Effluent Quality Assessment of Palatka WWTF Putnam County NPDES # FL0040061 Sampled November 1 & 4, 2024

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
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Summary of Results

Total residual chlorine and cyanide exceeded permit limits and Class III Water Quality Criteria for Fresh Waters. Nutrient and algal growth potential (AGP) results indicate a potential for nutrient enrichment of the receiving waters due to the effluent. The effluent sample was not toxic to the freshwater fish species during the acute definitive bioassay. The acute definitive *Ceriodaphnia dubia* (*C. dubia*) bioassay was reported as No Result due to significant mortality in multiple effluent concentrations. There were eleven organic constituents detected in the effluent grab sample.

Facility Overview

The Palatka Wastewater Treatment Facility is a domestic wastewater treatment facility. A Facility Summary, including a description of the facility, summary of permit limits, and any relevant Administrative Order (AO), Consent Order (CO), and Discharge Monitoring Report (DMR) information is provided in Appendix A. The effluent is continuously discharged into the St. Johns River, a Class III Fresh Water [waterbody identification (WBID) 2213M] (Figure 1).

The St. Johns River falls within the Site Specific Interpretations of the Numeric Nutrient Criteria (NNC) for the segment St. Johns River above Rice Creek. For this region, the NNC, expressed as annual load, are 500,325 kg/yr total phosphorus and 8,571,563 kg/yr total nitrogen (Subsection 62-304.415(1), F.A.C.). The St. Johns River falls within the Peninsular bioregion; the daily average dissolved oxygen (DO) saturation shall not be below 38 percent in more than 10 percent of the values (Paragraph 62-302.533(1)(a), F.A.C.). This fifth year inspection (FYI) event only provides single sample results. It should be noted that waterbody impairment assessments are based on longer-term data, and individual exceedances of a criterion do not indicate use impairment. http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

Methods

Effluent grab and 24-hour time proportioned composite samples were collected from monitoring site location EFD-1, for outfall D-001, on November 4, 2024. Equipment blanks were collected on November 1, 2024. The permit specifies flow-proportioned composite samples, and time-proportioned composite samples were collected. The permit specifies *Cyprinella leedsi* (*C. leedsi*) as the freshwater fish for acute toxicity bioassays and *Pimephales promelas* (*P. promelas*) as the freshwater fish for chronic toxicity bioassays. Due to an oversight, *P. promelas* was ordered by the laboratory and used for the acute bioassay.

Samples were collected by Conor Lucey, Shane Jordan, Quang Nguyen and Bronze Titus (Northeast District). Analyses were performed by Eurofins Laboratories in Jacksonville, Orlando, Pensacola, and Savannah, and DEP Laboratory in Tallahassee. All field and laboratory methods followed DEP Standard Operating Procedures (see https://floridadep.gov/dear/quality-

assurance/content/dep-sops and https://floridadep.gov/dear/florida-dep-laboratory/content/dep-laboratory-quality-assurance-manual-and-sops for details) and met DEP quality assurance/quality control standards (see https://floridadep.gov/dear/quality-assurance). Explanations of specific methods and measurements can be found in Appendix B.

Class III Water Quality Criteria for Fresh and Marine Waters are found in Chapter 62-302, F.A.C. All references to Rule 62-302.530, F.A.C. are to the surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667.

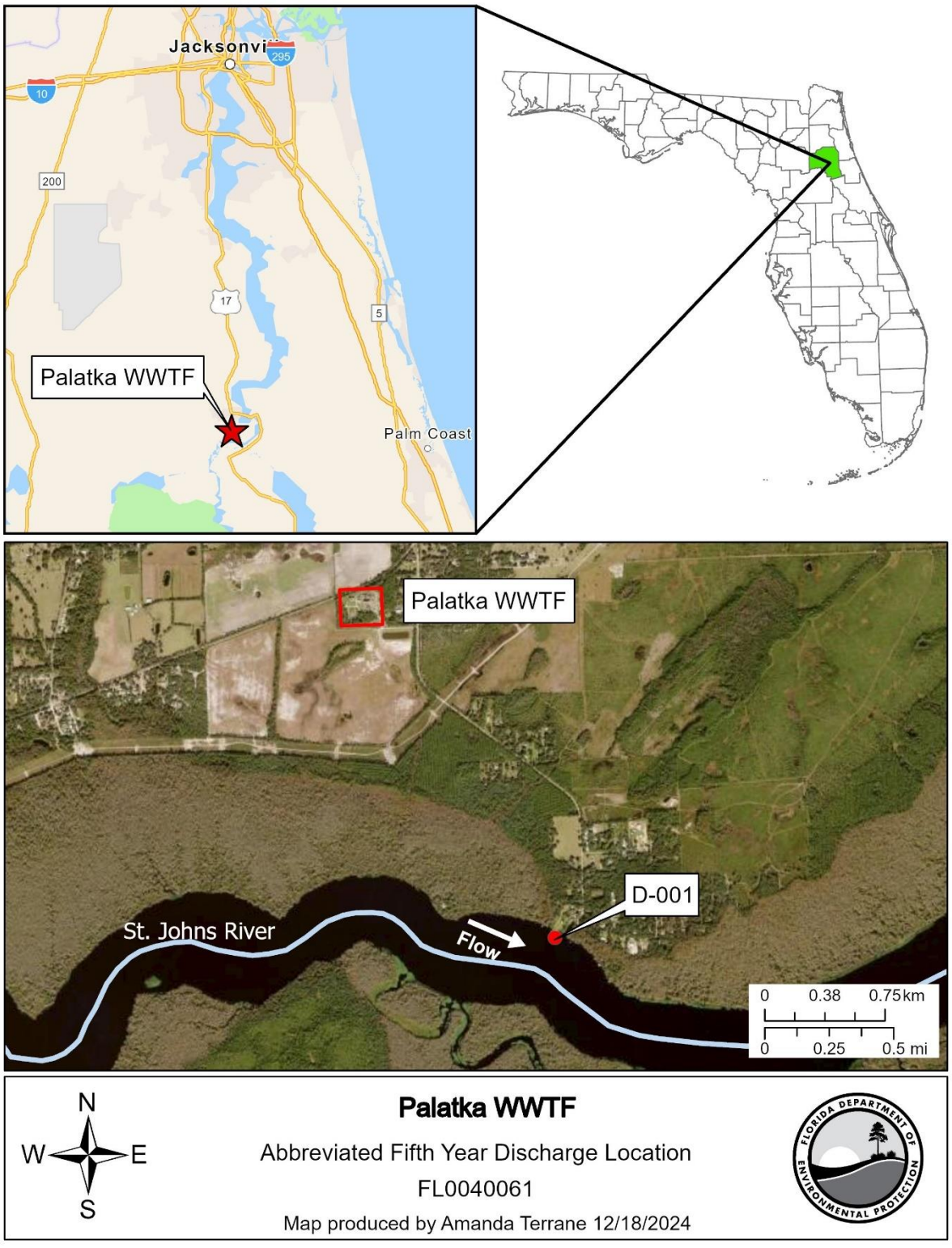


Figure 1. Map of Facility and Discharge Location

Results

Physical and Chemical Parameters (See Table 1 and Appendices C & D)

- Field measured effluent total residual chlorine exceeded Class III Water Quality Criterion for Fresh Waters (Subsection 62-302.530(18), F.A.C.) and the effluent permit limit.

Analytical Water Chemistry (See Table 2 and Appendix D)

- Cyanide detected in the effluent grab sample exceeded the Class III Water Quality Criterion for Fresh Waters (Subsection 62-302.530(24), F.A.C.) and the effluent permit limit.

- Total ammonia nitrogen and nitrate and nitrite were detected in the equipment blank.

Microbiology (See Table 2 and Appendix B)

- Effluent *Escherichia coli* levels complied with the Class III Water Quality Criterion for Fresh Waters and effluent permit limit.

- Effluent fecal coliform levels complied with the effluent permit limit.

Toxicity Whole Effluent Test (See Table 2)

- Tests were performed November 5 through November 9, 2024.

- The sample was aerated for 20 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.7 mg/L to 8.4 mg/L.

- Acute bioassay results are reported as the Concentration Lethal to 50% of the test organisms (LC50).

- For the 96-hour acute definitive test for the water flea, *C. dubia*, the test was reported as No Result because significant mortality was observed in the 6.25%, 12.5%, and 25% effluent samples. There was 5% mortality in 100% sample.

- The calculated LC50 for the fish, *P. promelas*, was >100% effluent with 0% mortality in 100% sample. The effluent sample was not toxic to the fish, *P. promelas*, during the 96-hour acute definitive bioassays. The permit specifies using *C. leedsi* as the freshwater fish species for acute toxicity bioassays.

- For more information or to obtain copies of the toxicity bench sheets, please contact the Biology Laboratory at 850-245-8177.

Metals (See Table 3 and Appendix D)

- Effluent metals complied with Class III Water Quality Criteria for Fresh Waters and effluent permit limits.

Algal Growth Potential (See Table 4 and Appendix B)

- The freshwater unicellular green alga, *Pseudokirchneriella subcapitata* was used to determine the AGP values in the effluent grab sample. The analytical chemistry suggests that the effluent is nitrogen-limited (Miller et al. 1978).

- The effluent grab sample AGP result of 28.8 mg dry wt/L is greater than the AGP range (6.10 to 20.0 mg dry wt/L) suggested to be representative of high productivity for freshwater (Miller et al. 1978).

