutants	Fluorene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Hexachloroethane	2.8 U	µg/L	2.8	11
10/23/2017	NAS BLANK	Priority Organic Pollutants	Pentachlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Phenanthrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Pyrene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	2-Chloronaphthalene	0.93 U	µg/L	0.93	3.7
10/23/2017	NAS BLANK	Priority Organic Pollutants	Fluoranthene	0.19 U	µg/L	0.19	0.75
10/23/2017	NAS BLANK	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	µg/L	2.8	11
10/23/2017	NAS BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	µg/L	2.8	11

EPA End Sheet

The Bioassay of USN NAS Jacksonville WWTF effluent sampled on October 23, 2017. NPDES #FL0000957.

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 FL0000957	11 12 171023	18 B	19 S	20 1

Remarks

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The Priority Pollutants Analysis of USN NAS Jacksonville WWTF effluent sampled on October 23, 2017. NPDES #FL0000957.

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 FL0000957	11 12 171023	18 X	19 S	20 1

Remarks

66

Biological Analyses of USN NAS Jacksonville WWTF effluent sampled on October 23, 2017. NPDES #FL0000957.

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 FL0000957	11 12 171023	18 S	19 S	20 1

Remarks

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