Effluent Quality Assessment of USN Naval Station Mayport Wastewater Treatment Facility Duval County NPDES # FL0000922 Sampled June 3, 5, & 7, 2024

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection
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DEP Laboratory, Biology Program
2600 Blair Stone Road, MS 6515
Tallahassee, FL 32399-2400
www.floridadep.gov

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Summary of Results

In the chronic definitive bioassay, the IC25 for the mysid, *Americamysis bahia*, did not comply with the permit limit. Algal growth potential (AGP) analysis was not performed due to malfunctioning laboratory equipment. Sixteen organic constituents were detected in the effluent grab sample.

Facility Overview

The USN Mayport Naval Station 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. Administrative order AO-280NE was executed on 12/06/2019 and provided interim limits for total nitrogen and copper. A permit revision issued on 2/24/2023 removed the mixing limit for copper. The facility has an established mixing zone for effluent total recoverable concentrations of nickel discharged through outfall D-001 to the St. Johns River. The effluent is continuously discharged into the St. Johns River, a Class III Marine Water [waterbody identification (WBID) 2213A] (Figure 1).

Receiving waters for this facility fall under the Estuary-Specific Numeric Interpretations of the Narrative Nutrient Criteria (NNC) for St. Johns River within the Lower St. Johns region. For this region, the NNC, expressed as annual load, are 722,834 kg/yr total phosphorus and 1,376,855 kg/yr total nitrogen. The NNC, expressed as the long-term average of annual means, is 5.4 µg/L chlorophyll *a* (Subparagraph 62-302.532(1)(bb)(F.A.C.). For Class III predominantly marine waters, the daily average dissolved oxygen (DO) saturation shall not be below 42 percent in more than 10 percent of the values (Subsection 62-302.533(2), F.A.C.). This 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

Equipment blanks were collected on May 6, 2024. Effluent grab and 24-hour time proportioned composite samples were collected from monitoring site location EFD-01, for outfall D-001 on June 3, 2024. Effluent renewal composite samples were collected on June 5 and 7, 2024. The permit specifies flow-proportioned composite samples and time-proportioned composite samples were collected.

Samples were collected by Conor Lucey, Bronze Titus, and Ian Watkins (Northeast District). Analyses were performed by Diversified Environmental Laboratories, Inc. in Jacksonville, Eurofins Environmental Testing in Orlando, Eurofins Pensacola, 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.

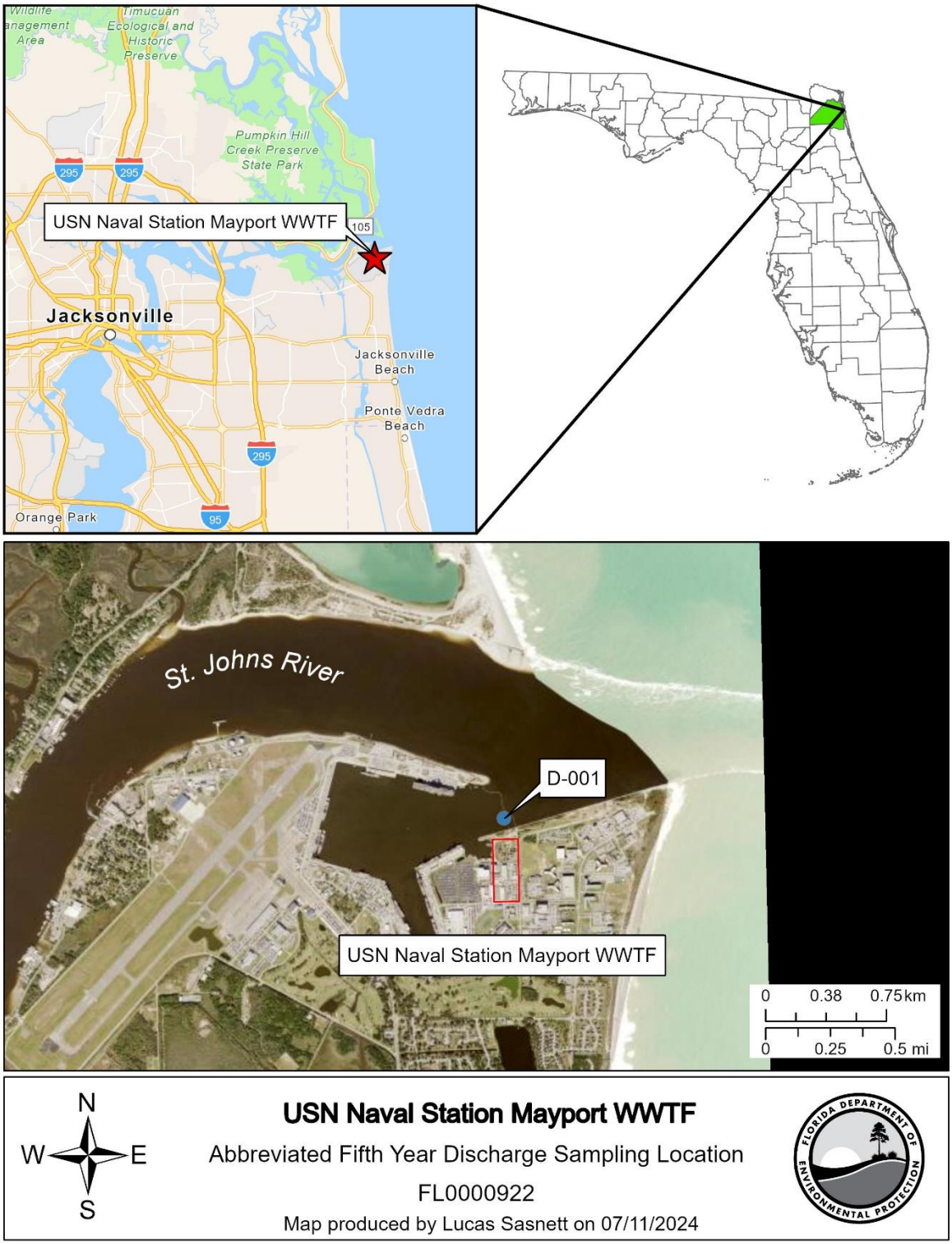


Figure 1. Map of Facility and Discharge Location

Results

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

- All measured effluent water quality parameters complied with Class III Water Quality Criteria for Marine Waters and effluent permit limits.

Analytical Water Chemistry (See Table 2 and Appendix D)

- All water chemistry analytes detected in the effluent grab and composite samples complied with Class III Water Quality Criteria for Marine Waters and effluent permit limits.

- Carbonaceous biochemical oxygen demand (CBOD) results were J-qualified for the effluent grab and composite samples due to spike recovery being outside the limits specified in the method. Samples were V-qualified for method blank contamination. Sample results are possibly biased high.

- Oils and greases were detected in the field blank. They were undetected in the effluent grab sample.

- Total phosphorus, nitrate and nitrite, and total ammonia were detected in the equipment blank.

Microbiology (See Table 2 and Appendix B)

- Effluent enterococci levels complied with the Class III Water Quality Criterion for Marine Waters.

- Effluent enterococci and fecal coliform levels complied with effluent permit limits.

Toxicity Whole Effluent Test (See Table 2)

- Tests were performed June 4 through June 11, 2024.

- The sample was aerated for 10 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.8 mg/L to 7.6 mg/L.

- Aliquots of the bioassay sample were salinity-adjusted according to method requirements from an apparent salinity of approximately 3 parts per thousand (ppth) to a salinity of approximately 5 ppth for the *M. beryllina* test and 20 ppth for the *A. bahia* test. Control mortality, for the test controls and salt-adjusted control, were within method acceptance criteria.

- Chronic bioassay results are reported as the 25% Inhibition Concentration (IC25). An 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 62-302.200(5), Subsection 62-302.530(20) and/or facility permit limits.

- For the chronic definitive bioassay, the IC25 for the mysid, *Americamysis bahia*, was calculated as 85.1% effluent. This did not comply with the effluent permit limit.

- For the chronic definitive bioassay, the IC25 for the fish, *Menidia beryllina*, was calculated as being greater than 100% effluent, and therefore complied with effluent permit limits.

- 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 Marine Waters and effluent permit limits.

- Mercury was detected in the field blank between the method detection limit (MDL) and the practical quantitation limit (PQL).

Organic Constituents (See Table 4 and Appendix D)

- Bromoform and dichlorobromomethane levels measured in the effluent grab sample complied with the annual average effluent permit limits.

- Atrazine (herbicide), azoxystrobin (fungicide), caffeine (stimulant), fipronil (insecticide), fipronil desulfinyl (insecticide), fipronil sulfide (insecticide), fipronil sulfone (insecticide), fludioxonil (fungicide), flutolanil (fungicide), oxadiazon (herbicide), prodiamine (herbicide), sulfentrazone (herbicide), tebuconazole (fungicide), bromodichloromethane (chemical manufacture), chloroform (solvent), and dibromochloromethane (chemical manufacture) were detected in the effluent grab sample.

- Caffeine was detected in the field blank between the MDL and PQL.

Literature Cited

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 Marine Waters, and field parameters

Parameter	Units	Class III Criteria	Effluent Permit Limits	Effluent EFD-01
Temperature	C	-	Report	27.4
pH	SU	6.5 - 8.5	6.5 - 8.5	7.2
Specific Conductance	µmhos/cm	-	-	6,281
Salinity	ppth	-	-	3 c
Dissolved Oxygen	% saturation	≥ 42	-	104.7
Dissolved Oxygen	mg/L	-	≥ 5.0 s	8.1

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

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

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

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Effluent Composite
Ortho-phosphate	mg P/L	-	Report	0.94	0.90
Total Phosphorus [1]	mg P/L	-	Report	1.1	1.1
Total Ammonia Nitrogen [1]	mg N/L	-	Report	7.3	7.7
Un-ionized Ammonia (calc salinity)	mg N/L	-	-	0.1 c	-
Nitrate and Nitrite [1]	mg N/L	-	Report	0.036	0.10
Total Kjeldahl Nitrogen	mg N/L	-	Report	9.6	9.6
Organic Nitrogen	mg N/L	-	Report	2.3 c	1.9 c
Total Nitrogen	mg N/L	-	Report	9.6 c	9.7 c
Total Organic Carbon	mg C/L	-	-	19	-
Chlorophyll *a* - Corrected	µg/L	≤ 5.4 a	-	1.6 I	-
Phaeophytin	µg/L	-	-	1.0 U	-
CBOD, 5 day, N - inhibited	mg/L	-	≤ 60 sp	20 JV	21 JV
Hardness	mg CaCO3/L	-	-	865 c	-
Total Suspended Solids	mg/L	-	≤ 60.0 sp	4 I	6 I
Turbidity	NTU	≤ 29 t	-	2.0	-
Color (true)	PCU	-	-	15	-
Alkalinity	mg CaCO3/L	-	-	219 A	-
Chloride	mg Cl/L	-	-	1900 A	-
Fluoride	mg F/L	≤ 5.0	-	0.75	-
Sulfate	mg SO4/L	-	-	310 A	-
Surfactants (MBAs)	mg/L	-	≤ 5.0 sp	-	0.11
Oils and Greases [2]	mg/L	-	≤ 5.0 s	1.6 U	-
Fecal Coliforms	cfu/100 mL	-	≤ 800 s	490 A	-
Enterococci	MPN/100 mL	≤ 130	≤ 130	10.0 U	-
Bioassay - Fish *(M. beryllina)*	% effluent	-	≥ 100 sp	-	> 100
Bioassay - Mysid (*A. bahia*)	% effluent	-	≥ 100 sp	-	85.1 e

e - Value exceeds the Class III Water Quality Criterion or effluent permit limit

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

a - Annual average

c- Value is calculated

p – 16-hour flow proportioned composite

s - Single sample

t - Shall not exceed 29 NTUs above background

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

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

J - Estimated value

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

V - Analyte was detected in both sample and method blank

1 - Analyte detected in the equipment blank

2 - Analyte detected in the field blank

Table 3. Analytical metals data

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

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Effluent Composite
Aluminum	µg/L	≤ 1,500	-	195	-
Arsenic	µg/L	≤ 50	-	0.71	-
Cadmium	µg/L	≤ 8.8	-	0.020 U	-
Calcium	mg/L	-	-	97.4	-
Chromium, Total [3]	µg/L	≤ 50	-	0.40 U	-
Copper	µg/L	≤ 3.7	≤ 3.7 sp	2.80	2.28
Iron	µg/L	≤ 300	≤ 300.0 sp	67 I	60 I
Lead	µg/L	≤ 8.5	≤ 8.5 sp	0.20 U	0.20 U
Magnesium	mg/L	-	-	151	-
Mercury [2]	ng/L	≤ 25	≤ 25 s	0.45 I	-
Nickel	µg/L	≤ 8.3	≤ 26.0 sp [4]	4.3	5.3
Potassium	mg/L	-	-	46	-
Selenium	µg/L	≤ 71	-	0.20 U	-
Silver	µg/L	≤ 2.3	-	0.010 U	-
Sodium	mg/L	-	-	1080	-
Zinc	µg/L	≤ 86	-	5.0 U	-