Organic Constituents (See Table 5 and Appendix D)

- Atrazine (herbicide), azoxystrobin (fungicide), fipronil desulfinyl (insecticide), fipronil sulfide (insecticide), fludioxonil (fungicide), metalaxyl (fungicide), metolachlor (herbicide), simazine (herbicide), sulfentrazone (herbicide), tebuconazole (fungicide) and 2,4,6-trichlorophenol (pesticide) were detected in the effluent grab sample.

- There are no effluent permit limits for organic constituents.

Literature Cited

Miller, W. E., Maloney, T. E. and Greene, J. C. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA600/978-018. U. S. EPA, Cincinnati, Ohio. 126 p.

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

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

Table 1. Measured field parameters

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and field parameters

Parameter	Units	Class III Criteria	Effluent Permit Limits	EFD-1
Temperature	C	-	Report	28
pH	SU	6.0 - 8.5	6.0 - 8.5	6.6
Specific Conductance	µmhos/cm	≤ 1,275	Report	733
Salinity	ppth	-	-	0.3 c
Dissolved Oxygen	% saturation	≥ 38	-	85.3
Dissolved Oxygen	mg/L	-	≥ 5.0	6.6
Total Residual Chlorine	mg/L	≤ 0.01	≤ 0.01	0.04 e

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated.
e - Value exceeds the Class III Water Quality Criteria or permit limits.

Table 2. Analytical water chemistry, microbiological, and toxicological data

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and analytical water chemistry, microbiological, and toxicological data

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab
Ortho-phosphate	mg P/L	-	Report	-	1.1
Total Phosphorus	mg/L	-	-	1.7	1.8
Total Ammonia Nitrogen [1]	mg N/L	≤ 3.13 sc	Report	0.099	0.042
Un-ionized Ammonia (calc salinity)	mg N/L	-	-	-	< 0.02 c
Nitrate and Nitrite [1]	mg N/L	-	Report	7.5	5.7
Total Kjeldahl Nitrogen	mg N/L	-	-	0.96	0.84
Organic Nitrogen	mg N/L	-	≤ 8 sp	0.86 c	0.8 c
Total Nitrogen	mg/L	-	-	8.5 c	6.5 c
Total Organic Carbon	mg C/L	-	-	-	8.5
Chlorophyll *a* - Corrected	µg/L	-	-	-	0.93 U
Phaeophytin	µg/L	-	-	-	1.0 U
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60.0 sp (EFA-1)	4.6	2.2
Total Suspended Solids	mg/L	-	≤ 60.0 sp (EFA-1)	5 I	3 I
Turbidity	NTU	≤ 29 t	-	-	1.8
Color (true)	PCU	-	-	-	15
Alkalinity	mg CaCO3/L	≥ 20	-	-	79 A
Chloride	mg Cl/L	-	-	-	140 A
Cyanide	mg/L	≤ 0.0052	≤ 0.0052 s	-	0.0099 I e
Fluoride	mg F/L	≤ 10.0	-	-	0.17
Sulfate	mg SO4/L	-	-	-	39 A
Fecal Coliforms	MPN/100 mL	-	≤ 800 s	-	20 J
Escherichia coli	MPN/100 mL	≤ 410	≤ 410	-	10 U
Bioassay - Water flea *(C. dubia)*	% effluent	≥100	≥100 s	-	No Result
Bioassay - Fish *(P. promelas)* *	% effluent	≥100	≥100 s	-	>100

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

e - Value exceeds the Class III Water Quality Criteria or permit limits.

c - Value is calculated.

p - 16 hour flow proportioned composite

s - Single sample

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

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

J - Estimated value.

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

1 - Analyte detected in the equipment blank

* - *C. leedsi* is the permitted freshwater fish species for acute toxicity; *P. promelas* was used in this test.

Table 3. Analytical metals data

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and analytical metals data

Analyte	Units	Effluent Grab Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab
Hardness	mg CaCO3/L	-	-	-	180 c
Aluminum	µg/L	-	-	-	27
Arsenic	µg/L	≤ 50	-	-	1.08
Cadmium	µg/L	≤ 0.418 b	-	-	0.020 U
Calcium	mg/L	-	-	-	48.4
Chromium, Total [2]	µg/L	≤ 139 b	-	-	0.56 I
Copper	µg/L	≤ 15.4 b	-	-	3
Iron	µg/L	≤ 1,000	-	-	250
Lead	µg/L	≤ 6.71 b	-	-	0.20 U
Magnesium	mg/L	-	-	-	14.3
Mercury	ng/L	≤ 12	≤ 12 s	-	1.1
Nickel	µg/L	≤ 85.7 b	-	-	1.2 I
Potassium	mg/L	-	-	-	8.2
Selenium	µg/L	≤ 5.0	-	-	0.23 I
Silver	µg/L	≤ 0.07	≤ 0.07 sp	0.011 I	0.010 U
Sodium	mg/L	-	-	-	69
Zinc	µg/L	≤ 197 b	-	-	18 I

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

b - Value is calculated based on hardness.

c - Value is calculated.

p - 16 hour flow proportioned composite

s - Single sample

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.

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

Table 4. Algal Growth Potential (AGP)

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

Location	Test Species	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Predicted AGP (TN) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent Grab	*Pseudokirchneriella subcapitata*	28.8 A	220 ± 44	470 ± 95	250 ± 50	770 ± 160	5.2	3.6

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

Table 5. Detected Organic Constituents

Effluent limits, Class III Water Quality Criteria for Fresh Waters, and analytical organic and pesticide data

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Atrazine	ng/L	-	-	6
Azoxystrobin	ng/L	-	-	8.7
Fipronil Desulfinyl	ng/L	-	-	0.19 I
Fipronil Sulfide	ng/L	-	-	1.9
Fludioxonil	ng/L	-	-	0.24 I
Metalaxyl	ng/L	-	-	3.3
Metolachlor	ng/L	-	-	4.2
Simazine	ng/L	-	-	0.92 I
Sulfentrazone	ng/L	-	-	1.9 I
Tebuconazole	ng/L	-	-	3.9 I
2,4,6-Trichlorophenol	µg/L	-	-	0.056 I

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Appendix A. Facility Summary

PART I: Information gathered prior to sampling event	
Prepared By: Abhi Maturi	Contact Number: 904-256-1584
Facility Name (as it appears on permit): Palatka WWTF	Former Names:
NPDES Permit Number: FL0040061	Permit Expiration Date: 06/08/2025
Physical Address: 3010 Browns Landing Road, Palatka Florida 32177	
District: Northeast	County: Putnam
Function of Facility: Domestic Waste Water Treatment	
Facility Type: Domestic Waste Water	Permitted Capacity (MGD): 3.5 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 10/01/2023-10/31/2024:0.27 MGD	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): 10/01/2023-10/31/2024: 1.3918 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): D-001 (Surface Water Discharges) EFD-1: Sample point after dechlorination and before discharge to Outfall D-001 EFA-1: Sample point after disinfection (basic-level disinfection) and prior to dechlorination CAL-1: Calculated value SWB-1: 50 yards upstream from Outfall D-001 on the north bank SWB-2: 50 yards upstream from Outfall D-001 on the south bank SWD-1: 50 yards downstream from Outfall D-001 on the north bank SWD-2: 50 yards downstream from Outfall D-001 on the south bank	

R-001 (Reuse Discharges)

EFA-1: Sample point after disinfection (basic-level disinfection) and prior to dechlorination

EFA-2: Sample point after disinfection (high-level disinfection) and prior reuse of reclaimed water

EFB-1: Sample point after filtration and prior to disinfection (high-level disinfection)

CAL-1: Calculated value

Other Sampling Points

INF-1: Influent before biological, physical, or chemical treatment or dilution.

CAL-1: Calculated value

DOC-1: Summation of truckloads of leachate transferring from landfill to the WWTF

Description of Permitted Outfall(s):

D-001: Surface water discharge into the St. Johns River (Class III fresh waters; WBID 2213M). Outfall location is at Latitude 29° 35' 49" N, Longitude 81° 38' 22" W

R-001: Reuse discharge into the slow rate public access systems. Sites include the Palatka Golf Course, cemetery and airport, and future use.

