

Effluent Quality Assessment

USN Naval Station Mayport Wastewater Treatment Facility

Duval County

NPDES #FL0000922

Sampled December 9, 2013

January 2014

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

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USN Naval Station Mayport Wastewater Treatment Facility (WWTF), Building 285, Bon Homme Richard Street, Mayport, Duval County, Florida, 32228. NPDES #FL0000922.

Facility Overview

USN Naval Station Mayport WWTF is a complete mix conventional activated sludge wastewater treatment facility which treats 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 and composite samples for biological and chemical analyses for this facility were collected on December 9, 2013. Additional samples for mercury and surfactants were collected on December 17, 2013. All samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Jeremy Parrish, Kim Pearce, and 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_03, TA07_04.

Results

Chemistry Results (See Table 1 and Appendix C)

- The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.059 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.
- The single sample concentration (65 µg/L) of dibromochloromethane complied with the single sample permitted limit of *report* but was greater than both the Class III Marine Criterion (annual average) and the permitted limit (annual average) for dibromochloromethane. Since the Class III Marine Criterion and the numerical permitted limit are annual averages, a determination of an exceedance could not be made.
- Copper and nickel detected in the effluent grab sample exceeded Class III Marine Criteria but complied with permitted limits set by Administrative Order 126 NE (see facility summary).
- Bromoform, mercury, zinc, carbonaceous biological oxygen demand (CBOD), and fluoride were detected in the effluent at levels that comply with Class III Marine Water Quality Criteria (62-302.530, F.A.C.) and/or permitted limits. Total recoverable petroleum hydrocarbons (TRPH) were detected in the effluent at a level between the laboratory method detection limit (MDL) and practical quantitation limit (PQL). Aluminum, arsenic, cadmium, total chromium, iron, and total suspended solids (TSS) were detected between MDL and PQL.
- Napthalene and total ammonia were detected in the field blanks at levels that fall between the MDL and PQL of their methods.

Toxicity Test Results (See Appendix C)

- Tests were performed December 10 - 14, 2013.

Americamysis bahia 96-hour acute definitive bioassay –	LC_{50} > 100%, 0%* mortality in 100% sample at 96 hours
Menidia beryllina 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.
- Aliquots of the bioassay sample were salinity-adjusted from an apparent salinity of approximately 1.1 parts per thousand (ppth) to a salinity of approximately 20.0 ppth for the *Americamysis bahia* test and to a salinity of approximately 5.0 ppth for the *Menidia beryllina test*. Forty Fathoms®marine mix artificial sea salts was used for the salinity adjustments. The salinity adjustments were performed per permitted conditions. Salt controls were prepared by diluting 20 ppth salinity artificial seawater (ASW) with well water to a salinity of approximately 1.0 ppth then salting this solution with artificial sea salts to match the salinity of the appropriate test solution. The purpose of the salt controls was to confirm that there was no effect of adding artificial sea salts to the sample. There was no mortality in the salt controls of the *Americamysis bahia* test or in the salt controls of the *Menidia beryllina* test.

Conclusion

The effluent sample collected from the EFD-1 NPDES sampling point for this facility on December 9, 2013, was not acutely toxic to either test species during the 96-hour acute definitive bioassays. Effluent water quality samples collected on December 9 and 17, 2013, did not exceed applicable permitted conditions. Where exceedances of water quality standards occurred, amounts detected complied with permit limits set by Administrative Order 126 NE.

For additional information concerning this sampling event, including bioassay bench sheets and SRT data, please contact Bruce.Alexander@dep.state.fl.us and/or Joseph.Faircloth@dep.state.fl.us.