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

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- Analyte detected in the field blank

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

4 - within the mixing zone area

Table 4. Detected Organic Constituents

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

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Bromoform	µg/L	-	≤ 360.0 a	0.5 U
Atrazine	ng/L	-	-	1.7
Azoxystrobin	ng/L	-	-	8.9 J
Caffeine [2]	ng/L	-	-	230
Fipronil	ng/L	-	-	7.1
Fipronil Desulfinyl	ng/L	-	-	0.27 I
Fipronil Sulfide	ng/L	-	-	0.88
Fipronil Sulfone	ng/L	-	-	1.1
Fludioxonil	ng/L	-	-	1.5
Flutolanil	ng/L	-	-	720
Oxadiazon	ng/L	-	-	1.3 I
Prodiamine	ng/L	-	-	3.8 J
Sulfentrazone	ng/L	-	-	38
Tebuconazole	ng/L	-	-	1.8 I
Bromodichloromethane	µg/L	-	-	1.1
Chloroform	µg/L	-	-	1.6
Dibromochloromethane	µg/L	-	≤ 34.0 a	0.82

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
a - Annual average
I – The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J – Estimated value
U- Material analyzed for but not detected; value reported is the method detection limit
2 - Analyte detected in the field blank

Appendix A. Facility Summary

PART I: Information gathered prior to sampling event	
Prepared By: Conor Lucey	Contact Number: 904-256-1674
Facility Name (as it appears on permit): USN Naval Station Mayport WWTF	Former Names:
NPDES Permit Number: FL0000922	Permit Expiration Date: 12/05/2024
Physical Address: U.S. Naval Station Mayport WWTF, Building 285 Bon-Homme Richard Street, Mayport Florida 32228	
District: Northeast	County: Duval
Function of Facility: This facility treats domestic wastewater from the USN Naval Station Mayport's collection system to the standards of the National Pollutant Discharge Elimination System (NPDES) program. The effluent is discharged to the St. Johns River.	
Facility Type: Domestic Wastewater Major NPDES	Permitted Capacity (MGD): 2.0 MGD

Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months):

Annual Average

D-001 - April 2023 – April 2024 - 0.601 MGD

Monthly Averages

03/31/2024	EFD-1	1	Flow	0.66	Report MGD	MK - Monthly Average
02/29/2024	EFD-1	1	Flow	4.044	Report MGD	MK - Monthly Average
01/31/2024	EFD-1	1	Flow	0.55	Report MGD	MK - Monthly Average
12/31/2023	EFD-1	1	Flow	0.598	Report MGD	MK - Monthly Average
11/30/2023	EFD-1	1	Flow	.483	Report MGD	MK - Monthly Average
10/31/2023	EFD-1	1	Flow	0.517	Report MGD	MK - Monthly Average
09/30/2023	EFD-1	1	Flow	0.53	Report MGD	MK - Monthly Average
08/31/2023	EFD-1	1	Flow	0.665	Report MGD	MK - Monthly Average
07/31/2023	EFD-1	1	Flow	0.718	Report MGD	MK - Monthly Average
06/30/2023	EFD-1	1	Flow	0.722	Report MGD	MK - Monthly Average
05/31/2023	EFD-1	1	Flow	0.618	Report MGD	MK - Monthly Average
04/30/2023	EFD-1	1	Flow	0.584	Report MGD	MK - Monthly Average
03/31/2023	EFD-1	1	Flow	0.546	Report MGD	MK - Monthly Average

If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):

N/A

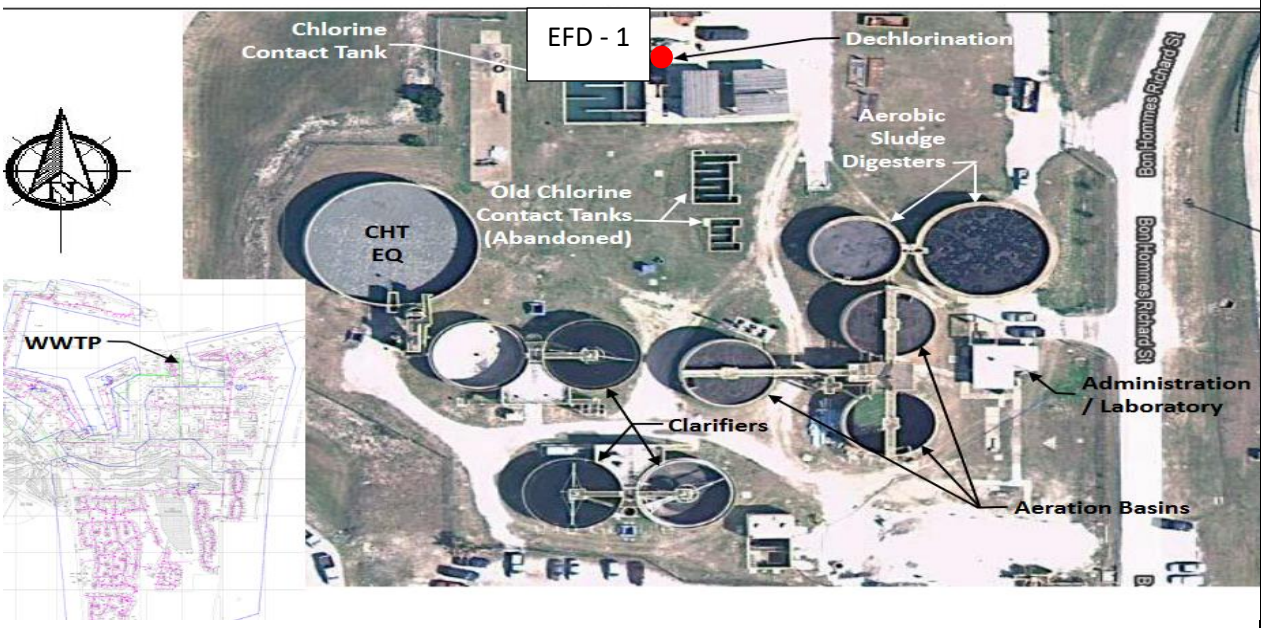
Description of type of Discharge:

☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent

☐ Other, please specify:

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):
EFA – 1 Effluent, immediately after disinfection prior to dechlorination
EFB – 1 Effluent, immediately prior to discharge into the disinfection contact chamber
EFD – 1 Final effluent, after final treatment and prior to discharge to St. Johns River
(immediately following dechlorination if chlorination was used)

Figure 2 EFD-1 Sampling Location



CAL – 1 Calculated percent three-month average daily flow
CAL – 2 Calculated percent removal of CBOD5 or TSS
CAL – 3 Calculated length of longest excursion or percent of time exceeding pH
CAL – 4 Calculated total mass load of total nitrogen or TP
SWD – 1 Approximately at latitude: 30°23' 48.27" N and longitude: 81°24' 6.37" W
SWD – 2 Approximately at latitude: 30°23' 59.902"N and longitude: 81°23' 53.881" W
SWD – 3 Approximately at latitude: 30°24' 4.56" N and longitude: 81°24' 23.08" W

Figure 3 Surface Water sampling locations for FL00009222



Description of Permitted Outfall(s):
D-001: A 22-inch diameter high-density polyethylene (HDPE) pipe that connects to an approximately 130-foot long, 18-inch diameter HDPE diffuser. The diffuser includes six, 6-in diameter HDPE risers each with two, 6-in diffuser ports. The diffuser is located approximately 160-ft offshore and 20-ft below the water surface within the NS Mayport Turning Basin. The point of discharge (POD) is located approximately at latitude 30°23' 42.78" N, longitude 81°24' 13" W.

Figure 4 Location of permitted discharge location



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

A. Existing Wastewater Treatment Facility:

an existing 2.0 million gallon per day (MGD) annual average daily flow (AADF) permitted capacity complete mix conventional activated sludge wastewater treatment facility (WWTF) consisting of two separate headworks, one serves the base and the second serves ships in port. Both headworks perform influent screening and grit removal, with the flows from the ship headworks going to a 615,000-gallon on-line flow equalization tank, three equal volume aeration tanks (722,000 gallons total), three equal size secondary clarifiers (total of 4770 square feet of surface area) and a single 87,000-gallon chlorine contact chamber. Effluent disinfection is achieved either by a sodium hypochlorite chlorination system using sodium hypochlorite followed by dechlorination using sodium bisulfite, or by a peracetic acid (PAA) disinfection system. Biosolids treatment is performed in two aerobic digesters (tanks are in series) with a total volume of 521,000 gallons to meet Class B stabilization requirements and applied on DEP-permitted land application sites.

Figure 5 Aerial View of Existing Wastewater Treatment Facility



B. Construction New Wastewater Treatment Facility:

A new advanced wastewater treatment facility (AWTF) will be constructed to replace the existing complete mix conventional activated sludge facility. The new advanced wastewater treatment facility will consist of the treatment units:

a. Shore Wastewater Headworks:

The shore wastewater headworks will include:

i. Two mechanical cleaned bar screens, each of which will have a capacity of 3.0 MGD, a screen opening of 6.0 mm (0.23 inch), a screen width of 2.5 feet;

ii. Two parallel channels; each of which will be 2.5 ft width x 5 ft depth x 2.36 ft upstream water level and 1.5 ft downstream water level;

iii. One dewatering screw press with a screening volume of 2 ft3 per day, a screening disposal container volume of 4 yd3, powered by 3 hp;

iv. One vortex grit separator which will have a capacity of 2.5 MGD, 7 ft in diameter, 9.5 ft depth, 7 ft maximum outlet water depth, and be powered by 0.75 hp;

v. One grit washer and conveyor.

b. Shore Wastewater Lift Station:

Shore wastewater lift station will have a design capacity of 1,390 gpm @ 62 ft TDH, four (3 duty + 1 standby) variable speed centrifugal pumps (20 hp power and 1,800 revolutions per minute).

c. Ships Wastewater Headworks:

The ships wastewater headworks will include:

i. Two mechanical cleaned bar screens, each of which will have a capacity of 3.0 MGD, a screen opening of 6.0 mm (0.23 inch), a screen width of 2.5 feet;

ii. Two parallel channels; each of which will be 2.5 ft width x 5 ft depth x 2.36 ft upstream water level and 1.5 ft downstream water level;

iii. Two dewatering screw press with a screening volume of 2 ft 3 per day, a screening disposal container volume of 4 yd3, powered by 3 hp;

iv. One vortex grit separator which will have a capacity of 2.5 MGD, 7 ft in diameter, 9.5 ft depth, 7 ft maximum outlet water depth, and be powered by 0.75 hp;

v. One grit washer and conveyor.

vi. Two ships wastewater foam generation channels, each of which will be 26.5 ft long x 3ft wide x 9 ft deep; the channels lie between the grit removal chambers and the lift station.

d. Ships Wastewater Lift Station:

Ships wastewater lift station will have a design capacity of 3,900 gpm @ 35 ft TDH, four (3 duty + 1 standby) constant speed centrifugal pumps (25 hp power and 1,800 revolutions per minute).

e. Ships Wastewater Salt Balancing System:

The ships wastewater salt balancing system includes:

i. A salinity sensor and automated flow splitter which is design to direct flow to different tanks based on salinity concentration;

ii. Four salt 377,000-gallon balancing and diversion tanks; each of which will have dimensions of 50 ft in length x 36 ft in width x 28 ft water depth. One of the four tank will serve division for offside disposal; the three other tanks will use to store high or low salinity wastewater.

iii. Four mechanical mixers, each of which will have a mixer impeller diameter of 98.4 inches, mixer horsepower of 5 hp, a mixing capacity of 14,132 ft 3/min;

iv. A salt balancing flow splitter and controller system which includes salinity probes, salinity meters, salinity controllers, automated plug valves, and automatic valve controller;

v. Four salt balancing return and disposal pumps, each of which will have a design capacity of 250 gpm at 26 ft TDH, 5 hp and 1,175 rpm.

f. Flow Equalization System:

The flow equalization system includes:

i. Two 942,500-gallon flow equalization tanks, each of which will be 90 ft in length x 50ft in width x 28 ft side water depth;

ii. Four Mechanical mixers (two for each EQ tank), each mechanical mixer will have an impeller diameter of 98.4 inches, 5 hp, capacity of 14,132 ft 3/min;

iii. One EQ tanks delivery pumps system which includes three 25-hp variable frequency drive centrifugal pumps with a design capacity of 475 gpm at 35 ft TDH.

g. Odor Control System:

The salt balancing tanks and equalization tanks will be filled with flat, FRP covers, and the interior gases withdraws and conveyed to an order control system which includes:

i. One wet chemical scrubber which is 5 ft in diameter, 23.75 ft height;

ii. One 4,600-gallon sodium hypochlorite storage and appurtenances

iii. One odor control blower (powered by 15 hp, having a flow capacity of 7,200 scfm).

h. Biological Nutrient Removal Treatment System:

The BNR treatment system will include four treatment stages: (1) Primary Anoxic; (2) Primary Aerobic; (3) Secondary Anoxic; and (4) Secondary Aerobic:

- **i.** Primary Anoxic: The primary anoxic zone consists of:
  - **1.** Three 75,082-gallon anoxic tanks (33.75 ft (length) x 18.75 ft (width) x 20.64ft (side water depth)); hydraulic retention time of each anoxic tank is 2.0 hours;
  - **2.** Each anoxic tank is equipped with a mechanical mixer (21 ft shaft length, 98.4 inches impeller diameter, 1 hp motor, 16 rmp) which has a mixing capacity of 8379 cft per minute.
- **ii.** Primary Aerobic: The primary aerobic zone consists of:
  - **1.** Four 150,000-gallon aeration tanks (85 ft (length) x 13.75 ft (width) x 20.0 ft (side water depth)); hydraulic retention time of each aerobic tank is 12.0 hours;
  - **2.** Each of the primary aeration tank is equipped with 270 fine bubble diffusers (ADF270 (9") model, manufactured by SSI) which are divided into two zones: Zone 1 consist of 150 fine bubble diffusers, and Zone 2 consist of 120 fine bubble diffusers. The total number of fine bubble diffusers in the four aeration tanks are 1080.
  - **3.** Three (two duty, one standby) aeration blowers which provide a design are flow of 2,900 scfm. The blower is powered by 100-hp motor, screw positive displacement type, model D52S, manufactured by Aerzen.
  - **4.** Three internal recycle pumps which have design capacity of 2,175 gpm, powered by 40 hp motor;
  - **5.** Three return sludge pumps which have design capacity of 300 gpm, powered by 5 hp motor.
- **iii.** Secondary Anoxic: Secondary anoxic zone consists of:
  - **1.** Two 60,770-gallon secondary anoxic tanks (25.25 ft (length) x 16.75 ft (width) x 19.15 ft (side water depth)); hydraulic retention time of each anoxic tank is 3.24 hours;
  - **2.** Each anoxic tank is equipped with a mechanical mixer (20 ft shaft length, 98.4 inches impeller diameter, 1 hp motor, 16 rpm) which has a mixing capacity of 8379 cft per minute.
- **iv.** Secondary Aerobic/Reaeration: Secondary aerobic zone consists of:
  - **1.** Two 40,455-gallon aeration tanks (25.25 ft (length) x 11.3 ft (width) x 19.0 ft (side water depth)); hydraulic retention time of each anoxic tank is 1.1 hours;
  - **2.** Each the primary aeration tank is equipped with 50 fine bubble diffusers (ADF270 (9") model, manufactured by SSI). The total number of fine bubble diffusers in the two pre-aeration tanks are 100.
- **v.** Carbon Source Solution:
  - **1.** Micro-C (100 mg/L) will be pump to the anoxic tanks to provide a carbon source for the denitrification process.
  - **2.** One 2000-gallone double walled bulk storage tank and feed pumps for the carbon solution.

i. Secondary Clarification System: the secondary clarifier system will comprise:

- **i.** Three 45-ft diameter secondary clarifiers, each of which has an external diameter of 45 ft, an internal diameter of 36 ft, centerwell diameter of 13.5 ft, centerwell skirt length of 6.6 ft, sidewater depth of 17.5 ft, surface overflow rate of 290 gpd per square feet.
- **ii.** Three return activated sludge (RAS) pump stations, each will have a capacity of 450 gpm @ 20 ft TDH, 10 hp;
- **iii.** One waste activated sludge (WAS) control valve, having a capacity of 50 gpm, 0.5 hp;

j. Metals Precipitation System: The metals precipitation system consists of:
- **i.** Two metals precipitation skids with a design capacity of 0.9 MGD AADF; each metal
  precipitation skid will be 17.37 ft (length) x 28.3 ft (width) x 10.92 ft (side water depth))
- **ii.** Treatment chemical storage tanks for Ferric @ 40%, Caustic @25%, Sulfuric acid @ 93%, anionic and cationic polymers.

k. Effluent Filtration System: The effluent filter system consists of:
- **i.** Four continuous self-backwash sand filters, each of which is 11.33 ft in diameter, 100sq.ft surface area, 6.67 ft media depth, 5.0 gpd/ft2 surface loading rate and has a filter capacity of 500.0 gpm;
- **ii.** Three 25-hp filter feed pumps which have design capacity of 1,085 gpm.

l. Effluent Neutralization System: The effluent neutralization system includes:
- **i.** Two neutralization tanks (9.5 ft (length) x 8.3 ft (width) x 14.5 ft (height) with 12.5 ft (side water depth))
- **ii.** One neutralization chemical (sulfuric acid, caustic) metering system consisting of pH probes, feed pumps.

m. Peracetic Acid (PAA) Disinfection System: The PAA disinfection consists of:
- **i.** One concrete disinfection tank (21,700 gallons, 12.5 ft (side water depth))
- **ii.** One 3,000-gallon bulk storage tank; two PAA metering pumps, one mixer.

n. Aerated Sludges Storage System: The aerated sludge/biosolids storage system consists of:
- **i.** One above grade circular tank (24 ft (diameter), 20 ft (height), 18 ft (side water depth));
- **ii.** Sixteen 24-inch coarse bubble diffusers;
- **iii.** One 25-hp WAS pump.

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

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Flow (thru the WWTF)	MGD	Max	2.0	Annual Average	Continuous	Recording Flow Meter with Totalizer	EFD – 1	See I.A.4
		Max	Report	Monthly Average				
		Max	Report	3-Mon Average Daily Flow				
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL – 1	
BOD, Carbonaceous 5- day, 20C	mg/L	Max	20.0	Annual Average	Weekly	16-hr FPC	EFD – 1	
		Max	25.0	Monthly Average				
		Max	45.0	Weekly Average				
		Max	60.0	Single Sample				

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)

CBOD, % Removal, 5-day	percent	Min	85	Monthly Average	Monthly	Calculated	CAL – 2	See I.A.6
Solids, Total Suspended	mg/L	Max	20.0	Annual Average	Weekly	16-hr FPC	EFD – 1	
		Max	30.0	Monthly Average				
		Max	45.0	Weekly Average				
		Max	60.0	Single Sample				
Solids, Total Suspended, % Removal	percent	Min	85	Monthly Average	Monthly	Calculated	CAL – 2	See I.A.6
pH	s.u.	Min	6.5	Single Sample	Continuous	Meter	EFD – 1	See I.A.3
		Max	8.5	Single Sample				
Length of Longest pH Excursion	min	Max	60	Single Sample	Monthly	Calculated	CAL – 3	See I.A.15
% of Time Exceeding pH Limits	percent	Max	1.0	Single Sample	Monthly	Calculated	CAL – 3	See I.A.15

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)

Coliform, Fecal	#/100mL	Max	200	Monthly Geometric Mean	Weekly	Grab	EFD – 1	See I.A.8
		Max	200	Annual Average				
		Max	800	Single Sample				

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Enterococci	#/100mL	Max	35	Monthly Geometric Mean	5/Month	Grab	EFD – 1	See I.A.9
	#/100mL	Max	130	90th Percentile				
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Single Sample	Daily	Grab	EFD – 1	See I.A.14
Peracetic Acid (PAA) Dosage	mg/L	Min	2.0	Single Sample	Continuous	Meter	EFB-1	See I.A.12
Peracetic Acid (PAA) Residual	mg/L	Max	1.0	Single Sample	Daily, 24hours	Grab	EFD-1	See I.A.12
Or for Backup								
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Continuous *(When Chlorine is being used)*	Meter	EFA – 1	See I.A. 11
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours *(When Chlorine is being used)*	Grab	EFD – 1	See I.A.7
Petrol Hydrocarbons, Total Recoverable	µg/L	Max	Report	Single Sample	Weekly	Grab	EFD – 1	
	µg/L	Max	Report	Monthly Average				
Oil and Grease	mg/L	Max	5.0	Single Sample	Weekly	Grab	EFD – 1	See I.A.7

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Surfactants (MBAS)	mg/L	Max	0.5	Single Sample	Weekly	16-hr FPC	EFD– 1	See I.A.7
Nitrogen, Total (as N)	mg/L	Max	Report	Annual Average	Weekly	16-hr FPC	EFD – 1	
		Max	Report	Monthly Average				
		Max	Report	Single Sample				
Nitrogen, Total, (as N)	Lb/yr	Max	Report	Annual Total	Monthly	Calculated	CAL-4	See I.A.16
	Lb/Month	Max	Report	Monthly Total				
Phosphorus, Total (as P)	mg/L	Max	Report	Annual Average	Weekly	16-hr FPC	EFD – 1	
		Max	Report	Monthly Average				
		Max	Report	Single Sample				
Phosphorus, Total (as P)	Lb/yr	Max	Report	Annual Total	Monthly	Calculated	CAL-4	See I.A.16
	Lb/Month	Max	Report	Monthly Total				

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Copper, Total Recoverable	µg/L	Max	3.7	Single Sample	Monthly	16-hr FPC	EFD – 1	See I.A.17
Nickel, Total Recoverable *(within the mixing zone area)*	µg/L	Max	26	Single Sample	Monthly	16-hr FPC	EFD – 1	See I.A.18
Iron, Total Recoverable	mg/L	Max	300.0	Single Sample	Monthly	16-hr FPC	EFD – 1	See I.A.7
Lead, Total Recoverable	µg/L	Max	8.5	Single Sample	Monthly	16-hr FPC	EFD – 1	See I.A.7
Mercury, Total Recoverable	µg/L	Max	0.025	Single Sample	Monthly	Grab	EFD – 1	See I.A.13
Bromoform	µg/L	Max	360.0	Annual Average	Quarterly *(only when using chlorine as disinfection agent)*	Grab	EFD – 1	See I.A.7
		Max	Report	Single Sample				
Chlorodibromomethane	µg/L	Max	34.0	Annual Average	Quarterly *(only when using chlorine as disinfection agent)*	Grab	EFD – 1	See I.A.7
		Max	Report	Single Sample				

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD – 1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	EFD – 1	See I.A.20
Temperature (C), Water	Deg C	Max	Report	Single Sample	Quarterly	Meter	EFD – 1	See I.A.20
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD – 1	See I.A.20
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Quarterly	16-hr FPC	EFD – 1	See I.A.20
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Quarterly	Filtered Grab	EFD – 1	See I.A.20
Chronic Whole Effluent Toxicity, 7-Day IC25 (*Americamysis bahia*)	percent	Min	100	Single Sample	Semi-Annually *(twice per year)*	24-hr FPC	EFD – 1	See I.A.19
Chronic Whole Effluent Toxicity, 7-Day IC25 (*Menidia beryllina*)	percent	Min	100	Single Sample	Semi-Annually *(twice per year)*	24-hr FPC	EFD – 1	See I.A.19
Temperature (ºC), Water	Deg C	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Meter	SWD – 1 SWD – 2 SWD – 3	See I.A.20

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Oxygen, Dissolved (DO)	mg/L	Min	Report	Single Sample	Semi-Annually *(twice per year)*	Meter	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Oxygen, Percent Saturation	Percent	Min	Report	Single Sample	Semi-Annually *(twice per year)*	Meter (or Calculated)	SWD – 1 SWD – 2 SWD – 3	See I.A.20
BOD, Carbonaceous 5-day, 20ºC	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Solids, Total Suspended	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
pH	S.U.	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Meter	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Specific Conductance	Umhos/cm	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Meter	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Nitrate plus Nitrite, Total (as N)	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Total Nitrogen, as N	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Total Phosphorus, as P	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Copper, Total Recoverable	µg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Nickel, Total Recoverable	µg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20
Chlorophyll a	mg/L	Max	Report	Single Sample	Semi-Annually *(twice per year)*	Grab	SWD – 1 SWD – 2 SWD – 3	See I.A.20

PART I: Continued	
Receiving Waters: St. Johns River	Classification (indicate whether fresh or marine): Class III marine water – WBID 2213A

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

19. The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-001.

a. Effluent Limitation

(1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) 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. [Rules 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 flow proportional 24-hr composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-014, Section 8.

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

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

d. Test Requirements

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

(2) The permittee shall conduct 7-day survival and growth chronic toxicity tests with a mysid shrimp, Americamysis (Mysidopsis) bahia, Method 1007.0, and an inland silverside, Menidia beryllina, Method 1006.0, concurrently.

(3) All test species, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd Edition, EPA-821-R-02-014. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.

(4) The control water and dilution water used shall be artificial sea salts as described in EPA- 821-R-02-014, Section 7.2. The test salinity shall be determined as follows:

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

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

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

e. Quality Assurance Requirements

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

(2) If the mortality in the control 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-02-014, Section 14.12 (Americamysis bahia) and Section 13.12 (Menidia beryllina). 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 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-02-014, Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

f. Reporting Requirements

(1) Results from all required tests routine and additional shall be reported on the Monthly Discharge Monitoring Report (DMR) as the calculated IC25 for each test species.

(2) A bioassay laboratory report for each routine test shall be prepared according to EPA-821- R-02-014, 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-02-014, Section 10, and e-mailed or mailed within 30 days after the last day of the second valid additional follow-up test.