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

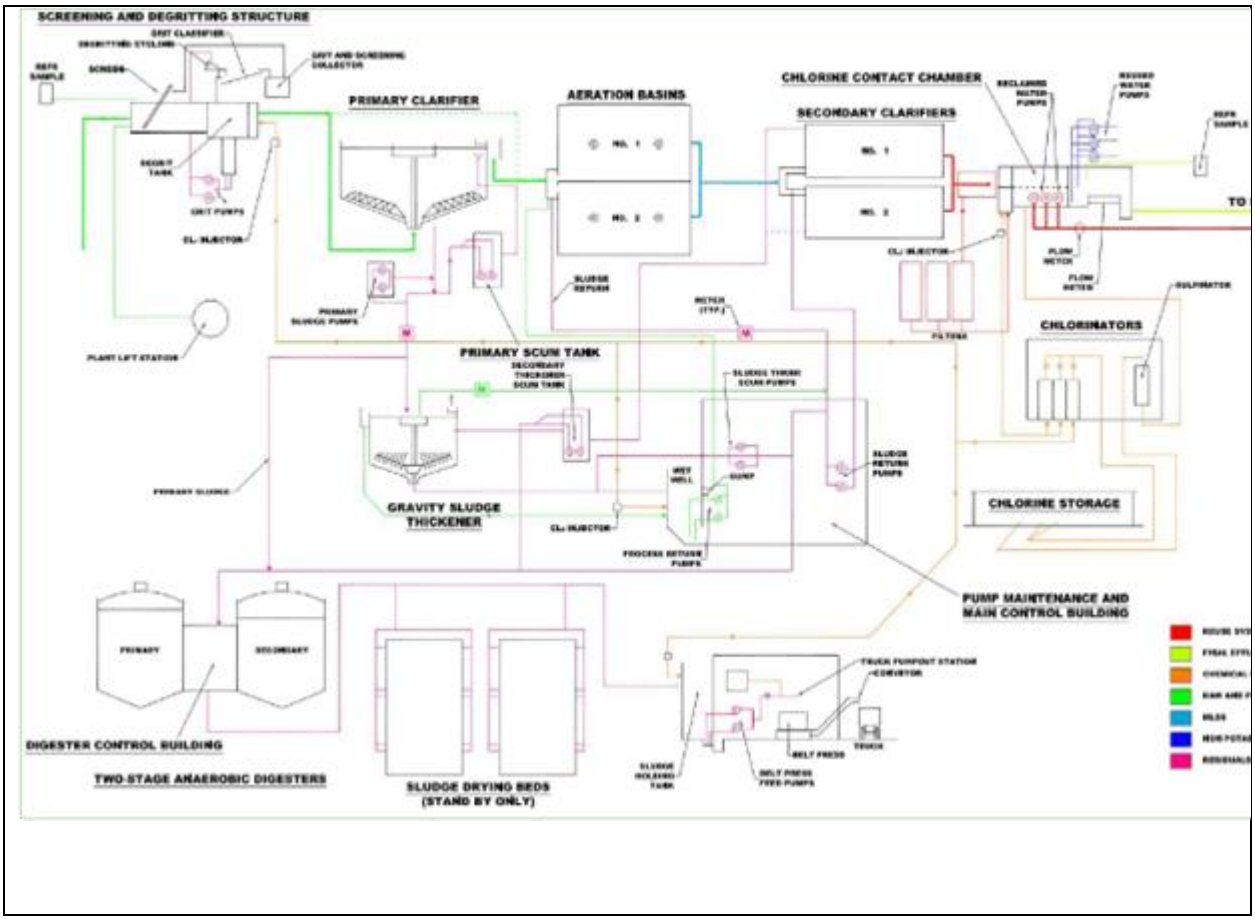
An existing 3.5 million gallons per day (MGD) annual average daily flow (AADF) permitted capacity conventional activated sludge domestic wastewater treatment facility (WWTF) consisting of the following:

- Preliminary treatment (headworks) structure includes mechanically cleaned bar screen with ¼ inch spacing; forced vortex grit collector; two 250 gallons per minute (gpm) grit pumps; and a grit cyclone washer/separator;
- One circular primary clarifier with a diameter of 60 feet, a side water depth of 12 feet, a surface area of 2,827 ft^2, and a working volume of approximately 250,000 gallons;
- Two rectangular aeration basins with a combined volume of approximately 1.090 million gallons. Each basin is 90 feet long, 45 feet wide, and has an operating side-water depth of 18 feet. Each rectangular aeration basins has 252 diffusors. Each diffusor has is 63-mm in diameter, 1 meter in length, and a capacity of 5.7 SCFM:
- A 22 feet by 34 feet blower building that houses three 75-hp 36,000 rpm variable speed motors with Tri-lobe blowers. Two motors will be duty with one backup;

- Two rectangular secondary clarifiers with a combined working volume of approximately 700,000 gallons, a total surface area of 7,784 ft^2, and an overflow rate of 385 gallon per day per sq. foot (ADF). Each clarifier is 139 feet long, 28 feet wide, and has 12 feet of side-water depth;
- Two automatic backwash disk filters which has a capacity of 1.50 MGD AADF or 4.35 MGD peak hourly flow. One automatic backwash disk filter which has a capacity of 0.850 MGD AADF.
- Chlorine contact basin which has a capacity for 3.5 MGD AADF or a 10.15 MGD peak- hour flow. The basin is 44 feet long by 15 feet wide by 10 feet deep (a total volume of 98,740 gallons), divided into three (3) channels:
- One chlorination/dechlorination system;
- One effluent flow meter (Ultrasonic),
- One circular gravity sludge thickener with a diameter of 35 feet, depth of 12 feet, and a volume of approximately 86,000 gallons;
- Two circular anaerobic digesters for two-stage digestion. Each digestion tank is 50 feet in diameter and has a high-water operating level of 17 feet for a total working of approximately 250,000 gallons; and
- One sludge dewatering unit includes, a polymer feed system, a belt filter press consisting of a continuous belt that is 6.6 feet long and has a rated capacity between 50 and 100 gpm, and, for emergency use only, five sludge drying beds with a surface area of approximately 20,000 ft^2 (4,000 square feet each).

Permit Revision FL0040061-018/RM allows for the following changes at the plant:

- The change of biosolids/sludge treatment process consist of replacing and converting the existing anaerobic sludge treatment process to aerobic biosolids/sludge treatment utilizing the existing facilities (tanks). The aerobic biosolids/sludge treatment system consisting of two aerobic digester tanks, each of which has a volumes of 0.36 million gallons (49,092ft3), a diameter of 50 ft, a surface aera of 2045.5 ft^2, and a maximum surface water depth of 24 ft. Air is supplied through 23 ft diffuser submergence.
- The improvements to the biosolids/sludge dewatering system include replacement of the existing system with similar equipment component consisting of: (1) Belt filter press; (2) Polymer storage/Feed system; (3) Dewatered Sludge transfer conveyor system; (4) Integrated electrical and control system.


SCREENING AND DEGRITTING STRUCTURE
PRIMARY CLARIFIER
AERATION BASINS
CHLORINE CONTACT CHAMBER
SECONDARY CLARIFIERS
PRIMARY SCUM TANK
CHLORINATORS
GRAVITY SLUDGE THICKENER
CHLORINE STORAGE
PUMP MAINTENANCE AND MAIN CONTROL BUILDING
DIGESTER CONTROL BUILDING
TWO-STAGE ANAEROBIC DIGESTERS
SLUDGE DRYING BEDS (STAND BY ONLY)


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PART I: Continued										
List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)										
			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow (to St. Johns River)	MGD	Max	3.0	Report Only			Continuous *(During Discharge)*	Recording Flow Meter With Totalizer	EFD-1	See I.A.3
Cumulative Number of Days Discharge	Days/Months	Max		Report			Daily	Calculation	CAL-1	See I.A.14
BOD, Carbonaceous 5 day, 20 C	Mg/L	Max	20	25	40	60	Weekly *(During Discharge)*	16-hr FPC	EFA-1	
CBOD, % Removal, 5-Day	Percemt	Min		85			Monthly	Calculated	CAL-1	See I.A.7

Solids, Total Suspended	Mg/L	Max	20	30	45	60	Weekly *(During Discharge)*	16-hr FPC	EFA-1	
Solids, Total Suspended, % Removal	Percent	Min		85			Monthly	Calculated	CAL-2	See I.A.6
Coliform, Fecal	#/100mL	Max	200	200 (Monthly Geo)		800	Weekly *(During Discharge)*	Grab	EFD-1	See I.A.7 & I.A.8
Escherichia Coli (e. coli) Bacteria	#/100ml	Max		126 (Monthly Geo)		410 (90^{th} Percentile)	Weekly *(During Discharge)*	Grab	EFD-1	
pH	s.u	Min/Max				6.0/8.5	Continuous *(During Discharge)*	Meter	EFD-1	See I.A.3
Chlorine, Total Residual (For Disinfection)	Mg/L	Min				0.5	Continuous *(During Discharge)*	Meter	EFA-1	See I.A.3 & I.A.9

Chlorine, Total Residual (For Dechlorination)	Mg/L	Max				0.01	Daily; 24 hours *(During Discharge)*	Grab	EFD-1	
Nitrogen, Organic, Total (as N)	Mg/L	Max	5	5	6	8	Weekly *(During Discharge)*	16-hour FPC	EFD-1	
Nitrogen, Ammonia Total (as N) (Effluent)	Mg/L	Max		Report		Report	Weekly *(During Discharge)*	Grab	EFD-1	See I.A.10
Nitrogen, Ammonia Total (as N) (Limits)	Mg/L	Max		Report		Report	Weekly *(During Discharge)*	Calculated	Cal-1	See I.A.10
Nitrogen, Ammonia, Total (as N) (Compliance= Effluent-Limit)	Mg/L	Max		0		0	Weekly *(During Discharge)*	Calculated	CAL-1	See I.A.10
Temperature (C), Water	Deg C	Max				Report	Weekly *(During Discharge)*	Meter	EFD-1	