Literature Cited

None

Table 1. Effluent limits, Class III Criteria for predominantly marine waters, chemical and microbiological data, and qualifiers

USN Naval Station Mayport WWTF	Class III Criteria	Effluent Limits	Grab
Organic Constituents (µg/L)			
Atrazine	-	-	0.35
Bromoform	-	Report	58
Dibromochloromethane	-	Report	65
TRPH	-	-	0.3 I
Metals (µg/L unless otherwise noted)			
Aluminum	≤ 1500	-	15 I
Arsenic	≤ 50	-	0.77 I
Cadmium	≤ 8.8	-	0.20 I
Calcium (mg/L)	-	-	78.6
Chromium, total	-	-	0.32 I
Copper	≤ 3.7	≤ 3.7 p	31.9
Iron	≤ 300	≤ 300 p	69 I
Lead	≤ 8.5	≤ 8.5 p	0.20 U
Magnesium (mg/L)	-	-	51.9
Mercury	≤ 0.025	≤ 0.025 s	0.0062
Nickel	≤ 8.3	≤ 8.3 p	21.9
Selenium	≤ 71	-	0.20 U
Silver	≤ 2.3	-	0.025 U
Sodium (mg/L)	-	-	300
Zinc	≤ 86	-	44
Nutrients (mg/L)			
Ortho-phosphate	-	Report	1.9
Total Phosphorus	-	Report	2.2
Total Ammonia	-	Report	0.059
Un-ionized Ammonia	-	Report	<0.02 c
Nitrate and Nitrite	-	Report	12.0
Total Kjeldahl Nitrogen	-	Report	1.0 J
Organic Nitrogen	-	Report	1.06
Total Nitrogen	-	Report	13
Total Organic Carbon	-	-	6.8
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 4.0	≥ 4.0	7.11
pH (SU)	6.5 - 8.5	6.5 - 8.5	7.01
Specific Conductance (µmhos/cm)	-	-	2,141
Temperature (°C)	-	Report	3.0
Salinity	-	-	1.1
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	< 0.03 QU£
Total Suspended Solids (mg/L)	-	≤ 60.0 p	3 I
Color (true, PCU)	-	-	7.1
Alkalinity (mg CaCO3/L)	-	-	130 A
CBOD, 5 day (mg/L), N - inhibited	-	≤ 60.0 p	2.0 A
Oils and Greases (mg/L)	≤ 5.0	≤ 5.0	0.74 U
Chloride (mg/L)	-	-	470 A
Fluoride (mg/L)	≤ 5.0	-	0.77
Sulfate (mg/L)	-	-	150 A
Flow (MGD)	-	2.0 a	0.728 a*
Hardness (mg $CaCO_3$)	-	-	409.9 c
Microbiology (Number of colony forming units/100ml)			
Fecal Coliforms *	≤ 400s #	≤ 800 s	2 B

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

c - Value is calculated

p - 16-hour flow proportioned composite

s - Single sample

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

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

- 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

‡- Refrigerated temperature

* - Measured from 12/31/2012 - 11/30/2013

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): USN Naval Station Mayport WWTF	Former Names: N/A
NPDES Permit Number: FL0000922	Permit Expiration Date: 8/26/2014
Physical Address: Building 285, Bon Homme Richard Street, Mayport, FL 32228	
District: Northeast	County: Duval
Function of Facility: Treat domestic wastewater to advance standards prior to discharge to the St. Johns River (Class III marine waters).	
Facility Type: Domestic Wastewater	Permitted Capacity (MGD): 2.0 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): The months from September 2012 to September 2013 the mean flow was roughly 0.463 MGD with daily averages ranging plus/minus 0.3 MGD.	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): The months from July 2012 to July 2013 the mean flow was roughly 0.740 MGD with daily averages ranging plus/minus 0.5 MGD.	
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
EFA-1 Effluent, immediately after disinfection, but prior to dechlorination.
EFD-1 Final effluent, immediately after dechlorination, but prior to discharge to St. Johns River.

Description of Permitted Outfall(s):

Surface Water Discharge D-001:
An existing 2.0 MGD annual average daily flow discharge to St. John's River,
Class III Marine waters, (WBID# 2213A) which is approximately 200 feet in length and discharges at a depth of approximately 22.4 feet. The point of discharge is located approximately at latitude 30°23' 38" N, longitude 81°24' 13" W.

Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility):
To operate an existing 2.0 million gallon per day (MGD) annual average daily flow (AADF) permitted capacity complete mix conventional activated sludge wastewater treatment facility (WWTF) consisting of two separate headworks, one serves as the base and the second serves ships in port. Both headworks perform influent screening and grit removal, with the flows from the ship headworks going to a 615,000 gallon on-line flow equalization tank, three equal volume aeration tanks (722,000 gallons total), three equal size secondary clarifiers (total of 4770 square feet of surface area), and a single 87,000 gallon chlorine contact chamber using sodium hypochlorite, followed by dechlorination using sodium bisulfate. Residuals treatment is performed in two aerobic digesters (tanks are in series) with a total volume of 521,000 gallons and applied on an approved land application site.

PART I: Continued

List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under
(Leave cell blank if not applicable)

			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/ Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site Number**	**Notes**
Flow (thru the WWTF)	MGD	Max Max Max	2.0 Report Report	Annual Average Monthly Average Quarterly Average	Continuous	Recording Flow Meter with Totalizer	EFD-1	See I.A.4
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL-1	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 25.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	16-hr FPC	EFD-1	
CBOD, % Removal, 5-day	percent	Min	85	Monthly Average	Monthly	Calculated	CAL-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	Weekly	16-hr FPC	EFD-1	
Solids, Total Suspended, % Removal	percent	Min	85	Monthly Average	Monthly	Calculated	CAL-2	
pH	s.u.	Min Max	6.5 8.5	Single Sample Single Sample	Continuous	Meter	EFD-1	See I.A.3
Length of Longest pH Excursion	min	Max	60	Single Sample	Monthly	Calculated	CAL-3	See I.A.10
% of Time Exceeding pH Limits	percent	Max	1	Single Sample	Monthly	Calculated	CAL-3	See I.A.10

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Coliform, Fecal	#/100mL	Max Max Max Max	200 200 400 800	Annual Average Monthly Geometric Mean 90th Percentile Single Sample	Weekly	Grab	EFD-1	See I.A.5
Enterococci	#/100mL	Max	35	Monthly Geometric Mean	5/Month	Grab	EFD-1	See I.A.7
Oxygen, Dissolved (DO)	mg/L	Min	4.0	Single Sample	Daily, 24 hours	Grab	EFD-1	See I.A.11
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Continuous	Meter	EFA-1	See I.A.3 and I.A.6
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Grab	EFD-1	See I.A.12
Petrol Hydrocarbons, Total Recoverable	ug/L	Max	Report	Monthly Average	Weekly	Grab	EFD-1	
Oil and Grease	mg/L	Max	5.0	Single Sample	Weekly	Grab	EFD-1	
Surfactants (MBAS)	mg/L	Max	0.5	Single Sample	Weekly	16-hr FPC	EFA-1	
Nitrogen, Total	mg/L	Max Max Max	Report Report Report	Annual Average Monthly Average Single Sample	Weekly	16-hr FPC	EFD-1	
Nitrogen, Total	lb/yr	Max Max	Report Report	Annual Total Monthly Total	Monthly	Calculated	CAL-1	See I.A.13
Bromoform	ug/L	Max Max	360.0 Report	Annual Average Single Sample	Monthly	Grab	EFD-1	See I.A.14
Chlorodibromomethane	ug/L	Max Max	34.0 Report	Annual Average Single Sample	Monthly	Grab	EFD-1	See I.A.14
Copper, Total Recoverable	ug/L	Max	3.7	Single Sample	Monthly	16-hr FPC	EFD-1	See I.A.14
Nickel, Total Recoverable	ug/L	Max	8.3	Single Sample	Monthly	16-hr FPC	EFD-1	See I.A.14
Iron, Total Recoverable	mg/L	Max	300.0	Single Sample	Monthly	16-hr FPC	EFD-1	See I.A.14

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Lead, Total Recoverable	ug/L	Max	8.5	Single Sample	Monthly	16-hr FPC	EFD-1	See I.A.14
Mercury, Total Recoverable	ug/L	Max	0.025	Single Sample	Monthly	Grab	EFD-1	See I.A.14
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	16 hr FPC	EFD-1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	EFD-1	
Temperature (C), Water	Deg C	Max	Report	Single Sample	Quarterly	Meter	EFD-1	
Ammonia, Unionized (as NH3)	mg/L	Max	Report	Single Sample	Quarterly	Calculated	CAL-5	See I.A.8
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD-1	
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD-1	
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab	EFD-1	
Chronic Whole Effluent Toxicity, 7 Day IC25 (Mysidopsis bahia)	percent	Min	100	Single Sample	Semi-Annually; twice per year	24 hr FPC	EFD-1	See I.A.9
Chronic Whole Effluent Toxicity, 7-Day IC25 (Menidia beryllina)	percent	Min	100	Single Sample	Semi-Annually, twice per year	24-hr FPC	EFD-1	See I.A.9