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

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

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

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 19.a.(1).

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 19.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 19.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%, 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-02-014.

(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 19.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 19.b. (1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-014, 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 19.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 19.a.(2), 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. [62-4.241, 62- 620.620(3)]

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):
Administrative Order (AO-280NE)
Executed: 12/06/2019

III. ORDER

a. The Permittee, US Naval Station Mayport, shall be allowed to discharge from outfall D-001 and shall comply with the requirements of this Order, the Permit, and any subsequent revisions to the Permit.

b. During the interim period in which the Permittee is working to bring the Facility into compliance as required by this Order, the following monitoring requirements for copper and nickel shall apply at outfall D-001:

(1) During the period beginning upon the issuance date of the permit revision (018) and lasting as indicated in the compliance schedule III.2.a.(3), the permittee is authorized to discharge effluent from Outfall D-001 to the St. Johns River (Class III marine water – WBID 2213A). Such interim discharge shall be limited and monitored by the permittee as specified below:

a. Interim Limit and Compliance Schedule for Total Annual Mass Load of TN

Effluent Limitations				Monitoring Requirements				
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Total Nitrogen, Load	Lbs/year	Max	21,161	Annual Total	Monthly	Calculated	CAL–4	

a. Effluent samples shall be taken at the monitoring site locations listed above and as described below:

Monitoring Site	Description of Monitoring Site
CAL – 4	Calculated total mass load of total nitrogen

3) Compliance schedule for achieving compliance with the permit limit requirements for the total annual mass load of total nitrogen:

ACTION ITEM	DUE DATE
(a) Submit a new plan of action (POA) to achieve the total annual mass load limit for the total nitrogen within Specific Condition Number I.A.1.	Completed
(b) Implement the plan of action.	Completed

(c) Submit a report summarizing progress toward compliance with the final total annual mass load limit for TN.	Completed
(d) Submit final report summarizing the facility will meet and be in compliance with final limit for TN.	Completed
(e) Beginning to comply with the total annual mass load of 13,325 lbs/year for the total nitrogen.	Completed

4) The total annual mass load interim limit for TN shall expire on August 31, 2023 or when the total annual rolling over mass load of TN exceeds 21,161 lbs/year, whichever comes first. Beginning on September 1, 2023, the total annual mass load limit for total nitrogen shall not exceed 13,325 lbs/year, as required under Specific Permit Conditions I.A.1.

b. Interim Limit and Compliance Schedule for Copper, Total Recoverable Concentration

(1) During the period beginning upon the issuance date of the permit revision and lasting as indicated in the compliance schedule III.2.b(3), the permittee is authorized to discharge effluent from Outfall D-001 to the St. Johns River (Class III marine water – WBID 2213A). Such interim discharge shall be limited and monitored by the permittee as specified below:

Effluent Limitations					Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Copper, Total Recoverable	µg/L	Max	74	Single Sample	Monthly	16-hr FPC	EFD-1	

(2) Effluent samples shall be taken at the monitoring site locations listed above and as described below:

Monitoring Location Site Number	Description of Monitoring Location
EFD-1	Final effluent, immediately after final treatment, but prior to discharge to St. Johns River.

(3) A mixing zone for total recoverable copper concentration in the effluent discharged through the existing outfall D-001 to the St. Johns River has been established. The mixing zone has a polygon shape which was delineated based on a longitudinal distance of 18 m in spatial distance from the diffuser (upstream and downstream) and a total width of 10 m. The total mixing zone area shall be 756 m2 {(39.6 m (length of diffuser) + 2x18 m (each direction from diffuser)) x 10 m (total width) = 756 m2}, centered over the diffuser and perpendicular to the shore. Within the mixing zone,

a minimum dilution ratio of 1:25.1 is achieved at critical/worse case hydrologic scenarios. The maximum interim limit at the end-of-pipe for copper (total recoverable) is 74 µg/ (92th percentile effluent concentration) at the permitted capacity of 2.0 MGD AADF. The discharge shall meet the water quality criterion of 3.7 µg/L for copper at the edge of mixing area. The coordinates of the vertices of the copper mixing zone are listed in the Table 1, and mixing zone delineation is shown on Figure 1.

(4) Compliance schedule for achieving compliance with the permit requirements for copper:

ACTION ITEM	DUE DATE
(a) Submit a plan of action (POA) to achieve the permit limit of 3.7 µg/L. within Specific Condition Number I.A.1. and schedule a meeting with FDEP – Northeast District Staff to discuss the POA.	Completed
(b) Implement the plan of action.	March 01, 2024
(c) Submit a report summarizing progress toward compliance with the final limit for copper.	August 01, 2024
(d) Submit final report summarizing the facility will meet and be in compliance with final limit for copper.	November 31, 2024

Facility Mixing Zone Details (if applicable):

Mixing Zone Area for Copper:

A mixing zone for the effluent total recoverable concentration of copper discharged through the existing outfall D-001 to the St. Johns River has been established. The mixing zone has a polygon shape which was delineated based on a longitudinal distance of 18 m in spatial distance from the diffuser (upstream and downstream) and a total width of 10 m. The total mixing zone area shall be 756 m2 {(39.6 m (length of diffuser) + 2x18 m (each direction from diffuser)) x 10 m (total width) = 756 m2}, centered over the diffuser and perpendicular to the shore. Within the mixing zone, a minimum dilution ratio of 1:25.1 is achieved at critical/worse case hydrologic scenarios. The maximum concentration limit at the end-of-pipe for copper (total recoverable) is 74 µg/ (92th percentile effluent concentration) at the permitted capacity of 2.0 MGD AADF. The discharge shall meet the water quality criterion of 3.7 µg/L for copper at the edge of mixing area. The coordinates of the vertices of the copper mixing zone are as follows:

Coordinate Label	Latitude	Longitude
A	30º 23’ 41.77”	81º 24’ 15.00”
B	30º 23’ 42.53”	81º 24’ 12.32”
C	30º 23’ 42.22”	81º 24’ 12.19”
D	30º 23’ 41.46”	81º 24’ 14.89”

Figure 6 Mixing Zone Area for Copper



Mixing Zone Area for Nickel:

A mixing zone for effluent total recoverable nickel concentrations discharged through the existing outfall D-001 to St. Johns River has been established. The mixing zone has a polygon shape which was delineated based on a longitudinal distance of 5.0 m in spatial distance from the diffuser (upstream and downstream) and a total width of 10 m. The total mixing zone area shall be 496 m2 {(39.6 m (total length of diffuser) + 2x5 m (each direction from diffuser) x 10 m = 500 m2}, centered over the diffuser and perpendicular to the shore. Within the mixing zone, a minimum dilution ratio of 1:3.3 is achieved at critical/worse case hydrologic scenarios. The maximum concentration limit at the end-of-pipe for nickel (total recoverable) is 26 µg/ (92th percentile effluent concentration) at the permitted capacity of 2.0 MGD AADF. The discharge shall meet the water quality criterion of 8.3 µg/L for nickel at the edge of mixing area. The coordinates of the vertices of the nickel mixing zone are as follows:

Coordinate Label	Latitude	Longitude
A	30º 23’ 41.90”	81º 24’ 14.54”
B	30º 23’ 42.40”	81º 24’ 12.78”
C	30º 23’ 42.09”	81º 24’ 12.65”

D	30º 23’ 41.59”	81º 24’ 14.43”

Figure 7 Mixing Zone Area for Nickel



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

10/31/2023	EFD-1	Enterococci	96.52	35	#/100m MM - Monthly Geometric Mean
10/31/2023	EFD-1	Enterococci	200	130	#/100mL 9A - 90th Percentile

Describe previous FYI and WQBEL study:

FYI

The last Third-Year inspection was conducted on 7/25/2022, for the effluent discharge through Outfall D-001.

The result of the inspection is summarized below:

(1) Water Chemistry Results:

Nutrient and Metals

- The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.01 mg/L and .084 for the Grab samples.
- Kjeldahl Nitrogen was 1.0 mg/l and NO2NO3-N was 17 mg/L in the grab samples. The Kjeldahl Nitrogen was 1.1 mg/l and NO2NO3-N was 17 mg/L in the composite samples.
- Total-P and O-Phosphate-P was 2.2 mg/L and 2.1 mg/L respectively in the grab samples. The total P was 2.5 mg/L in the composite samples.
- Copper was 52.6 ug/L and nickel was 19.4 ug/L in the grab samples. The copper was 51.9 ug/L and nickel was 19.6 ug/L in the composite samples.

(2) Toxicity Results:

- The bioassay samples were chronically toxic to the Americamysis bahia test organisms but were not chronically toxic to the Menidia beryllina test organisms, according to permit conditions.
    - Americamysis bahia The 25% Inhibition Concentration (IC25) for growth in the Americamysis bahia bioassay was 71.6% effluent. The
    - No Observed Effect Concentration (NOEC) for survival was 50% effluent. The NOEC for growth was 25% effluent.
    - Menidia beryllina The 25% Inhibition Concentration (IC25) for growth in the Menidia beryllina bioassay was >100% effluent. The No
    - Observed Effect Concentration (NOEC) for survival and growth was 100% effluent.

Water Quality Based Effluent Limitation (WQBEL)

Water quality based effluent limitations (WQBELs) are effluent limitations, which may be more stringent than a technology based effluent limitation, that have been determined necessary by the Department to ensure that water quality standards in a receiving body of water will not be violated. WQBELs are developed in accordance with Chapter 62-650, F.A.C., and are based on the characteristics of the discharge, the receiving water characteristics, and the criteria and standards in Chapters 62-4, 62-302, and the 62-600 series, F.A.C.; they were developed based on Total Maximum Daily Load (TMDL) allocations adopted in Chapter 62-304, F.A.C., and allocations developed as part of a Basin Management Action Plan (BMAP) or/and a Reasonable Assurance Plan (RAP). WQBELs are included in the permit for the following pollutants of concern.

A. Bacteriological Qualities:
    a. Enterococci
        i. The enterococci effluent limitations previously included in the permit have been replaced with enterococci effluent limitations consistent with the bacteriological water quality standards (WQS) for enterococci in Rule 62-302.530, F.A.C.
    b. Fecal Coliform

i. Because there is no established relationship between fecal coliform and enterococci bacteria, limitations based on both the disinfection requirements for fecal coliform from Rule 62-600.440, F.A.C., and based on the bacteriological WQS for enterococci for discharges to Class III predominately marine waters under Rule 62-302.530, F.A.C., have been included in the permit

B. Dissolved Oxygen(DO):
   a. Ambient river monitoring has confirmed that the DO level of the River has been in compliance with the Site-Specific Alternative Criteria (SSAC) for DO.
   b. There is no evidence to show that the effluent would impact the DO level of the waterbody. Therefore, the limit for DO is proposed to remain unchanged

C. Iron:
   a. Reasonable potential analysis shows that the discharge still has potential to exceed the WQS for iron; in addition, the segment of the receiving waterbody is within the National Preserve; therefore,
   b. The permittee is required to continue monitoring for iron.

D. Mercury:
   a. The permittee is required to continue to monitor for mercury.

E. Lead:
   a. Lead is listed as an impaired parameter of the segment of the river (WBID 2213B).
   b. The effluent has been complying with the WQS for lead. However, the reasonable potential analysis shows that the discharge still has potential exceed the WQS for lead; in addition, the segment of the receiving waterbody is within the National Preserve; therefore, the permittee is required to continue monitoring for lead.

F. Copper:
   a. The discharge is required to comply with WQS of 3.7µg/L for copper, except within an approved mixing zone area.
   b. The discharge shall meet the water quality criterion of 3.7 µg/L for copper at the edge of mixing area.
   c. The existing mixing zone area was established based on the target dilution of 25.1 which for approximately 93.1% of time that concentration of copper would be below the WQS of 3.7 µg/L.
   d. However, based on the current (up to date) data, at a dilution factor (S) of 25.1, only approximately 33.84% of time that concentration of copper will be below the WQS of 3.7 µg/L within the mixing zone area. Results of the new calculations show that the existing MZ area needs to be re-evaluated.
   e. While the segment of this St. Johns River basin (WBID 2213A) has yet to be formally assessed under the Impaired Waters Rule (Chapter 62-303, F.A.C.), the permittee should allow time necessary to complete research, planning, study which demonstrate that the discharge will meet the Department's rules.
   f. Pursuant with Sections 403.088(2) and 403.067(7), Florida Statutes, an administrative order (AO 208 NE) proposed to be issued conjunction with the permit. The administrative order will include schedule for achieving compliance with all permit conditions if the specified criteria are met.