Nitrogen, Total	Mg/L	Max	Report	Report	Report	Report	Weekly *(During Discharge)*	16-hr FPC	EFA-1	
Nitrogen, Total (Load)	Lb/year	Max	19,821	Report			Monthly	Calculated	CAL-1	See I.A.11
Phosphorus, Total (as P)	Mg/L	Max	Report	Report	Report	Report	Weekly *(During Discharge)*	16-hr FPC	EFA-1	
Phosphorus, Total (load)	Lb/year	Max	2369.3	Report			Monthly	Calculated	CAL-1	See I.A.11
Oxygen, Dissolved (DO)	Mg/L	Min				5	Daily; 24 hours *(During Discharge)*	Meter	EFD-1	See I.A.13
Siver, Total Recoverable	Ug/L	Max				0.07	Quarterly *(During Discharge)*	16-hr FPC	EFD-1	
Nitrite plus Nitrate, Total 1 det. (as N)	Mg/L	Max				Report	Quarterly *(During Discharge)*	Grab	EFD-1	
Nitrogen, Organic, Total (as N)	Mg/L	Max				Report	Quarterly *(During Discharge)*	Grab	EFD-1	

Specific Conductance	µmhos/cm	Max				Report	Quarterly *(During Discharge)*	Meter	EFD-1	
Phosphate, Ortho (as P)	Mg.L	Max				Report	Quarterly *(During Discharge)*	Grab	EFD-1	
Cyanide, Total (as CN)	Ug/L	Max				5.2	Quarterly *(During Discharge)*	Grab	EFD-1	
Total Recoverable Mercury	Ug/L	Max				0.012	Annually	Grab	EFD-1	See I.A.12
Chronic Whole Effluent Toxicity, 7-Day IC25 *(Ceriodaphnia dubia)*	Percent	Min				100	Semi-Annually; Twice per Year	24 Hour TPC	EFD-1	See I.A.15

Chronic Whole Effluent Toxicity, 7-Day IC25 *(Pimephales promelas)*	Percent	Min				100	Semi-Annually; Twice per Year	24 Hour TPC	EFD-1	See I.A.15
Or										
Acute Whole Effluent Toxicity, 96-Hr LC_{50} *(Ceriodaphnia dubia)*	Percent	Min				100	Semi-Annually; Twice per Year	Grab	EFD-1	See I.A.16
Acute Whole Effluent Toxicity, 96-Hr LC_{50} (*Cyprinella leedsi*)	Percent	Min				100	Semi-Annually; Twice per Year	Grab	EFD-1	See I.A.16
BOD, Carbonaceous 5 Day, 20 C	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17

Solids, Total Suspended	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Nitrogen, Total	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Nitrogen, Ammonia, Total (as N)	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Nitrogen, Organic, Total (as N)	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Nitrite plus Nitrate, Total 1 Det. (as N)	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
pH	s.u	Max				Report	Semi-Annually *(During Discharge)*	Meter	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17

Oxygen, Dissolved (DO)	Mg/L	Min				Report	Semi-Annually *(During Discharge)*	Meter	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
DO Percent Saturation	Percent	Min				Report	Semi-Annually *(During Discharge)*	Meter or Calculation	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Temperature (C), Water	Deg C	Max				Report	Semi-Annually *(During Discharge)*	Meter	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Specific Conductance	µmhos/cm	Max				Report	Semi-Annually *(During Discharge)*	Meter	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Phosphorus, Total (as P)	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17
Phosphate, Ortho (as P)	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17

Chlorophyll A	Mg/L	Max				Report	Semi-Annually *(During Discharge)*	Grab	SWB-1, SWB-2, SWD-1, SWD-2	See I.A.17

I.A.3. During the period of required operator attendance, hourly measurement of pH and total residual chlorine for disinfection may be substituted for continuous measurement.

I.A.4 A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months.

I.A.6. In accordance with subsections 62-600.420(1) and (2), F.A.C., the monthly average effluent CBOD5 and TSS concentrations shall not exceed 15% of their respective influent values (i.e., 85% removal).

I.A.7. The effluent limitations for the monthly geometric means for bacteriological quality (fecal coliform or E. coli) are only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly geometric means shall be calculated and reported on the Discharge Monitoring Report but shall not be used to determine compliance with the limitations for the monthly geometric means. All other bacteriological quality effluent limitations included in permit condition I.A.1. apply regardless of the number of values reported.

I.A.8. To report the "90th percentile,"

- Place the bacteria results in ascending order (from lowest to highest value) and assign each sample a number, 1 for the lowest value.
- Multiply the total number of samples by 0.9 to determine the 90th percentile level.
- Report the value of the sample that corresponds to the 90th percentile level (e.g., 10 samples x 0.9 = 9, report the value of the 9th sample). If the 90th percentile level is not a whole number, rounding or interpolation should be used to determine the 90th percentile. When rounding, round down to the nearest whole number if the decimal is 0.4 or lower and round up to the nearest whole number if the decimal is 0.5 or higher (e.g., 12 samples x 0.9 = 10.8, report the value of the 11th sample if rounding).

I.A.9 Total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow.

I.A.10 Effluent (i.e. the final treated wastewater) shall be monitored for pH and temperature at the same time and location as total ammonia nitrogen (TAN). The monthly average TAN value shall not exceed the average of the values calculated from the below equation, with no single value exceeding 2.5 times the value from the equation. To determine compliance with the monthly average and single sample limits for TAN is following calculations steps below:

a. Calculate TAN Criterion Value for a collected sample using the below equation:

$$TAN\ Criterion = 0.8876 \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \text{ x } (2.126\ x\ 10^{0.028(20-T)})$$

Where:

- T and pH are the paired temperature (in degrees Celsius) and pH associated with the effluent TAN sample, i.e., measured at the same time and location as the effluent TAN sample is collected.
- For purposes of TAN criterion calculations, pH is subject to the range of 6.5 to 9.0. In the TAN criterion equation, the pH shall be set to 6.5 if the measured pH is less than 6.5 and set to 9.0 if the measured pH is greater than 9.0.
- The value of T shall be set to 7 if the measured temperature is less than 7°C.

b. Calculate TAN Limits:

- Monthly Average TAN Limit = Average TAN Criterion Values of the Month =

$$= \frac{\sum TAN\ Criterion\ Value}{\sum \#\ of\ values}$$

- Single Sample TAN limit = 2.5 x Calculated TAN Criterion Value

c. Calculate TAN Compliances:

- Monthly Average TAN Compliance = Mon Avg TAN Eff. – Mon Avg TAN Limit ≤ 0.0
- Single Sample TAN Compliance = Single Sample TAN Eff.– Single Sample TAN Limit ≤ 0.0

I.A.11 The permittee shall calculate total monthly and total annual mass load of total nitrogen and total phosphorus for the discharge from Outfall D-001. The Total monthly mass load and total annual mass loads of total nitrogen or total phosphorus shall be calculated as follows:

a. Monthly Mass Load (ML)

ML (Lbs/Month) = Flow$(\frac{MG}{Mon})$ x (TN or TP)$(\frac{mg}{L})$ + x 8.34 $(\frac{L}{MG})(\frac{Lbs}{mg})$

Where:

ML	=	Monthly mass load of total nitrogen; (Lbs/Mon)
Flow	=	Monthly volume of effluent discharged from Outfall D-001; (MG)
TN	=	Monthly volume of effluent discharged from Outfalls D-001.(MG)
TP	=	Monthly average concentration of TN monitored at EFD-1 for Palatka WWTF.

b. The annual mass load of TN or TP shall be expressed in units of pounds per year (lbs/yr) and is computed using a rolling twelve (12) – month period. The calculation shall be the sum of the twelve most recent monthly mass loadings of total nitrogen or total phosphorus.

I.A.12 The permittee, shall collect the effluent sample and use EPA Method 1631E or clean techniques to analyze for mercury, total recoverable. An alternative EPA approved method such as Method 245.1 or 245.7 with a MDL of 12.0 ng/L or less operated in the high sensitivity mode can be used as for initial screening for mercury. If mercury is not detected (e.g., the results are less than the MDL of 12.0 ng/L), then mercury is in compliance with the water quality criterion of Rule 62-302.530(41), FAC. However, for any sample results that have a value greater than the MDL but less than the PQL, the permittee shall conduct an additional evaluation for mercury using clean techniques such as Method 1631E. If testing results show quantifiable mercury levels in the effluent, then the permittee shall prepare and implement a mercury minimization plan addressing sources of mercury.

I.A.13 Limits of dissolved oxygen concentration and other pollutants (such as CBOD5 and TKN) of effluent shall be maintained such that the discharge does not degrade dissolved oxygen level of the receiving water/stream (Lower St. Johns River) below the Water Quality Criterion. The Criterion requires that 90 percent of the daily average percent dissolved oxygen (DO) saturation values of the stream shall be above 38%.

I.A.14 The permittee shall count and report number in a calendar month that the effluent discharge from the Outfall D-001 to St. Johns River. Cumulative number of days in a calendar month on which the effluent is discharged from Outfall D-001 shall be reported on the DMR. A daily discharge is defined as when the discharge occurs for 6.0 (six) hours or more per day (24 hours).

I.A.15 Chronic Whole Effluent Toxicity Monitoring:

When the discharge from the Outfall D-001 to St. John River exceeds five (5) consecutive days or a total of fifteen (15) days in a month within six months, the permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity.

a. Effluent Limitation

(1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) for reproduction or growth 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 LC50 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 semi-annually, twice per year, the first starting within 6 months of the most recent tests 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 24-hr composite 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 Edition, 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 7.2.3.

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, then 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 exceeds 20% for either species in any test, or any other test acceptability criteria are not met, 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 for either test species prior to the end of any test and the control mortality is less than 20% 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 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 toxicity bioassay tests shall be reported on the Discharge Monitoring Report (DMR) as the calculated IC25 for reproduction or growth 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 to Jacksonville only:

Florida Department of Environmental Protection

Northeast District Office – Wastewater Section

8800 Baymeadows Way West, Suite 100

Jacksonville, Florida 32256

g. Test Failures

(1) A test fails when the test results do not meet the limits in 15.a.(1).