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
St. Johns River (Class III marine waters)	**Class III marine waters.**

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):
See Permit Condition I.A.9

b. Monitoring Frequency

(1) Routine toxicity tests shall be conducted once every six months, 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) For each routine test or additional follow-up test conducted, a total of three flow proportional 24-hr composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-014, 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 7-day survival and growth chronic toxicity tests with a mysid shrimp, **Americamysis (Mysidopsis) bahia**, Method 1007.0, and an inland silverside, **Menidia beryllina**, Method 1006.0, 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 Marine and Estuarine Organisms**, 3rd Edition, EPA-821-R-02-014. 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 used shall be artificial sea salts as described in EPA-821-R-02-014, Section 7.2. The test salinity shall be determined as follows:

(a) For the **Americamysis bahia** bioassays, the effluent shall be adjusted to a salinity of 20 parts per thousand (ppt) with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 20 ppt. If the salinity of the effluent is greater than 20 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.

(b) For the **Menidia beryllina** bioassays, if the effluent salinity is less that 5 ppt, the salinity shall be adjusted to 5 ppt with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 5 ppt. If the salinity of the effluent is greater than 5 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.

(c) If the salinity of the effluent requires adjustment, a salinity adjustment control should be prepared and included with each bioassay. The salinity adjustment control is intended to identify toxicity resulting from adjusting the effluent salinity with artificial sea salts. To prepare the salinity adjustment control, dilute the control/dilution water to the salinity of the effluent and adjust the salinity of the salinity adjustment control at the same time and to the same salinity that the salinity of the effluent is adjusted using the same artificial sea salts.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.): The facility is under AO 126 NE which provides interim limits for Total Recoverable Mercury, Total Recoverable Lead, Total Recoverable Nickel, Total Recoverable Iron, Bromoform, Chlorodibromomethane, and Total Recoverable Copper. The AO was executed on 7/6/2012 and will expire on 6/29/2014.

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: **November 2012 – TSS % Removal – 84%; Permitted minimum = 85%** **March 2013 – Total Recoverable Nickel – 44 ug/L; Permitted maximum = 40 ug/L** **August 2013 – IC25 Statre 7 day Chr Mysid Bahia – 49%; Permitted minimum = 100%.**
Describe previous FYI and WQBEL study: **"The conclusion from the USN Mayport Naval Station Wastewater Treatment Facility Bioassays is quoted:** **The effluent samples collected from D-001 for this facility on April 2 and 3, 2006, were acutely toxic to the *Americamysis bahia* test species but were not acutely toxic to the *Menidia beryllina* test species during the 96-hour acute screen bioassays. The toxicity is attributed, at least in part, to the effluent copper concentration. The effluent AGP result greatly exceeded the "problem" threshold for marine receiving waters. The effluent copper, iron, nickel, oil and grease, pH, and total residual chlorine exceeded Class III marine water quality criteria. Effluent oil and grease, pH, and total residual chlorine also violated permitted limits. Effluent copper did not exceed the permitted mixing zone limit."**
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 January 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 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 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 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 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 be constitute exceedances of 62-302.530(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(b) F.A.C.