G. Nickel:
   a. The discharge is required to comply with the water quality standards (WQS) of 8.3 µg/L for nickel, except within an approved mixing zone area.
   b. The discharge shall meet the water quality criterion of 8.3 µg/L for nickel at the edge of mixing area.
   c. The existing mixing zone area was established based on the target dilution ratio of 1:3.3 which for approximately 92.0 % of time that concentration of nickel would be below the WQS of 8.3 µg/L.
   d. However, based on the current (up to date) data, at a dilution factor (S) of 3.3, only approximately 37.54 % of time that concentration of nickel would be below the WQS of 8.3 µg/L within the mixing zone area. Results of the new calculations show that the existing MZ area for nickel needs to be re-evaluated.

e. While the segment of this St. Johns River basin (WBID 2213A) has yet to be formally assessed under the Impaired Waters Rule (Chapter 62-303, F.A.C.), the permittee should allow time necessary to complete research, planning, study which demonstrate that the discharge will meet the Department's rules.
f. Pursuant with Sections 403.088(2) and 403.067(7), Florida Statutes, an administrative order (AO 208 NE) proposed to be issued conjunction with the permit. The administrative order will include schedule for achieving compliance with all permit conditions if the specified criteria are met.

H. Nutrients - Numeric Interpretation of the Narrative Nutrient Criteria
   a. Total Nitrogen:
      i. Discharge from USN Mayport Station WWTF is subject to the mass load limitation (waste load allocation (WLA) for total nitrogen(TN) discharge to St. Johns River Basin (WBID 2213A). According to the TMDLs–BMAP, the TN- waste load allocation for the USN NAS Jax WWTF is 16,909.2 Lbs/year (7,686 Kg/yr).
      ii. The Applicant, USN, has entered a Consent Order (OGC FILE NO. 14-0408) with the Department to achieve compliance with the total nitrogen (TN) TMDL loading limitation of 25,705 Lbs/Year , which aggregates total nitrogen (TN) loading from the two Wastewater facilities (FL0000922 and FL0000957).
   b. Total Phosphorus

I. Bromoform (CHBr3) and Chlorodibromomethane (CHClBr2):
   a. Bromoform (CHBr3) and Chlorodibromomethane are trihalomethanes (THMs), which were known as chlorination by-products.
   b. The permittee has been required to monitor for bromoform and chlorodibromomethane since 2009. The analytical data show that beginning in April 2016 (when the peracetic acid (also known as peroxyacetic acid (PAA)) disinfection system was placed into service to replace existing chlorine disinfection system) concentrations of these trihalomethanes were consistently below the method detection limit of 0.2 μg/L.
   c. Based history data, the trihalomethanes (Bromoform and Chlorodibromomethane) should be monitored only when the chlorine disinfection system is placed back into service.

J. Whole Effluent Toxicity Test:
   a. The permittee shall continue to conduct semi-annual chronic definitive testing of 24-hr composite samples with marine species; mysids tested NLT 20 ppt and Menidia NLT 5 ppt. Run 2 additional definitive tests if IC25 < 100% final effluent

K. Ambient Sampling Requirements:
   a. The Permittee is required to conduct regular monitoring of the segment of the Amelia River near the outfall for maintaining data on the impact of the discharge to the water quality of the surface water body which is a part of an on-going Water Quality Based Effluent Limitation (WQBEL) study for the river. If a new WQBEL is developed for the facility which requires the effluent limit to be revised, the permittee shall be informed in writing by a notice of permit revision.

L. Downstream Waterbodies Protections:
   a. The effluent discharging from the Outfall D-001 includes limitations that protects the downstream waterbodies. The discharge should not adversely affect the designated use of the downstream waterbodies.

M. Specific conditions include the following:
   a. The permittee will provide annual reports concerning the integrity of the outfall and will determine and propose an evaluation and analysis method.

Describe previous or current Enforcement Actions (including WLs):
A WL was issued on 05/04/2021 for nickel exceedances, enterococci, and carbonaceous biochemical oxygen demand (CBOD). The WL was closed out on 05/11/2021.

Describe any violations or problems noted in previous inspection:

Compliance Evaluation Inspection & Sanitary Sewer Overflow Inspection conducted on 07/25/2022 with the following violations:

1. Effluent Quality
- **a.** Review period from 10/01/2019 to 6/30/2022
- **b.** Exceedances listed below.

Date	Monitoring Location	Description	Result	Limit	Units	Statistical Base
11/30/2020	CAL-2	CBOD, % Removal, 5-day	78	85	percent	MJ - Monthly Average Minimum
07/31/2021	EFD-1	Enterococci	36	35	#/100mL	MM - Monthly Geometric Mean
07/31/2021	EFD-1	Enterococci	200	130	#/100mL	9A - 90th Percentile
02/28/2021	EFD-1	Enterococci	200	130	#/100mL	9A - 90th Percentile
03/31/2022	EFD-1	IC25 Statre 7day Chr Mendia	31	100	percent	ME - Minimum
02/28/2022	EFD-1	IC25 Statre 7day Chr Mendia	32	100	percent	ME - Minimum
01/31/2020	EFD-1	IC25 Statre 7day Chr Mendia	4	100	percent	ME - Minimum
02/28/2021	EFD-1	IC25 Statre 7day Chr Mysid Bahia	65.3	100	percent	ME - Minimum
01/31/2021	EFD-1	Nickel, Total Recoverable	31	26	ug/L	MB - Maximum
12/31/2020	EFD-1	Nickel, Total Recoverable	51	26	ug/L	MB - Maximum
11/30/2020	EFD-1	Nickel, Total Recoverable	45	26	ug/L	MB - Maximum
11/30/2019	EFD-1	Nickel, Total Recoverable	29	26	ug/L	MB - Maximum
09/30/2020	EFD-1	Oil and Grease	9.2	5	mg/L	MB - Maximum

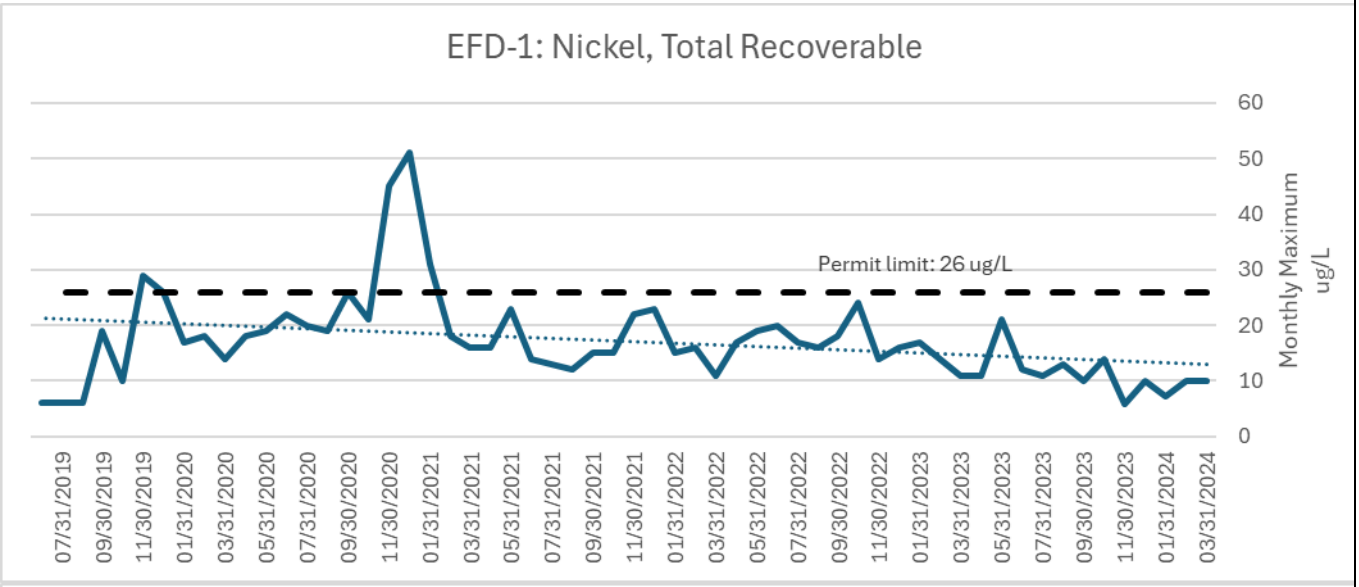
2. Facility Site Review
Contents in Digester # 1 were not well-mixed.

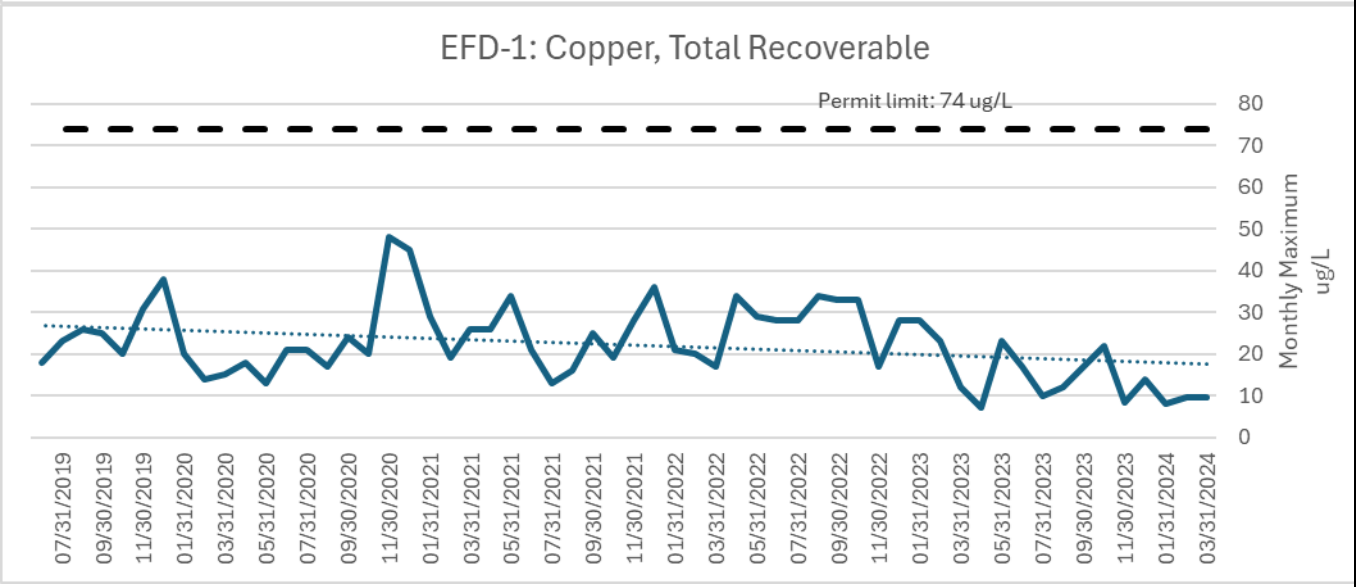
Discuss whether DMR trends within previous five years are improving or declining:

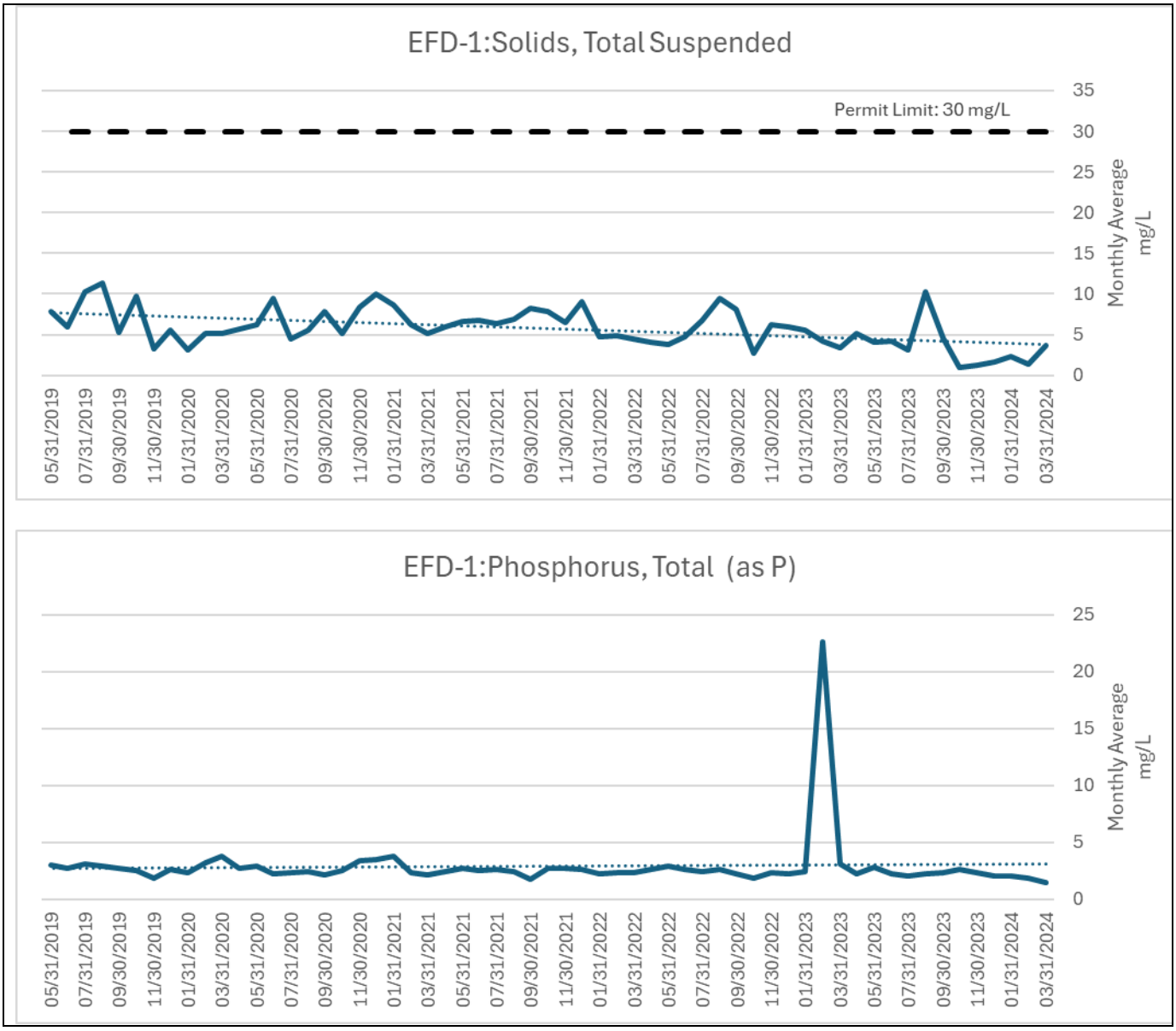
Data from EFD-1 for the past 5 years (05/2019 – 05/2024) would suggest DMR trends to be declining.