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 15.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 15.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 first additional follow-up test 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 second additional follow-up test 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 analyzed according to the procedures 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 15.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 15.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, then a repeat test shall be initiated within 21 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 15.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 21 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) 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 15.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 failures.

I.A.16 Acute Whole Effluent Toxicity Monitoring. When the discharge from Outfall D-001 to the St. John River does not meet the sampling criteria listed in Condition I.A.12. 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 semi-annually (once every 6 months), the first starting within 6 months of the most recent tests and lasting for the duration of this permit.

c. Sampling Requirements

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

d. Test Requirements

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

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

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

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-012, Table 7.

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, 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, 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 routine and additional follow-up tests shall be reported on the Discharge Monitoring Report (DMR) as the calculated LC50 effluent concentration for each test 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 emailed 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-02-012, 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 within 30 days to Jacksonville only:

Florida Department of Environmental Protection

Northeast District – Wastewater Section

8800 Baymeadows Way West, Suite 100

Jacksonville, Florida 32256

g. Test Failures

(1) A test fails when the test results do not meet the limits in 16.a.(1).

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the acute toxicity limitation in 16.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 16.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 first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) 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 16.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 16.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 16.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, 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.

I.A.17 The permittee shall conduct regular monitoring of the segment of the St. Johns River near the outfall for maintaining data on the impact of the discharge to the water quality of the surface water body. Monitoring shall be on a semi-annually (twice per year) basis and shall coincide with one of the quarterly nutrient monitoring events.

PART I: Continued	
Receiving Waters: St. Johns River	Classification (indicate whether fresh or marine): Class III Freshwaters, WBID 2213M

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

If the facility discharges to Outfall D-001 for more than 5 consecutive days or 15 in one month within a six-month period, then the facility must do Chronic Whole Effluent Toxicity. Testing will be done on the Ceriodaphnia Dubia and the Pimephales Promelas and the frequency will be semiannual.

If the facility does not discharge for the above stated timeframes, then the facility must do Acute Whole Effluent Toxicity. Testing will be done on the Ceriodaphnia Dubia and the Cyprinella Leedsi and the frequency will be sem-annual.

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.): Facility is not under any Administrative or Consent Orders

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:

Date	Parameter and Units	Limit	Result
04/30/2024	Fecal Coliform #/100ml	25	178.9
05/31/2024	Total Suspended Solids mg/L	5	7.1
01/31/2024	Total Suspended Solids mg/L	5	7.2
12/31/2024	Total Suspended Solids mg/L	5	120
10/31/2023	Total Suspended Solids mg/L	5	27
12/31/2023	Total Cyanide ug/L	10	5.2
12/31/2023	Total Phosphorus lb/Yr	2369	3369

03/31/2024 (MWC-4)	Nitrite plus Nitrate, Total 1 Det. Mg/L	10	12
03/31/2024 (MWC-3S)	Nitrite plus Nitrate, Total 1 Det. Mg/L	10	11
12/31/2023 (MWC-3D)	Nitrite plus Nitrate, Total 1 Det. Mg/L	10	11
12/31/2023 (MWC-3S)	Nitrite plus Nitrate, Total 1 Det. Mg/L	10	13
06/30/2024 (MWC-3S)	Total Dissolved Solids mg/L	500	510

Describe previous FYI and WQBEL study:

Describe previous or current Enforcement Actions (including WLs):

Facility does not have any active consent orders. Most recent enforcement action was Warning Letter 23-220 sent following a compliance evaluation inspection conducted on 10/23/2023.

Describe any violations or problems noted in previous inspection:

The following deficiencies were observed in the last inspection:

- The lab refrigerator thermometer was not calibrated within the calibration date range.
- Reduced Pressure Zone (RPZ) testing was outside the calibration date range.
- The mechanical bar screen was not functioning during the inspection.
- The flowmeter certification was not available during the inspection.
- The facility had Total Suspended Solids (TSS), Total Cyanide, and Total Recoverable Silver effluent exceedances.
- Facility had Nitrite plus Nitrate, Total 1 det. (as N) groundwater exceedances

All but the effluent exceedances have been resolved since the inspection.

Discuss whether DMR trends within previous five years are improving or declining:

Parameters have remained consistent in the last 5 years with the occasional exceedances. No signs that trends are improving are declining.

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

Except for a brief spike between May 2023 and July 2023 Monthly flow averages to D-001 typically stayed consistent at 0.6 or less MGD. Flows to R-001 fluctuated between 1-1.8 MGD except between May 2023 and July 2023 where it dropped to a low of 0.2 MGD

PART II: Sampling Event Information	
Date(s) sample collected: 11/04/2024	Sampler(s): Conor Lucey, Shane Jordan, Quang Nguyen
Temperature (Deg C):28	pH (SU):6.60
Dissolved Oxygen (mg/L):6.64	Conductivity (µmhos/cm):733
Total Residual Chlorine (mg/L):0.59	Total Residual Chlorine - after Disinfection (mg/L):0.04
Method of Chlorination: Sodium Hypochlorite	Method of De-chlorination: Bisulfite
Flow During Sample Collection for each outfall(MGD): 2.158 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): EFD-1 .3075 MGD EFF-2 1.3918 MGD	
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: Composite samples had to be collected from the end of the CCC before dechlorination because of intermittent surface water discharge. Grab samples collected from a spigot.	

Appendix B. Explanations of Measurements

Biological assessments are prepared by DEP staff to provide information for review of NPDES permit renewal applications. Biological assessments, in conjunction with other information concerning the subject facility and its receiving-water body, are used to determine appropriate permit conditions. References to Rule 62-302.530, F.A.C., are to the currently applicable surface water quality criteria table with an effective date of 02/17/2016 and a notice identification number of 17115667.

- **Chemical Analyses of the Effluent**

  The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following DEP SOPs. The results from these analyses were compared with Water Quality Criteria (Chapter 62-302, F.A.C.) and facility permit limits.

- **Toxicity Bioassays**

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

- **Bacteriological Testing**

  High levels of fecal indicator bacteria may constitute an exceedance of Subsection 62-302.530(6) and/or facility permit limits. Fecal coliform 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.*Escherichia coli* results are based on Most Probable Number (MPN) and shall not exceed 410 in 10% or more of the samples during any 30-day period (62-302.530(6)(b), F.A.C.). *Enterococci* results are based on Most Probable Number (MPN) and shall not exceed 130 in 10% or more of the samples during any 30-day period (62-302.530(6)(c), F.A.C.). If fewer than 10 samples are taken within a month for a given location, the Ten Percent Threshold Value (TPTV) is assessed as a single sample maximum.

- **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. AGP results within the range 6.10 to 20.0 mg dry wt/L are suggested to be representative of high productivity for freshwaters (Miller et al. 1978). High AGP values may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C. and/or Paragraph 62-302.530(48)(b), F.A.C.

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP 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 ± 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 (USEPA 2000). 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 Subsection 62-302.530(62), F.A.C. If a nutrient value is non-detect, predicted AGP (freshwater only) and N:P ratio (fresh and marine) is calculated using ½ the method detection limit (MDL) for non-detect value.

- **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 Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a) F.A.C. and/or Paragraph 62-302.530(48)(b) F.A.C..

- **Definition of Qualifiers** (Rule 62-160.700, F.A.C.)

  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. Chain of Custody

Request Number: RQ-2024-10-21-33
NED FY13 Palatka WWTF (FL0040061)

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Page 1 of 4
last revised Jan 25, 2018

Customer: NE-DIST
Project ID: FY13

Requester: Benjamin Nomann
Collected By: Conor Living Bronze Titus
Field Report Prepared By: Conor Living
Sampling Agency:

Location: Palatka WWTF (FL0040061)	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 11/01/24 Time 12:40	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2): D			
Field ID: Equipment Blanks	Matrix (type, e.g., Salt, Fresh, etc): DI water	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #:	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude 29.6157 ☐ dd ☐ dms	Longitude -81.6508720 ☐ dd ☐ dms	Salinity (ppt)	Comments: Grabbed on site at WWTF after last sampling event						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date	Time	Bottle Group(s)			
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date	Time	Bottle Group(s)			
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments						
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date	Time	Bottle Group(s)			
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments						

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Conor Living	11/01/24 2:00 pm	FedEx	1	AB	11.4.24/9.30

Request Number: RQ-2024-10-21-33

NED FYI3 Palatka WWTF (FL0040061)