(6) 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	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 9:55	Mayport-final effl.(grab)	Overflow	Fecal Coliforms-Membrane Filter	2	B	cfu/100 mL	1.6	
12/9/2013 9:55	Mayport-final effl.(grab)	Toxicology	Bioassay-Acute-Def-SW-Fish, LC50	100	L	LC50		
12/9/2013 9:55	Mayport-final effl.(grab)	Toxicology	Bioassay-Acute-Def-SW-Mysid, LC50	100	L	LC50		
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Alkalinity	130	A	mg CaCO3/L	0.65	2.5
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	O-Phosphate-P	1.9		mg P/L	0.08	0.2
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Ammonia-N	0.059		mg N/L	0.002	0.005
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Fluoride	0.77		mg F/L	0.035	0.1
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Chloride	470	A	mg Cl/L	4	10
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Organic Carbon	6.8		mg C/L	0.5	1
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Sulfate	150	A	mg SO4/L	4	10
12/9/2013 9:55	Mayport-final effl.(grab)	Nutrients	Color (true)	7.1		PCU	2.5	6
12/9/2013 9:55	Mayport-final effl.(grab)	Overflow	Oil and Grease	0.74	U	mg/L	0.74	2.6
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Mevinphos	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Norflurazon	0.028	U	ug/L	0.028	0.11
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Phorate	0.0047	U	ug/L	0.0047	0.019
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Ethion	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Metolachlor	0.057	U	ug/L	0.057	0.23
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Prometryn	0.019	U	ug/L	0.019	0.075
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Atrazine Desethyl	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Disulfoton	0.0047	U	ug/L	0.0047	0.019
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Ethoprop	0.0047	U	ug/L	0.0047	0.019
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Naled	0.038	UJ	ug/L	0.038	0.15
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Parathion Ethyl	0.019	UJ	ug/L	0.019	0.075
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Alachlor	0.057	U	ug/L	0.057	0.23
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Azinphos Methyl	0.019	UJ	ug/L	0.019	0.075
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Chlorpyrifos Methyl	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Atrazine	0.35		ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Bromacil	0.038	U	ug/L	0.038	0.15
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Demeton	0.023	UJ	ug/L	0.023	0.091
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Metribuzin	0.021	U	ug/L	0.021	0.083
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Malathion	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Fonofos	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Butylate	0.019	U	ug/L	0.019	0.075
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Simazine	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Parathion Methyl	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Diazinon	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Atrazine Desisopropyl	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Ametryn	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Prometon	0.019	U	ug/L	0.019	0.075

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Hexazinone	0.028	U	ug/L	0.028	0.11
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Chlorpyrifos Ethyl	0.0094	U	ug/L	0.0094	0.038
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Metalaxyl	0.038	U	ug/L	0.038	0.15
12/9/2013 9:55	Mayport-final effl.(grab)	Pesticides	Fenamiphos	0.028	U	ug/L	0.028	0.11
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,4-Dichlorophenol	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzidine	97	UJ	ug/L	97	390
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Di-n-octyl phthalate	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	TRPH	0.30	I	mg/L	0.25	1
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2-Nitrophenol	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Di-n-butyl phthalate	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Hexachlorobenzene	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Isophorone	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Diethyl phthalate	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	58
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.8
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9	U	ug/L	1.9	7.8
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Dimethyl phthalate	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.8
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	U	ug/L	39	160
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.8
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	58
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Butyl benzyl phthalate	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Phenol	0.97	U	ug/L	0.97	3.9