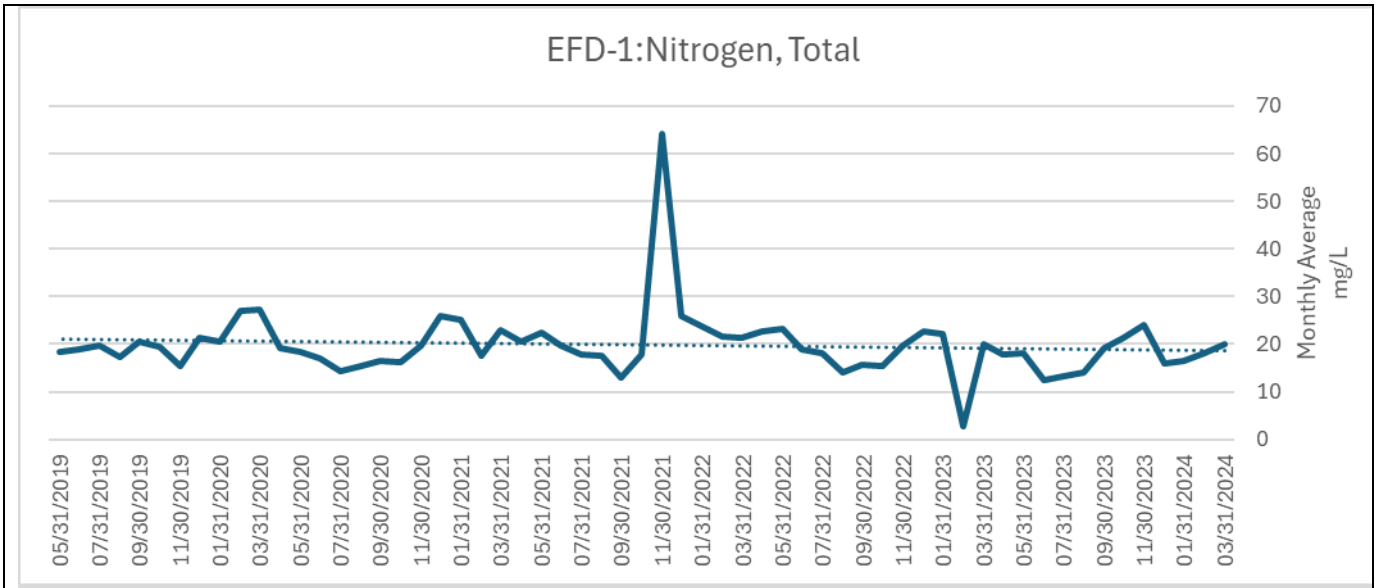
The following parameters all show a steady upward trend in the effluent from the treatment facility:
Total; Enterococci.

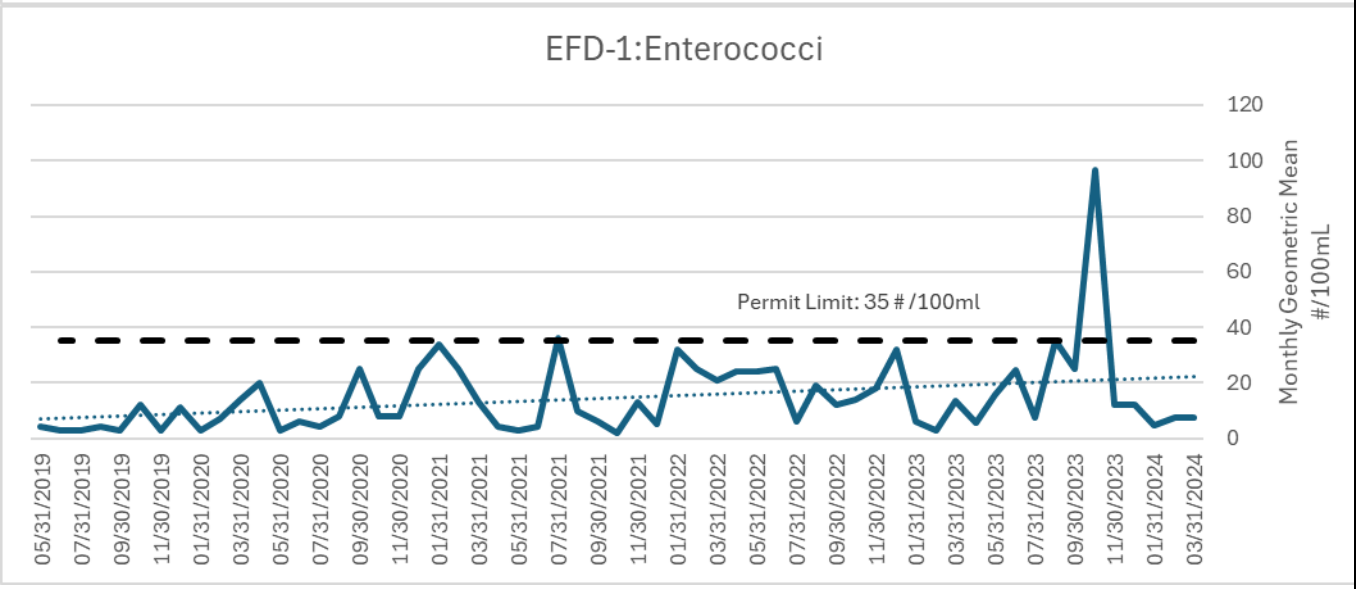
The following parameters all show a steady downward trend in the effluent from the treatment facility:
Total Recoverable, Nickel; Total Recoverable, Copper; Solids, Total Suspended; Phosphorus, Total; Nitrogen, Total;






EFD-1:Solids, Total Suspended
Permit Limit: 30 mg/L
Monthly Average mg/L
35
30
25
20
15
10
5
0
05/31/2019
07/31/2019
09/30/2019
11/30/2019
01/31/2020
03/31/2020
05/31/2020
07/31/2020
09/30/2020
11/30/2020
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03/31/2023
05/31/2023
07/31/2023
09/30/2023
11/30/2023
01/31/2024
03/31/2024
EFD-1:Phosphorus, Total (as P)
Monthly Average mg/L
25
20
15
10
5
0
05/31/2019
07/31/2019
09/30/2019
11/30/2019
01/31/2020
03/31/2020
05/31/2020
07/31/2020
09/30/2020
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09/30/2023
11/30/2023
01/31/2024
03/31/2024





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

N/A

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.

- **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-2024-04-29-35

FYI3 USN Mayport Naval Station WWTF (FL0000922) NED

Customer: NE-DIST

Project ID: FYI3

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Page 1 of 5

last revised Jan 25, 2018

Requester: Benjamin Nomann

Collected By: CC BT FW

Field Report Prepared By: Conor Lucey

Sampling Agency: FDEP NED

Location: FYI 3 USN Mayport FL0000922 Effluent Grab Bottle Group A

Field ID / WIN/STORET #:

Latitude ☐dd ☐dms | Longitude ☐dd ☐dms

☐ Comp ☒ Grab | Collection (comp begin or grab) Date 6/3/24 Time 12:43 | Eastern Central | Composite end Date Time | Bottle Group(s) (See pg 2): A

Matrix (type, e.g., Salt, Fresh, etc): WW

Diss. Oxygen: 04.71813 ☐ mg/L ☐ % sat | Total Res. Chlorine (mg/L): N/A

Temp (C): 27.4 | pH: 7.17 | Sample Depth ☐ ft ☐ m | Sp. Conductance (umho/cm): 6281

Salinity (ppt): | Comments: Paracetic acid

Location: FYI 3 USN Mayport FL0000922 Effluent Comp Bottle Group B

Field ID / WIN/STORET #:

Latitude [redacted] Longitude ☐dd ☐dms

☒ Comp ☐ Grab | Collection (comp begin or grab) Date 6/02/24 Time 11:00am | Eastern Central | Composite end Date 6/3/24 Time 11:00am | Bottle Group(s): B

Matrix (type, e.g., Salt, Fresh, etc): WW

Diss. Oxygen: ☐ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): | pH: | Sample Depth ☐ ft ☐ m | Sp. Conductance (umho/cm):

Salinity (ppt): | Comments:

Location: FYI 3 USN Mayport FL0000922 Field Blank Bottle Group C

Field ID / WIN/STORET #:

Latitude ☐dd ☐dms | Longitude ☐dd ☐dms

☐ Comp ☐ Grab | Collection (comp begin or grab) Date 6/3/24 Time 12:20 | Eastern Central | Composite end Date Time | Bottle Group(s): C

Matrix (type, e.g., Salt, Fresh, etc): DI

Diss. Oxygen: ☐ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): | pH: | Sample Depth ☐ ft ☐ m | Sp. Conductance (umho/cm):

Salinity (ppt): | Comments:

Location:

Field ID:

WIN/STORET #:

Latitude ☐dd ☐dms | Longitude ☐dd ☐dms

☐ Comp ☐ Grab | Collection (comp begin or grab) Date Time | Eastern Central | Composite end Date Time | Bottle Group(s):

Matrix (type, e.g., Salt, Fresh, etc):

Diss. Oxygen: ☐ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): | pH: | Sample Depth ☐ ft ☐ m | Sp. Conductance (umho/cm):

Salinity (ppt): | Comments:

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
Conor Lucey	6/03/24	FedEX	4	A.SHAIK	06/04/2024 / 0900

Lucas Sechrest 6/4/24

0919

Request Number: RQ-2024-04-29-35

FYI3 USN Mayport Naval Station WWTF (FL0000922) NED

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: Conor Lucas

Collected By: CL BT

Sampling Agency: FDEP NED

Location: FYI 3 USN Mayport FL0000922 Effluent Comp Bottle Group B	☑ Comp ☐ Grab	Collection (comp begin or grab) Date 6/4/24 Time 10:00	Eastern Central	Composite end Date 6/5/24 Time 10:00					Bottle Group(s) (See pg 2) B
Field	Matrix (type, e.g., Salt, Fresh, etc)			Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)			
WIN/	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							
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 Lucas	6/5/24	FedEx	1	[signature]	06.06.24 / 0948

AGP 06.06.24 / 9:12

Request Number: RQ-2024-04-29-35

FYI3 USN Mayport Naval Station WWTF (FL0000922)
NED

Customer: NE-DIST

Project ID: FYI3

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Requester: Benjamin Nomann

Collected By: Conor Lucey Bronze titus

Field Report Prepared By: Conor Lucey

Sampling Agency: FDEP NED

FYI 3 USN Mayport
FL0000922
Effluent Comp
Bottle Group B

	☑ Comp ☐ Grab	Collection (comp begin or grab) Date 6/6/24 Time 10:00 Eastern Central			Composite end Date 6/7/24 Time 10:00			Bottle Group(s) (See pg 2) B
	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)			
	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)			
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments Peracetic Acid					

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
CL	6/7/24	FedEX	1		

DIVERSIFIED ENVIRONMENTAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

Project Number: (Lab Use Only) 240603.04

3653 Regent Boulevard, Suite # 509
Jacksonville, FL 32224
P. (904) 807-9625 E. info@delilab.com
F. (904) 807-9627

Page 1 of 1

Company Name: Florida Department of Environmental Protection
Address: 8800 Baymeadows Way W Ste 100
City: Jacksonville State: FL Zip: 32256
Attn.: Jeremy Parrish Jeremy.M.Parrish@floridadep.gov
Tel.: E-mail or Fax: DEP-Overflowmicro@dep.state.fl.us
Project Name: mayport Rgi 3
Project Number: RQ-2023-
Project Location:
Sampler Name/Signature: Conor Lucy

Transfer #	Sample # (Lab Use Only)	Sample Identification	Date Sampled	Time Sampled	Sample Matrix Code	Specific Cond. (Field)	Comp	Grab	E. Coli - Quantitray	Enterococci - Quantitray	Coliform, Fecal - MF 3 Dilutions
1	70046	mayport Bact	6/3/24	12:45	WW			X		X	X
2											
3											
4											
5											
6											
7											
8											
9											
0											

Container Information (Qty, Size, & Type): NPW; 250mL P NPW pH 06/03/24; 250mL P NPW pH 06/03/24

Container Preservation Codes: 6; 6; 6

Parameters: E. Coli - Quantitray; Enterococci - Quantitray; Coliform, Fecal - MF 3 Dilutions

Sample Matrix Codes:
A. Air P. Petroleum
B. Bulk S. Soil/Sludge
W. Wipe O. Other _____
PW. Potable Water
NPW. Non-Potable Water

Sample Kit or Container Lot #: NA

Preservation Codes:
0. None 5. Na2S2O3
1. H2SO4 6. Crushed Ice (4C)
2. HNO3 7. C6H8O6
3. HCl 8. NH4Cl
4. NaOH 9. Other: (List)

Thermal Preservation:
In Crushed Ice? Yes / No
Cooler Temp: NA °C
Sample Cont. Temp: 14.3 °C

Turnaround Requested:
X Standard (10 Business Days)
___ Semi-Rush (3-5 Business Days)
___ Rush (1-2 Business Days)
Turnaround times are estimated & subject to change. Surcharges apply for all Rush samples.