Customer: NE-DIST

Project ID: FYI3

Florida Department of Environmental Protection

Central Laboratory Submittal Form

last revised Jan 25, 2018

Requester: Benjamin Nomann

Field Report Prepared By: ~~FDE~~ CL Conar Lucas

Collected By: Conar Lucas, Shane Jordan, Quang Nguyen

Sampling Agency: FDEP NED

Location: EFD-1	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 11/4/24 Time 11:00 Eastern Central	Composite end Date Time	Bottle Group(s) (See pg 2): A				
Field ID: Effluent grabs	Matrix (type, e.g., Salt, Fresh, etc): Effluent	Diss. Oxygen 85.2 6.69 ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) 0.04					
WIN/STORET #	Temp (C) 28	pH 6.60	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm) 733				
Latitude 29.61575136 ☐ dd ☐ dms	Longitude -81.65066847 ☐ dd ☐ dms	Salinity (ppt)	Comments: Grabbed from a Spigot at Fat Lang					
Location: EFD-1	☒ Comp ☐ Grab	Collection (comp begin or grab) Date 11/3/24 Time 10:30 Eastern Central	Composite end Date 11/4/24 Time 10:30	Bottle Group(s): B				
Field ID: Effluent (comp)	Matrix (type, e.g., Salt, Fresh, etc): Effluent	Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L) 0.59					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude 29.61576937 ☐ dd ☐ dms	Longitude -81.65081750 ☐ dd ☐ dms	Salinity (ppt)	Comments: Poured at 11:10 Grab at end of CCC because of intermittent SW discharge					
Location: EFD-1	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 11/4/24 Time 11:30 Eastern Central	Composite end Date Time	Bottle Group(s): C				
Field ID: Field blanks	Matrix (type, e.g., Salt, Fresh, etc): DI water	Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude 29.61575736 ☐ dd ☐ dms	Longitude -81.65066847 ☐ dd ☐ dms	Salinity (ppt)	Comments: Taken near EFD-1					
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time Eastern Central	Composite end Date Time	Bottle Group(s)				
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)					
WIN/STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)				
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments					

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Conar Lucas	11/4/24 2:00	FedEx	4	A.SHAIK	11/05/2024 / 9:00

11/05/24 0929

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
TASK ASSIGNMENT/NOTIFICATION FORM: LAB145

Contract Manager: Linda Allen/Devan Cobb (850)-245-8084 / (850) 245-8078
2600 Blair Stone Rd., MS 6512
Tallahassee, FL 32399-2400

Contractor: Eurofins Environmental Testing Southeast, LLC
5102 LaRoche Ave
Savannah, GA 31404
ATTN: Noel Savoie

DEP Approval By: Devan R. Cobb-Williams Contractor Approval By: Noel Savoie
Project Manager

Contractor Representatives Contacted: Noel Savoie

Date: 10/8/2024
Means of Contact: Email

Task Assignment Number: OV627 Maximum Cost: **$83.00** Turnaround Time: 5 BD

Sample Delivery Date: 11/5/2024

Project Name/Description:
RQ-2024-10-21-33;NED FY13 Palatka WWTF (FL0040061)

Deliverable Number/ Parameter Group/ Method	**Sample Matrix**	**# of Samples**	**# of Containers**	**DEP ID #**	**Unit Cost**	**% Mark-up (if any)**	**Cost**
Quote/OV-CBOD-IN	W	2	2		$39.00		$78.00
CBOD, nitrogen-inhibited 5210B-2011							
217/Sample Disposal Fee:	2				$2.50		$5.00
Total Number of Containers Shipped:		2				**Total:**	**$83.00**

670 50626 Chain of Custody

QC Instructions:

Comments: Quote #

Samples released to Contract Lab by: _____ Date/Time: 11/4/24 2:00pm

Delivery Method: FedEx Shipping

Samples Accepted by: _____ Date/Time 11.5.24 0920

1.6 11.6

* **Please sign and return by email to** Linda.S.Allen@FloridaDEP.gov and Devan.R.Cobb@dep.state.fl.us

Eurofins Jacksonville
8021-6 Philips Highway
Jacksonville, FL 32256
Phone (904) 296-3007 Phone (904) 296-6210

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Savoie, Noel	Carrier Tracking No(s):	COC No: 762-4973-783.1
Client Contact: Sarah Menz	Phone: 850-245-8857	E-Mail: Noel.Savoie@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: DEP - Bureau of Labs Biology Section	PWSID:	Analysis Requested		Job #:
Address: Twin Towers Lab Complex A Rm 216 6515 2600 Blairstone Rd N	Due Date Requested:			Preservation Codes: R - NaThioSO4
City: Tallahassee	TAT Requested (days):			
State, Zip: FL, 32399	Compliance Project: Δ Yes Δ No			
Phone:	PO #: C402CA			Other:
Email: DEP-overflowmicro@floridadep.gov	WO #:			
Project Name: Palatka WWTF	Project #: 76200778			
Site: EFD-1	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	IDEXX_ColQT_24H - Fecal Coliform	IDEX_Ent_8H_QT - Enterococci	9223B_ClQ18_8H - E.Coli	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	R		
Effluent	11/4/24	11:10	G	Water			X	X			RQ-2024- 10-21-33

Lucas Sasnett
Confirmed with sampler sampling time should be 1100.

762-5577 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 11/4/24 1:22	Company: FDEP	Received by:	Date/Time: 11/4/24 1522	Company: ESE
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 6.1°C 0.2 -0.2 T-096

Ver: 04/02/2024

Appendix D. Chemical Analysis of Effluent

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 10:30	Effluent Composite	Overflow	Carbonaceous Biochemical Oxygen Demand	4.6	mg/L	2	2
11/4/2024 10:30	Effluent Composite	Metals	Silver	0.011 I	µg/L	0.01	0.04
11/4/2024 10:30	Effluent Composite	Nutrients	Kjeldahl Nitrogen	0.96	mg N/L	0.08	0.2
11/4/2024 10:30	Effluent Composite	Nutrients	TSS	5 I	mg/L	2	10
11/4/2024 10:30	Effluent Composite	Nutrients	NO2NO3-N	7.5	mg N/L	0.08	0.2
11/4/2024 10:30	Effluent Composite	Nutrients	Ammonia-N	0.099	mg N/L	0.002	0.005
11/4/2024 10:30	Effluent Composite	Nutrients	Total-P	1.7	mg P/L	0.05	0.25
11/4/2024 10:30	Effluent Composite	Nutrients	Total Residual Chlorine	0.59	mg/L		
11/4/2024 11:00	Effluent Grab	AGP/LN	Algal Growth Potential	28.8 A	mg DryWt/L		
11/4/2024 11:00	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	0.73 I	µg/L	0.68	2
11/4/2024 11:00	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.0 U	µg/L	1	3
11/4/2024 11:00	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.93 U	µg/L	0.93	2.8
11/4/2024 11:00	Effluent Grab	Overflow	Fecal Coliform-Quanti-Tray	20.0 J	MPN/100 mL	10	10
11/4/2024 11:00	Effluent Grab	Overflow	Enterococci-Quanti-Tray	10.0 U	MPN/100 mL	10	10
11/4/2024 11:00	Effluent Grab	Overflow	Carbonaceous Biochemical Oxygen Demand	2.2	mg/L	2	2
11/4/2024 11:00	Effluent Grab	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	No Result	LC50		
11/4/2024 11:00	Effluent Grab	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100 L	LC50		
11/4/2024 11:00	Effluent Grab	Metals	Calcium	48.4	mg/L	0.075	0.3
11/4/2024 11:00	Effluent Grab	Metals	Zinc	18 I	µg/L	5	20
11/4/2024 11:00	Effluent Grab	Metals	Nickel	1.2 I	µg/L	0.5	2
11/4/2024 11:00	Effluent Grab	Metals	Potassium	8.2	mg/L	0.3	1.2
11/4/2024 11:00	Effluent Grab	Metals	Sodium	69	mg/L	0.5	2
11/4/2024 11:00	Effluent Grab	Metals	Magnesium	14.3	mg/L	0.04	0.16
11/4/2024 11:00	Effluent Grab	Metals	Aluminum	27	µg/L	5	20
11/4/2024 11:00	Effluent Grab	Metals	Cadmium	0.020 U	µg/L	0.02	0.08
11/4/2024 11:00	Effluent Grab	Metals	Lead	0.20 U	µg/L	0.2	0.4
11/4/2024 11:00	Effluent Grab	Metals	Copper	3	µg/L	0.4	0.8
11/4/2024 11:00	Effluent Grab	Metals	Selenium	0.23 I	µg/L	0.2	0.8
11/4/2024 11:00	Effluent Grab	Metals	Chromium	0.56 I	µg/L	0.4	1.6
11/4/2024 11:00	Effluent Grab	Metals	Silver	0.010 U	µg/L	0.01	0.04
11/4/2024 11:00	Effluent Grab	Metals	Iron	250	µg/L	30	120
11/4/2024 11:00	Effluent Grab	Metals	Arsenic	1.08	µg/L	0.05	0.2