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2,4-Dimethylphenol	9.7	U	ug/L	9.7	39
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2-Chloronaphthalene	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	2-Chlorophenol	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97	U	ug/L	0.97	3.9
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.8
12/9/2013 9:55	Mayport-final effl.(grab)	Priority Organic Pollutants	Naphthalene	0.19	U	ug/L	0.19	0.78
12/9/2013 9:55	Mayport-final effl.(grab)	Field Parameter	pH	7.01				
12/9/2013 9:55	Mayport-final effl.(grab)	Field Parameter	Specific Conductance	2,141		umhos/cm		
12/9/2013 9:55	Mayport-final effl.(grab)	Field Parameter	Dissolved Oxygen	7.11		mg/L		
12/9/2013 9:55	Mayport-final effl.(grab)	Field Parameter	Sample Depth	0.20		m		
12/9/2013 8:00	Mayport-final effl.(comp)	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.0	A	mg/L	0.2	2
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Cadmium	0.20	I	ug/L	0.05	0.2
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Iron	69	I	ug/L	30	120
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Sodium	300		mg/L	2.5	10
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Selenium	0.20	U	ug/L	0.2	0.8
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Chromium	0.32	I	ug/L	0.3	1.2
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Lead	0.20	U	ug/L	0.2	0.8
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Calcium	78.6		mg/L	0.075	0.3
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Potassium	17.3		mg/L	0.3	1.2
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Copper	31.9		ug/L	0.5	1
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Arsenic	0.77	I	ug/L	0.25	1
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Zinc	44		ug/L	5	20
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Nickel	21.9		ug/L	0.25	1
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Aluminum	15	I	ug/L	5	20
12/9/2013 8:00	Mayport-final effl.(comp)	Metals	Magnesium	51.9		mg/L	0.04	0.16
12/9/2013 8:00	Mayport-final effl.(comp)	Nutrients	TSS	3	I	mg/L	2	10
12/9/2013 8:00	Mayport-final effl.(comp)	Nutrients	NO2NO3-N	12		mg N/L	0.1	0.25
12/9/2013 8:00	Mayport-final effl.(comp)	Nutrients	Total-P	2.2		mg P/L	0.025	0.25
12/9/2013 8:00	Mayport-final effl.(comp)	Nutrients	Kjeldahl Nitrogen	1.0	J	mg N/L	0.16	0.4
12/9/2013 8:00	Mayport-final effl.(comp)	Priority Organic Pollutants	Dibromochloromethane	65		ug/L	0.2	0.8
12/9/2013 8:00	Mayport-final effl.(comp)	Priority Organic Pollutants	Bromoform	58		ug/L	0.2	0.8
12/9/2013 8:00	Mayport-final effl.(comp)	Field Parameter	Temperature	3.0		C		
12/9/2013 12:50	Mayport-Equipment blank	Metals	Calcium	0.075	U	mg/L	0.075	0.3

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 12:50	Mayport-Equipment blank	Metals	Sodium	0.50	U	mg/L	0.5	2
12/9/2013 12:50	Mayport-Equipment blank	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
12/9/2013 12:50	Mayport-Equipment blank	Metals	Arsenic	0.25	U	ug/L	0.25	1
12/9/2013 12:50	Mayport-Equipment blank	Metals	Zinc	5.0	U	ug/L	5	20
12/9/2013 12:50	Mayport-Equipment blank	Metals	Potassium	0.30	U	mg/L	0.3	1.2
12/9/2013 12:50	Mayport-Equipment blank	Metals	Iron	30	U	ug/L	30	120
12/9/2013 12:50	Mayport-Equipment blank	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/9/2013 12:50	Mayport-Equipment blank	Metals	Lead	0.20	U	ug/L	0.2	0.8
12/9/2013 12:50	Mayport-Equipment blank	Metals	Copper	0.50	U	ug/L	0.5	1
12/9/2013 12:50	Mayport-Equipment blank	Metals	Magnesium	0.040	U	mg/L	0.04	0.16
12/9/2013 12:50	Mayport-Equipment blank	Metals	Aluminum	5.0	U	ug/L	5	20
12/9/2013 12:50	Mayport-Equipment blank	Metals	Selenium	0.20	U	ug/L	0.2	0.8
12/9/2013 12:50	Mayport-Equipment blank	Metals	Nickel	0.25	U	ug/L	0.25	1
12/9/2013 12:50	Mayport-Equipment blank	Metals	Chromium	0.30	U	ug/L	0.3	1.2
12/9/2013 12:50	Mayport-Equipment blank	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
12/9/2013 12:50	Mayport-Equipment blank	Nutrients	Total-P	0.002	U	mg P/L	0.002	0.005
12/9/2013 12:50	Mayport-Equipment blank	Nutrients	Kjeldahl Nitrogen	0.080	U	mg N/L	0.08	0.2
12/9/2013 12:50	Mayport-Equipment blank	Priority Organic Pollutants	Bromoform	0.20	U	ug/L	0.2	0.8
12/9/2013 12:50	Mayport-Equipment blank	Priority Organic Pollutants	Dibromochloromethane	0.20	U	ug/L	0.2	0.8
12/9/2013 9:55	TRIP BLANK	Priority Organic Pollutants	Bromoform	0.20	U	ug/L	0.2	0.8
12/9/2013 9:55	TRIP BLANK	Priority Organic Pollutants	Dibromochloromethane	0.20	U	ug/L	0.2	0.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Ammonia-N	0.004	I	mg N/L	0.002	0.005
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Chloride	0.20	U	mg Cl/L	0.2	0.5
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Organic Carbon	0.50	U	mg C/L	0.5	1
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Color (true)	2.5	U	PCU	2.5	6
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
12/9/2013 10:30	Mayport WWTF-Field Blank	Nutrients	Sulfate	0.20	U	mg SO4/L	0.2	0.5
12/9/2013 10:30	Mayport WWTF-Field Blank	Overflow	Oil and Grease	0.70	U	mg/L	0.7	2.5
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Metolachlor	0.061	U	ug/L	0.061	0.24
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Metribuzin	0.020	U	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Parathion Ethyl	0.020	UJ	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Atrazine	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Atrazine Desethyl	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Chlorpyrifos Methyl	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Fenamiphos	0.030	U	ug/L	0.03	0.12
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Mevinphos	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Ethoprop	0.0051	U	ug/L	0.0051	0.02
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Hexazinone	0.030	U	ug/L	0.03	0.12
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Phorate	0.0051	U	ug/L	0.0051	0.02
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Butylate	0.020	U	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Malathion	0.010	U	ug/L	0.01	0.041