Billing Information:
___ Invoice with Report
___ Invoice to Accounting
Req. #
P.O. #: C1E35B

Special Instructions:

Transfer Numbers	Relinquished By	Date / Time	Received By	Date / Time
1	Conor Lucy	6/3/24 14:05		06/03/24 1405

NELAP ACCREDITED TNI LABORATORY
Certification #E811059

Lab General Form#059, Rev. #1, Rev. Date: 02/07/22, Effective Date: 02/07/22.

Visit us online & order kits at: www.delilab.com

6/18/2024

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: 4/16/2024
Means of Contact: Email

Task Assignment Number: OV556 Maxmum Cost: **$83.00** Turnaround Time: 5 BD

Sample Delivery Date: 5/14/2024

Project Name/Description:
RQ-2024-04-29-35;FY13 USN Mayport Naval Station WWTF (FL0000922) NED

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

670-40947 Chain of Custody

QC Instructions:

Comments: Quote #

Samples released to Contract Lab by: Conor Lucy Date/Time: 6/3/24 12:30PM

Delivery Method: _____ Shipping FedEx

Samples Accepted by: MC Date/Time 6/4/24 923

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

2·2/2·2

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

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

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

400-256977 COC

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

Contractor Representatives Contacted: Noel Savoie

Date: 4/16/2024
Means of Contact: Email

Task Assignment Number: OV557 Maximum Cost: **$125.00** Turnaround Time: 10 BD

Sample Delivery Date: 5/14/2024

Project Name/Description:
RQ-2024-04-29-35; FYI3 USN Mayport Naval Station WWTF (FL0000922) NED

Deliverable Number/ Parameter Group/ Method	Sample Matrix	# of Samples	# of Containers	DEP ID #	Unit Cost	% Mark-up (if any)	Cost
59/ Foaming Agentw (MBAS) OV-MBAS-W SM 5540C	W	2	2		$60.00		$120.00
217/Sample Disposal Fee:	2				$2.50		$5.00
Total Number of Containers Shipped:	2					**Total:**	**$125.00**

QC Instructions:

Comments:

Samples released to Contract Lab by: Conor Lacy Date/Time: 6/3/24 2:30 pm

Delivery Method: _____ Shipping: FedEx

Samples Accepted by: Jonathan Williams Date/Time 6-4-24 1018

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

1.3°C/IR8

400-257186

640-Tallahassee

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: Bryan Black
Project Manager

Contractor Representatives Contacted: Noel Savoie

Date: 6/5/2024
Means of Contact: Email

Task Assignment Number: OV~~565~~ OV582 Maximum Cost: **$332.00** Turnaround Time: 10 BD

Sample Delivery Date: 6/5/2024

Project Name/Description:
RQ-2024-04-29-35;FYI3 USN Mayport Naval Station WWTF (FL0000922) NED

Deliverable Number/ Parameter Group/ Method	**Sample Matrix**	**# of Samples**	**# of Containers**	**DEP ID #**	**Unit Cost**	**% Mark-up (if any)**	**Cost**
173/HEM-Oil and Grease 1664B	W	2	4	2490828, 2490831	$56.00		$112.00
65/mercury, Low Level (LL CVAFS)1631E	W	2	8 vials	2490827, 2490830	$105.00		$210.00
217/Sample Disposal Fee:	4				$2.50		$10.00
Total Number of Containers Shipped:		12				**Total:**	**$332.00**

QC Instructions:

Comments:

Samples released to Contract Lab by: KK Date/Time: 6·5·24 / 1529

Delivery Method: _____HD_____

Samples Accepted by: _____ Date/Time 6·5·24 1529

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

6-6-24 9:27

Appendix D. Chemical Analysis of Effluent

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:43	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	1.6 I	ug/L	0.68	2.0
6/3/2024 12:43	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.0 U	ug/L	1.0	3.0
6/3/2024 12:43	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	1.6 I	ug/L	0.93	2.8
6/3/2024 12:43	Effluent Grab	Overflow	Fecal Coliforms-Membrane Filter	490 A	cfu/100 mL	10	10
6/3/2024 12:43	Effluent Grab	Overflow	Enterococci-Quanti-Tray	10.0 U	MPN/100 mL	10.0	10.0
6/3/2024 12:43	Effluent Grab	Overflow	Carbonaceous Biochemical Oxygen Demand	20 JV	mg/L	2.0	2.0
6/3/2024 12:43	Effluent Grab	Metals	Calcium	97.4	mg/L	0.075	0.30
6/3/2024 12:43	Effluent Grab	Metals	Selenium	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Metals	Chromium	0.40 U	ug/L	0.40	1.6
6/3/2024 12:43	Effluent Grab	Metals	Iron	67 I	ug/L	30	120
6/3/2024 12:43	Effluent Grab	Metals	Magnesium	151	mg/L	0.40	1.6
6/3/2024 12:43	Effluent Grab	Metals	Potassium	46	mg/L	3.0	12
6/3/2024 12:43	Effluent Grab	Metals	Lead	0.20 U	ug/L	0.20	0.40
6/3/2024 12:43	Effluent Grab	Metals	Zinc	5.0 U	ug/L	5.0	20
6/3/2024 12:43	Effluent Grab	Metals	Copper	2.80	ug/L	0.40	0.80
6/3/2024 12:43	Effluent Grab	Metals	Silver	0.010 U	ug/L	0.010	0.040
6/3/2024 12:43	Effluent Grab	Metals	Aluminum	195	ug/L	5.0	20
6/3/2024 12:43	Effluent Grab	Metals	Arsenic	0.71	ug/L	0.050	0.20
6/3/2024 12:43	Effluent Grab	Metals	Sodium	1.08E+03	mg/L	5.0	20
6/3/2024 12:43	Effluent Grab	Metals	Cadmium	0.020 U	ug/L	0.020	0.080
6/3/2024 12:43	Effluent Grab	Metals	Nickel	4.3	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Nutrients	Chloride	1.9E+03 A	mg Cl/L	4.0	10
6/3/2024 12:43	Effluent Grab	Nutrients	Sulfate	310 A	mg SO4/L	4.0	10
6/3/2024 12:43	Effluent Grab	Nutrients	Ammonia-N	7.3	mg N/L	0.40	1.0
6/3/2024 12:43	Effluent Grab	Nutrients	NO2NO3-N	0.036	mg N/L	0.0040	0.010
6/3/2024 12:43	Effluent Grab	Nutrients	Kjeldahl Nitrogen	9.6	mg N/L	0.80	2.0
6/3/2024 12:43	Effluent Grab	Nutrients	Organic Carbon	19	mg C/L	0.50	1.0
6/3/2024 12:43	Effluent Grab	Nutrients	Color (true)	15	PCU	2.5	6.0
6/3/2024 12:43	Effluent Grab	Nutrients	Turbidity	2.0	NTU	0.10	1.0
6/3/2024 12:43	Effluent Grab	Nutrients	TSS	4 I	mg/L	2.0	10
6/3/2024 12:43	Effluent Grab	Nutrients	Fluoride	0.75	mg F/L	0.025	0.10
6/3/2024 12:43	Effluent Grab	Nutrients	Total-P	1.1	mg P/L	0.050	0.25

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:43	Effluent Grab	Nutrients	O-Phosphate-P	0.94	mg P/L	0.040	0.10
6/3/2024 12:43	Effluent Grab	Nutrients	Total Alkalinity	219 A	mg CaCO3/L	0.65	2.5
6/3/2024 12:43	Effluent Grab	Overflow	HEM	1.6 U	mg/L	1.6	4.6
6/3/2024 12:43	Effluent Grab	Overflow	Mercury	0.45 I	ng/L	0.20	0.50
6/3/2024 12:43	Effluent Grab	Pesticides	Fludioxonil	1.5	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Naled	2.6 U	ng/L	2.6	13
6/3/2024 12:43	Effluent Grab	Pesticides	Norflurazon	1.0 U	ng/L	1.0	5.2
6/3/2024 12:43	Effluent Grab	Pesticides	Pendimethalin	1.8 U	ng/L	1.8	8.8
6/3/2024 12:43	Effluent Grab	Pesticides	Butylate	0.47 U	ng/L	0.47	2.3
6/3/2024 12:43	Effluent Grab	Pesticides	Cyanazine	5.2 U	ng/L	5.2	26
6/3/2024 12:43	Effluent Grab	Pesticides	Disulfoton	0.62 U	ng/L	0.62	3.1
6/3/2024 12:43	Effluent Grab	Pesticides	EPTC	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Ethoprop	0.13 U	ng/L	0.13	0.65
6/3/2024 12:43	Effluent Grab	Pesticides	Fluazifop-P-butyl	0.10 U	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Flumioxazin	3.1 U	ng/L	3.1	16
6/3/2024 12:43	Effluent Grab	Pesticides	Mevinphos	1.0 U	ng/L	1.0	5.2
6/3/2024 12:43	Effluent Grab	Pesticides	Oxadiazon	1.3 I	ng/L	0.36	1.8
6/3/2024 12:43	Effluent Grab	Pesticides	Simazine	0.26 U	ng/L	0.26	1.3
6/3/2024 12:43	Effluent Grab	Pesticides	Terbufos	0.21 U	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Terbuthylazine	0.21 U	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Metolachlor	0.78 U	ng/L	0.78	3.9
6/3/2024 12:43	Effluent Grab	Pesticides	Myclobutanil	0.36 U	ng/L	0.36	1.8
6/3/2024 12:43	Effluent Grab	Pesticides	Atrazine	1.7	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Azinphos Methyl	3.1 U	ng/L	3.1	16
6/3/2024 12:43	Effluent Grab	Pesticides	Azoxystrobin	8.9 J	ng/L	0.41	2.1
6/3/2024 12:43	Effluent Grab	Pesticides	Dimethenamid	0.10 U	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Fenamiphos	0.47 U	ng/L	0.47	2.3
6/3/2024 12:43	Effluent Grab	Pesticides	Fenbuconazole	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Imazalil	0.67 U	ng/L	0.67	3.4
6/3/2024 12:43	Effluent Grab	Pesticides	Molinate	0.26 U	ng/L	0.26	1.3
6/3/2024 12:43	Effluent Grab	Pesticides	Parathion Ethyl	0.16 U	ng/L	0.16	0.78
6/3/2024 12:43	Effluent Grab	Pesticides	Prodiamine	3.8 J	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Ametryn	1.1 U	ng/L	1.1	5.7
6/3/2024 12:43	Effluent Grab	Pesticides	Atrazine Desethyl	1.3 U	ng/L	1.3	6.7
6/3/2024 12:43	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.10 U	ng/L	0.10	0.52