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:00	Effluent Grab	Nutrients	TSS	3 I	mg/L	2	10
11/4/2024 11:00	Effluent Grab	Nutrients	Organic Carbon	8.5	mg C/L	0.5	1
11/4/2024 11:00	Effluent Grab	Nutrients	Chloride	140 A	mg Cl/L	0.4	1
11/4/2024 11:00	Effluent Grab	Nutrients	Color (true)	15	PCU	2.5	6
11/4/2024 11:00	Effluent Grab	Nutrients	Sulfate	39 A	mg SO4/L	0.4	1
11/4/2024 11:00	Effluent Grab	Nutrients	Turbidity	1.8	NTU	0.1	1
11/4/2024 11:00	Effluent Grab	Nutrients	O-Phosphate-P	1.1	mg P/L	0.2	0.5
11/4/2024 11:00	Effluent Grab	Nutrients	Total Alkalinity	79 A	mg CaCO3/L	0.65	2.5
11/4/2024 11:00	Effluent Grab	Nutrients	Kjeldahl Nitrogen	0.84	mg N/L	0.08	0.2
11/4/2024 11:00	Effluent Grab	Nutrients	Fluoride	0.17	mg F/L	0.025	0.1
11/4/2024 11:00	Effluent Grab	Nutrients	Ammonia-N	0.042	mg N/L	0.002	0.005
11/4/2024 11:00	Effluent Grab	Nutrients	NO2NO3-N	5.7	mg N/L	0.08	0.2
11/4/2024 11:00	Effluent Grab	Nutrients	Total-P	1.8	mg P/L	0.05	0.25
11/4/2024 11:00	Effluent Grab	Overflow	Cyanide	0.0099 I	mg/L	0.006	0.02
11/4/2024 11:00	Effluent Grab	Overflow	Mercury	1.1	ng/L	0.2	0.5
11/4/2024 11:00	Effluent Grab	Pesticides	Acetochlor	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Butylate	0.47 U	ng/L	0.47	2.3
11/4/2024 11:00	Effluent Grab	Pesticides	Caffeine	7.8 U	ng/L	7.8	39
11/4/2024 11:00	Effluent Grab	Pesticides	Carfentrazone Ethyl	0.16 U	ng/L	0.16	0.78
11/4/2024 11:00	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.31 U	ng/L	0.31	1.6
11/4/2024 11:00	Effluent Grab	Pesticides	Demeton	3.6 U	ng/L	3.6	18
11/4/2024 11:00	Effluent Grab	Pesticides	Difenoconazole	0.62 U	ng/L	0.62	3.1
11/4/2024 11:00	Effluent Grab	Pesticides	Disulfoton	0.62 U	ng/L	0.62	3.1
11/4/2024 11:00	Effluent Grab	Pesticides	Parathion Ethyl	0.16 U	ng/L	0.16	0.78
11/4/2024 11:00	Effluent Grab	Pesticides	Terbufos	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Ametryn	1.1 U	ng/L	1.1	5.7
11/4/2024 11:00	Effluent Grab	Pesticides	Azoxystrobin	8.7	ng/L	0.41	2.1
11/4/2024 11:00	Effluent Grab	Pesticides	Dimethenamid	0.10 UJ	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Fenbuconazole	0.52 U	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Fipronil	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Flutolanil	0.10 U	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Iprodione	0.52 U	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Mevinphos	1.0 U	ng/L	1	5.2
11/4/2024 11:00	Effluent Grab	Pesticides	Pronamide	0.10 U	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Ethoprop	0.13 U	ng/L	0.13	0.65
11/4/2024 11:00	Effluent Grab	Pesticides	Fenamiphos	0.47 U	ng/L	0.47	2.3

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:00	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.10 U	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Diazinon	0.13 U	ng/L	0.13	0.65
11/4/2024 11:00	Effluent Grab	Pesticides	EPTC	0.52 U	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Fipronil Desulfinyl	0.19 I	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Imazalil	0.67 U	ng/L	0.67	3.4
11/4/2024 11:00	Effluent Grab	Pesticides	Metalaxyl	3.3	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Naled	2.6 U	ng/L	2.6	13
11/4/2024 11:00	Effluent Grab	Pesticides	Prodiamine	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Prometon	3.1 U	ng/L	3.1	16
11/4/2024 11:00	Effluent Grab	Pesticides	Prometryn	0.36 U	ng/L	0.36	1.8
11/4/2024 11:00	Effluent Grab	Pesticides	Terbuthylazine	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Ibuprofen	0.080 U	µg/L	0.08	0.32
11/4/2024 11:00	Effluent Grab	Pesticides	Sucralose	57	µg/L	0.1	0.4
11/4/2024 11:00	Effluent Grab	Pesticides	Alachlor	0.41 U	ng/L	0.41	2.1
11/4/2024 11:00	Effluent Grab	Pesticides	Atrazine	6	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Carbophenothion	0.52 U	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Fipronil Sulfone	0.26 U	ng/L	0.26	1.3
11/4/2024 11:00	Effluent Grab	Pesticides	Malathion	0.36 U	ng/L	0.36	1.8
11/4/2024 11:00	Effluent Grab	Pesticides	Myclobutanil	0.36 U	ng/L	0.36	1.8
11/4/2024 11:00	Effluent Grab	Pesticides	Oxyfluorfen	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Pyriproxyfen	0.26 U	ng/L	0.26	1.7
11/4/2024 11:00	Effluent Grab	Pesticides	Atrazine Desethyl	1.3 U	ng/L	1.3	6.7
11/4/2024 11:00	Effluent Grab	Pesticides	Cyanazine	5.2 U	ng/L	5.2	26
11/4/2024 11:00	Effluent Grab	Pesticides	Fonofos	0.16 U	ng/L	0.16	0.78
11/4/2024 11:00	Effluent Grab	Pesticides	Hexazinone	0.52 U	ng/L	0.52	2.6
11/4/2024 11:00	Effluent Grab	Pesticides	Metribuzin	0.41 U	ng/L	0.41	2.1
11/4/2024 11:00	Effluent Grab	Pesticides	Parathion Methyl	0.21 U	ng/L	0.21	1
11/4/2024 11:00	Effluent Grab	Pesticides	Phorate	0.26 U	ng/L	0.26	1.3
11/4/2024 11:00	Effluent Grab	Pesticides	Tebuconazole	3.9 I	ng/L	1.4	7.2
11/4/2024 11:00	Effluent Grab	Pesticides	Dithiopyr	2.1 U	ng/L	2.1	10
11/4/2024 11:00	Effluent Grab	Pesticides	Fluxapyroxad	0.26 U	ng/L	0.26	1.3
11/4/2024 11:00	Effluent Grab	Pesticides	Norflurazon	1.0 U	ng/L	1	5.2
11/4/2024 11:00	Effluent Grab	Pesticides	Oxadiazon	0.36 U	ng/L	0.36	1.8
11/4/2024 11:00	Effluent Grab	Pesticides	Pendimethalin	1.8 U	ng/L	1.8	8.8
11/4/2024 11:00	Effluent Grab	Pesticides	Sulfentrazone	1.9 I	ng/L	1.4	7.2
11/4/2024 11:00	Effluent Grab	Pesticides	Naproxen	0.0080 U	ug/L	0.008	0.032

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:00	Effluent Grab	Pesticides	Azinphos Methyl	3.1 U	ng/L	3.1	16
11/4/2024 11:00	Effluent Grab	Pesticides	Bromacil	0.62 U	ng/L	0.62	3.1
11/4/2024 11:00	Effluent Grab	Pesticides	Ethion	0.31 UJ	ng/L	0.31	1.6
11/4/2024 11:00	Effluent Grab	Pesticides	Fludioxonil	0.24 I	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Fipronil Sulfide	1.9	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Fluazifop-P-butyl	0.10 U	ng/L	0.1	0.52
11/4/2024 11:00	Effluent Grab	Pesticides	Flumioxazin	3.1 U	ng/L	3.1	16
11/4/2024 11:00	Effluent Grab	Pesticides	Metolachlor	4.2	ng/L	0.78	3.9
11/4/2024 11:00	Effluent Grab	Pesticides	Molinate	0.26 U	ng/L	0.26	1.3
11/4/2024 11:00	Effluent Grab	Pesticides	Propiconazole	0.62 U	ng/L	0.62	3.1
11/4/2024 11:00	Effluent Grab	Pesticides	Simazine	0.92 I	ng/L	0.26	1.3
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2 U	µg/L	3.2	13
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Chrysene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	µg/L	1.1	4.3
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	11 UJ	µg/L	11	43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.11 U	µg/L	0.11	0.43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Phenol	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	5.4 U	µg/L	5.4	22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2 U	µg/L	2.2	8.6
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.11 U	µg/L	0.11	0.43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Pyrene	0.11 U	µg/L	0.11	0.43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	0.011 U	µg/L	0.011	0.043
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	2.2 U	µg/L	2.2	8.6
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	0.54 U	µg/L	0.54	2.2

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.027 UJ	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Isophorone	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	11 U	µg/L	11	43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	0.054 UJ	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Benzidine	11 U	µg/L	11	43
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	2.2 U	µg/L	2.2	8.6
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.054 UJ	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Anthracene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Fluorene	0.027 U	µg/L	0.027	0.11
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.22 U	µg/L	0.22	0.86
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.054 U	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.056 I	µg/L	0.054	0.22
11/4/2024 11:00	Effluent Grab	Nutrients	pH	6.6			
11/4/2024 11:00	Effluent Grab	Nutrients	Specific Conductance	733	µmhos/cm		
11/4/2024 11:00	Effluent Grab	Nutrients	Dissolved Oxygen %Sat	85.2669	%Sat		
11/4/2024 11:00	Effluent Grab	Nutrients	Temperature	28	C		
11/4/2024 11:00	Effluent Grab	Nutrients	Total Residual Chlorine	0.04	mg/L		
11/4/2024 11:30	Field Blank	Metals	Zinc	5.0 U	µg/L	5	20
11/4/2024 11:30	Field Blank	Metals	Nickel	0.50 U	µg/L	0.5	2
11/4/2024 11:30	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
11/4/2024 11:30	Field Blank	Metals	Iron	30 U	µg/L	30	120