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Ametryn	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Atrazine Desisopropyl	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Azinphos Methyl	0.020	UJ	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Diazinon	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Parathion Methyl	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Simazine	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Norflurazon	0.030	U	ug/L	0.03	0.12
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Ethion	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Chlorpyrifos Ethyl	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Bromacil	0.041	U	ug/L	0.041	0.16
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Prometryn	0.020	U	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Prometon	0.020	U	ug/L	0.02	0.081
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Naled	0.041	UJ	ug/L	0.041	0.16
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Metalaxyl	0.041	U	ug/L	0.041	0.16
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Demeton	0.024	UJ	ug/L	0.024	0.097
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Alachlor	0.061	U	ug/L	0.061	0.24
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Fonofos	0.010	U	ug/L	0.01	0.041
12/9/2013 10:30	Mayport WWTF-Field Blank	Pesticides	Disulfoton	0.0051	U	ug/L	0.0051	0.02
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzidine	95	U	ug/L	95	380
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.6
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	U	ug/L	38	150
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.6
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14	UJ	ug/L	14	57
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.76

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Phenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Naphthalene	0.25	I	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.6
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Isophorone	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.5	U	ug/L	9.5	38
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.76
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	TRPH	0.24	U	mg/L	0.24	0.95
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	57
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9	U	ug/L	1.9	7.6
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.95	U	ug/L	0.95	3.8
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	11
12/9/2013 10:30	Mayport WWTF-Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.6
12/17/2013 10:50	EFFLUENT	Metals	Mercury	6.2		ng/L	0.1	0.4
12/17/2013 10:50	EFFLUENT	Overflow	MBAS	0.15	I	mg/l LAS	0.12	0.2
12/17/2013 10:58	FIELD BLANK	Metals	Mercury	0.10	U	ng/L	0.1	0.4
12/17/2013 10:58	FIELD BLANK	Overflow	MBAS	0.12	U	mg/l LAS	0.12	0.2

EPA End Sheet

The Bioassay of USN Naval Station Mayport WWTF effluent sampled on December 9, 2013. NPDES #FL0000922.

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	F	L	0	0	0	0	9	2	2	11 12	1	3	1	2	0	9	18	**B**	19	**S**	20	1

Remarks

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The Priority Pollutants Analysis of USN Naval Station Mayport WWTF effluent sampled on December 9 and 17, 2013. NPDES #FL0000922.

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	F	L	0	0	0	0	9	2	2	11 12	1	3	1	2	0	9	18	**X**	19	**S**	20	1

Remarks

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Biological Analyses of USN Naval Station Mayport WWTF effluent sampled on December 9, 2013. NPDES #FL0000922.

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	F	L	0	0	0	0	9	2	2	11 12	1	3	1	2	0	9	18	**S**	19	**S**	20	1

Remarks

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