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:30	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
11/4/2024 11:30	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
11/4/2024 11:30	Field Blank	Metals	Selenium	0.20 U	µg/L	0.2	0.8
11/4/2024 11:30	Field Blank	Metals	Lead	0.20 U	µg/L	0.2	0.4
11/4/2024 11:30	Field Blank	Metals	Copper	0.40 U	µg/L	0.4	0.8
11/4/2024 11:30	Field Blank	Metals	Cadmium	0.020 U	µg/L	0.02	0.08
11/4/2024 11:30	Field Blank	Metals	Aluminum	5.0 U	µg/L	5	20
11/4/2024 11:30	Field Blank	Metals	Chromium	0.40 U	µg/L	0.4	1.6
11/4/2024 11:30	Field Blank	Metals	Silver	0.010 U	µg/L	0.01	0.04
11/4/2024 11:30	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
11/4/2024 11:30	Field Blank	Metals	Arsenic	0.050 U	µg/L	0.05	0.2
11/4/2024 11:30	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
11/4/2024 11:30	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
11/4/2024 11:30	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
11/4/2024 11:30	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
11/4/2024 11:30	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.002	0.005
11/4/2024 11:30	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	1
11/4/2024 11:30	Field Blank	Nutrients	Fluoride	0.025 U	mg F/L	0.025	0.1
11/4/2024 11:30	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
11/4/2024 11:30	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
11/4/2024 11:30	Field Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
11/4/2024 11:30	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
11/4/2024 11:30	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
11/4/2024 11:30	Field Blank	Overflow	Cyanide	0.0060 U	mg/L	0.006	0.02
11/4/2024 11:30	Field Blank	Overflow	Mercury	0.20 U	ng/L	0.2	0.5
11/4/2024 11:30	Field Blank	Pesticides	Carbophenothion	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Demeton	3.7 U	ng/L	3.7	19
11/4/2024 11:30	Field Blank	Pesticides	Ethoprop	0.13 U	ng/L	0.13	0.66
11/4/2024 11:30	Field Blank	Pesticides	Fipronil	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Mevinphos	1.1 U	ng/L	1.1	5.3
11/4/2024 11:30	Field Blank	Pesticides	Pronamide	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Simazine	0.26 U	ng/L	0.26	1.3
11/4/2024 11:30	Field Blank	Pesticides	Atrazine	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Naproxen	0.0080 U	ug/L	0.008	0.032
11/4/2024 11:30	Field Blank	Pesticides	Bromacil	0.64 U	ng/L	0.64	3.2
11/4/2024 11:30	Field Blank	Pesticides	Cyanazine	5.3 U	ng/L	5.3	26

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:30	Field Blank	Pesticides	EPTC	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Fipronil Sulfone	0.26 U	ng/L	0.26	1.3
11/4/2024 11:30	Field Blank	Pesticides	Flumioxazin	3.2 U	ng/L	3.2	16
11/4/2024 11:30	Field Blank	Pesticides	Sulfentrazone	1.5 U	ng/L	1.5	7.4
11/4/2024 11:30	Field Blank	Pesticides	Azoxystrobin	0.42 U	ng/L	0.42	2.1
11/4/2024 11:30	Field Blank	Pesticides	Dimethenamid	0.11 UJ	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Ethion	0.32 UJ	ng/L	0.32	1.6
11/4/2024 11:30	Field Blank	Pesticides	Flutolanil	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Malathion	0.37 U	ng/L	0.37	1.9
11/4/2024 11:30	Field Blank	Pesticides	Naled	2.6 U	ng/L	2.6	13
11/4/2024 11:30	Field Blank	Pesticides	Parathion Ethyl	0.16 U	ng/L	0.16	0.79
11/4/2024 11:30	Field Blank	Pesticides	Tebuconazole	1.5 U	ng/L	1.5	7.4
11/4/2024 11:30	Field Blank	Pesticides	Terbuthylazine	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Alachlor	0.42 U	ng/L	0.42	2.1
11/4/2024 11:30	Field Blank	Pesticides	Atrazine Desethyl	1.4 U	ng/L	1.4	6.9
11/4/2024 11:30	Field Blank	Pesticides	Azinphos Methyl	3.2 U	ng/L	3.2	16
11/4/2024 11:30	Field Blank	Pesticides	Butylate	0.48 U	ng/L	0.48	2.4
11/4/2024 11:30	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.32 U	ng/L	0.32	1.6
11/4/2024 11:30	Field Blank	Pesticides	Hexazinone	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Iprodione	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Metalaxyl	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Metolachlor	0.79 U	ng/L	0.79	4
11/4/2024 11:30	Field Blank	Pesticides	Myclobutanil	0.37 U	ng/L	0.37	1.9
11/4/2024 11:30	Field Blank	Pesticides	Prometryn	0.37 U	ng/L	0.37	1.9
11/4/2024 11:30	Field Blank	Pesticides	Acetochlor	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Sucralose	0.010 U	µg/L	0.01	0.04
11/4/2024 11:30	Field Blank	Pesticides	Ibuprofen	0.080 U	µg/L	0.08	0.32
11/4/2024 11:30	Field Blank	Pesticides	Diazinon	0.13 U	ng/L	0.13	0.66
11/4/2024 11:30	Field Blank	Pesticides	Fipronil Desulfinyl	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Molinate	0.26 U	ng/L	0.26	1.3
11/4/2024 11:30	Field Blank	Pesticides	Norflurazon	1.1 U	ng/L	1.1	5.3
11/4/2024 11:30	Field Blank	Pesticides	Chlorpyrifos Methyl	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Fluazifop-P-butyl	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Fluxapyroxad	0.26 U	ng/L	0.26	1.3
11/4/2024 11:30	Field Blank	Pesticides	Fonofos	0.16 U	ng/L	0.16	0.79
11/4/2024 11:30	Field Blank	Pesticides	Imazalil	0.69 U	ng/L	0.69	3.4

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:30	Field Blank	Pesticides	Pendimethalin	1.8 U	ng/L	1.8	9
11/4/2024 11:30	Field Blank	Pesticides	Phorate	0.26 U	ng/L	0.26	1.3
11/4/2024 11:30	Field Blank	Pesticides	Pyriproxyfen	0.26 U	ng/L	0.26	1.7
11/4/2024 11:30	Field Blank	Pesticides	Caffeine	7.9 U	ng/L	7.9	40
11/4/2024 11:30	Field Blank	Pesticides	Carfentrazone Ethyl	0.16 U	ng/L	0.16	0.79
11/4/2024 11:30	Field Blank	Pesticides	Disulfoton	0.64 U	ng/L	0.64	3.2
11/4/2024 11:30	Field Blank	Pesticides	Dithiopyr	2.1 U	ng/L	2.1	11
11/4/2024 11:30	Field Blank	Pesticides	Fenbuconazole	0.53 U	ng/L	0.53	2.6
11/4/2024 11:30	Field Blank	Pesticides	Metribuzin	0.42 U	ng/L	0.42	2.1
11/4/2024 11:30	Field Blank	Pesticides	Oxyfluorfen	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Prodiamine	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Propiconazole	0.64 U	ng/L	0.64	3.2
11/4/2024 11:30	Field Blank	Pesticides	Difenoconazole	0.64 U	ng/L	0.64	3.2
11/4/2024 11:30	Field Blank	Pesticides	Fenamiphos	0.48 U	ng/L	0.48	2.4
11/4/2024 11:30	Field Blank	Pesticides	Fipronil Sulfide	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Fludioxonil	0.11 U	ng/L	0.11	0.53
11/4/2024 11:30	Field Blank	Pesticides	Oxadiazon	0.37 U	ng/L	0.37	1.9
11/4/2024 11:30	Field Blank	Pesticides	Parathion Methyl	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Prometon	3.2 U	ng/L	3.2	16
11/4/2024 11:30	Field Blank	Pesticides	Terbufos	0.21 U	ng/L	0.21	1.1
11/4/2024 11:30	Field Blank	Pesticides	Ametryn	1.2 U	ng/L	1.2	5.8
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	5.2 U	µg/L	5.2	21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Phenanthrene	0.10 U	µg/L	0.1	0.42
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Naphthalene	0.10 U	µg/L	0.1	0.42
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.052 UJ	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.1 U	µg/L	3.1	13
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Nitrobenzene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Acenaphthene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Chrysene	0.026 U	µg/L	0.026	0.1

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	2.1 U	µg/L	2.1	8.4
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	4-Nitrophenol	10 U	µg/L	10	42
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Anthracene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Phenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	0.010 U	µg/L	0.01	0.042
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.21 U	µg/L	0.21	0.84
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Fluorene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Hexachloroethane	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1 U	µg/L	2.1	8.4
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Pyrene	0.10 U	µg/L	0.1	0.42
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Pentachlorophenol	0.52 U	µg/L	0.52	2.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Diethyl phthalate	2.1 U	µg/L	2.1	8.4
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Fluoranthene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	0.052 UJ	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	10 U	µg/L	10	42
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.026 U	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.026 UJ	µg/L	0.026	0.1
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Isophorone	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	µg/L	1	4.2
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.052 U	µg/L	0.052	0.21
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.026 U	µg/L	0.026	0.1

Date_Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
11/4/2024 11:30	Field Blank	Priority Organic Pollutants	Benzidine	10 U	µg/L	10	42
11/1/2024 12:40	Equipment Blank	Metals	Silver	0.010 U	µg/L	0.01	0.04
11/1/2024 12:40	Equipment Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
11/1/2024 12:40	Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
11/1/2024 12:40	Equipment Blank	Nutrients	NO2NO3-N	0.008 I	mg N/L	0.004	0.01
11/1/2024 12:40	Equipment Blank	Nutrients	Ammonia-N	0.003 I	mg N/L	0.002	0.005