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:43	Effluent Grab	Pesticides	Dithiopyr	1.0 U	ng/L	1.0	5.2
6/3/2024 12:43	Effluent Grab	Pesticides	Fonofos	0.16 U	ng/L	0.16	0.78
6/3/2024 12:43	Effluent Grab	Pesticides	Iprodione	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Phorate	0.26 U	ng/L	0.26	1.3
6/3/2024 12:43	Effluent Grab	Pesticides	Prometryn	0.36 U	ng/L	0.36	1.8
6/3/2024 12:43	Effluent Grab	Pesticides	Pyriproxyfen	0.26 U	ng/L	0.26	1.7
6/3/2024 12:43	Effluent Grab	Pesticides	Tebuconazole	1.8 I	ng/L	1.4	7.2
6/3/2024 12:43	Effluent Grab	Pesticides	Naproxen	0.084	ug/L	0.0080	0.032
6/3/2024 12:43	Effluent Grab	Pesticides	Acetochlor	0.21 U	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Bromacil	0.62 U	ng/L	0.62	3.1
6/3/2024 12:43	Effluent Grab	Pesticides	Diazinon	0.13 U	ng/L	0.13	0.65
6/3/2024 12:43	Effluent Grab	Pesticides	Difenoconazole	0.62 U	ng/L	0.62	3.1
6/3/2024 12:43	Effluent Grab	Pesticides	Ethion	0.31 U	ng/L	0.31	1.6
6/3/2024 12:43	Effluent Grab	Pesticides	Fipronil Sulfide	0.88	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Sulfentrazone	38	ng/L	1.4	7.2
6/3/2024 12:43	Effluent Grab	Pesticides	Carbophenothion	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Carfentrazone Ethyl	0.16 U	ng/L	0.16	0.78
6/3/2024 12:43	Effluent Grab	Pesticides	Demeton	3.6 U	ng/L	3.6	18
6/3/2024 12:43	Effluent Grab	Pesticides	Fipronil	7.1	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Fipronil Desulfinyl	0.27 I	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Hexazinone	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Metalaxyl	0.52 U	ng/L	0.52	2.6
6/3/2024 12:43	Effluent Grab	Pesticides	Metribuzin	0.41 U	ng/L	0.41	2.1
6/3/2024 12:43	Effluent Grab	Pesticides	Oxyfluorfen	0.21 U	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Parathion Methyl	0.21 U	ng/L	0.21	1.0
6/3/2024 12:43	Effluent Grab	Pesticides	Pronamide	0.10 U	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Sucralose	120	ug/L	1.0	4.0
6/3/2024 12:43	Effluent Grab	Pesticides	Ibuprofen	0.080 U	ug/L	0.080	0.32
6/3/2024 12:43	Effluent Grab	Pesticides	Alachlor	0.41 U	ng/L	0.41	2.1
6/3/2024 12:43	Effluent Grab	Pesticides	Fipronil Sulfone	1.1	ng/L	0.10	0.52
6/3/2024 12:43	Effluent Grab	Pesticides	Flutolanil	720	ng/L	2.6	13
6/3/2024 12:43	Effluent Grab	Pesticides	Fluxapyroxad	0.26 U	ng/L	0.26	1.3
6/3/2024 12:43	Effluent Grab	Pesticides	Malathion	0.36 U	ng/L	0.36	1.8
6/3/2024 12:43	Effluent Grab	Pesticides	Prometon	3.1 U	ng/L	3.1	16
6/3/2024 12:43	Effluent Grab	Pesticides	Propiconazole	0.62 U	ng/L	0.62	3.1

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:43	Effluent Grab	Pesticides	Caffeine	230	ng/L	7.8	39
6/3/2024 12:43	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.31 U	ng/L	0.31	1.6
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Dibromochloromethane	0.82	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	m,p-Xylene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,1-Dichloroethene	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Bromoform	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	o-Xylene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	TRPH	0.64 U	mg/L	0.64	2.5
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,2-Dichlorobenzene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	cis-1,3-Dichloropropene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	trans-1,3-Dichloropropene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,1,2-Trichloroethane	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,2-Dichloroethane	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,3-Dichlorobenzene	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Benzene	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Bromodichloromethane	1.1	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Bromomethane	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Chloroethane	0.50 U	ug/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Trichlorofluoromethane	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,1,1-Trichloroethane	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Carbon tetrachloride	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Chlorobenzene	0.20 U	ug/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Trichloroethene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Toluene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Chloroform	1.6	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Chloromethane	2.0 U	µg/L	2.0	8.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Ethylbenzene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Tetrachloroethene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,2-Dichloropropane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,1-Dichloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,1,2,2-Tetrachloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	1,4-Dichlorobenzene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Methylene chloride	1.0 U	µg/L	1.0	4.0
6/3/2024 12:43	Effluent Grab	Priority Organic Pollutants	Vinyl chloride	0.20 U	µg/L	0.20	0.80
6/3/2024 12:43	Effluent Grab	Nutrients	pH	7.17			

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:43	Effluent Grab	Nutrients	Specific Conductance	6281	umhos/cm		
6/3/2024 12:43	Effluent Grab	Nutrients	Dissolved Oxygen %Sat	104.7	%Sat		
6/3/2024 12:43	Effluent Grab	Nutrients	Temperature	27.4	C		
6/3/2024 12:20	Field Blank	Metals	Potassium	0.30 U	mg/L	0.30	1.2
6/3/2024 12:20	Field Blank	Metals	Aluminum	5.0 U	µg/L	5.0	20
6/3/2024 12:20	Field Blank	Metals	Nickel	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.30
6/3/2024 12:20	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.040	0.16
6/3/2024 12:20	Field Blank	Metals	Iron	30 U	µg/L	30	120
6/3/2024 12:20	Field Blank	Metals	Sodium	0.50 U	mg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Metals	Copper	0.40 U	µg/L	0.40	0.80
6/3/2024 12:20	Field Blank	Metals	Selenium	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Metals	Chromium	0.40 U	µg/L	0.40	1.6
6/3/2024 12:20	Field Blank	Metals	Arsenic	0.050 U	µg/L	0.050	0.20
6/3/2024 12:20	Field Blank	Metals	Zinc	5.0 U	µg/L	5.0	20
6/3/2024 12:20	Field Blank	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
6/3/2024 12:20	Field Blank	Metals	Lead	0.20 U	µg/L	0.20	0.40
6/3/2024 12:20	Field Blank	Metals	Silver	0.010 U	µg/L	0.010	0.040
6/3/2024 12:20	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.10	1.0
6/3/2024 12:20	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.080	0.20
6/3/2024 12:20	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.0040	0.010
6/3/2024 12:20	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.0040	0.010
6/3/2024 12:20	Field Blank	Nutrients	Fluoride	0.025 U	mg F/L	0.025	0.10
6/3/2024 12:20	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.50	1.0
6/3/2024 12:20	Field Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.0020	0.0050
6/3/2024 12:20	Field Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
6/3/2024 12:20	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.20	0.50
6/3/2024 12:20	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.0020	0.0050
6/3/2024 12:20	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.20	0.50
6/3/2024 12:20	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6.0
6/3/2024 12:20	Field Blank	Overflow	HEM	5.0	mg/L	1.4	4.1
6/3/2024 12:20	Field Blank	Overflow	Mercury	0.23 I	ng/L	0.20	0.50
6/3/2024 12:20	Field Blank	Pesticides	Dithiopyr	1.1 U	ng/L	1.1	5.3
6/3/2024 12:20	Field Blank	Pesticides	Fenamiphos	0.47 U	ng/L	0.47	2.4
6/3/2024 12:20	Field Blank	Pesticides	Hexazinone	0.53 U	ng/L	0.53	2.6

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:20	Field Blank	Pesticides	Metribuzin	0.42 U	ng/L	0.42	2.1
6/3/2024 12:20	Field Blank	Pesticides	Atrazine Desethyl	1.4 U	ng/L	1.4	6.9
6/3/2024 12:20	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.32 U	ng/L	0.32	1.6
6/3/2024 12:20	Field Blank	Pesticides	Metolachlor	0.79 U	ng/L	0.79	4.0
6/3/2024 12:20	Field Blank	Pesticides	Naled	2.6 U	ng/L	2.6	13
6/3/2024 12:20	Field Blank	Pesticides	Diazinon	0.13 U	ng/L	0.13	0.66
6/3/2024 12:20	Field Blank	Pesticides	EPTC	0.53 U	ng/L	0.53	2.6
6/3/2024 12:20	Field Blank	Pesticides	Ametryn	1.2 U	ng/L	1.2	5.8
6/3/2024 12:20	Field Blank	Pesticides	Bromacil	0.63 U	ng/L	0.63	3.2
6/3/2024 12:20	Field Blank	Pesticides	Fluxapyroxad	0.26 U	ng/L	0.26	1.3
6/3/2024 12:20	Field Blank	Pesticides	Iprodione	0.53 U	ng/L	0.53	2.6
6/3/2024 12:20	Field Blank	Pesticides	Myclobutanil	0.37 U	ng/L	0.37	1.8
6/3/2024 12:20	Field Blank	Pesticides	Prometryn	0.37 U	ng/L	0.37	1.8
6/3/2024 12:20	Field Blank	Pesticides	Propiconazole	2.2 I	ng/L	0.63	3.2
6/3/2024 12:20	Field Blank	Pesticides	Sulfentrazone	1.5 U	ng/L	1.5	7.4
6/3/2024 12:20	Field Blank	Pesticides	Terbufos	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Naproxen	0.0080 U	µg/L	0.0080	0.032
6/3/2024 12:20	Field Blank	Pesticides	Fipronil	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Acetochlor	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Oxadiazon	0.37 U	ng/L	0.37	1.8
6/3/2024 12:20	Field Blank	Pesticides	Prodiamine	0.21 UJ	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Sucralose	0.010 U	µg/L	0.010	0.040
6/3/2024 12:20	Field Blank	Pesticides	Cyanazine	5.3 U	ng/L	5.3	26
6/3/2024 12:20	Field Blank	Pesticides	Dimethenamid	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Ethoprop	0.13 U	ng/L	0.13	0.66
6/3/2024 12:20	Field Blank	Pesticides	Carfentrazone Ethyl	0.16 U	ng/L	0.16	0.79
6/3/2024 12:20	Field Blank	Pesticides	Chlorpyrifos Methyl	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Mevinphos	1.1 U	ng/L	1.1	5.3
6/3/2024 12:20	Field Blank	Pesticides	Prometon	3.2 U	ng/L	3.2	16
6/3/2024 12:20	Field Blank	Pesticides	Simazine	0.26 U	ng/L	0.26	1.3
6/3/2024 12:20	Field Blank	Pesticides	Demeton	3.7 U	ng/L	3.7	18
6/3/2024 12:20	Field Blank	Pesticides	Fipronil Sulfide	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Butylate	0.47 U	ng/L	0.47	2.4
6/3/2024 12:20	Field Blank	Pesticides	Malathion	0.37 U	ng/L	0.37	1.8
6/3/2024 12:20	Field Blank	Pesticides	Metalaxyl	0.53 U	ng/L	0.53	2.6

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:20	Field Blank	Pesticides	Molinate	0.26 U	ng/L	0.26	1.3
6/3/2024 12:20	Field Blank	Pesticides	Norflurazon	1.1 U	ng/L	1.1	5.3
6/3/2024 12:20	Field Blank	Pesticides	Parathion Methyl	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Fipronil Desulfinyl	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Flumioxazin	3.2 U	ng/L	3.2	16
6/3/2024 12:20	Field Blank	Pesticides	Disulfoton	0.63 U	ng/L	0.63	3.2
6/3/2024 12:20	Field Blank	Pesticides	Ethion	0.32 U	ng/L	0.32	1.6
6/3/2024 12:20	Field Blank	Pesticides	Fipronil Sulfone	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Alachlor	0.42 U	ng/L	0.42	2.1
6/3/2024 12:20	Field Blank	Pesticides	Flutolanil	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Fonofos	0.16 U	ng/L	0.16	0.79
6/3/2024 12:20	Field Blank	Pesticides	Oxyfluorfen	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Pendimethalin	1.8 U	ng/L	1.8	9.0
6/3/2024 12:20	Field Blank	Pesticides	Phorate	0.26 U	ng/L	0.26	1.3
6/3/2024 12:20	Field Blank	Pesticides	Pronamide	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Pyriproxyfen	0.26 U	ng/L	0.26	1.7
6/3/2024 12:20	Field Blank	Pesticides	Tebuconazole	1.5 U	ng/L	1.5	7.4
6/3/2024 12:20	Field Blank	Pesticides	Terbuthylazine	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Fenbuconazole	0.53 U	ng/L	0.53	2.6
6/3/2024 12:20	Field Blank	Pesticides	Fluazifop-P-butyl	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Fludioxonil	0.11 U	ng/L	0.11	0.53
6/3/2024 12:20	Field Blank	Pesticides	Atrazine	0.21 U	ng/L	0.21	1.1
6/3/2024 12:20	Field Blank	Pesticides	Azinphos Methyl	3.2 U	ng/L	3.2	16
6/3/2024 12:20	Field Blank	Pesticides	Azoxystrobin	0.42 U	ng/L	0.42	2.1
6/3/2024 12:20	Field Blank	Pesticides	Caffeine	14 I	ng/L	7.9	40
6/3/2024 12:20	Field Blank	Pesticides	Carbophenothion	0.53 U	ng/L	0.53	2.6
6/3/2024 12:20	Field Blank	Pesticides	Imazalil	0.69 U	ng/L	0.69	3.4
6/3/2024 12:20	Field Blank	Pesticides	Parathion Ethyl	0.16 U	ng/L	0.16	0.79
6/3/2024 12:20	Field Blank	Pesticides	Ibuprofen	0.080 U	µg/L	0.080	0.32
6/3/2024 12:20	Field Blank	Pesticides	Difenoconazole	0.63 U	ng/L	0.63	3.2
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Carbon tetrachloride	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Trichlorofluoromethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,3-Dichlorobenzene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,4-Dichlorobenzene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Bromodichloromethane	0.20 U	µg/L	0.20	0.80

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Dibromochloromethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Ethylbenzene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Vinyl chloride	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,1,2-Trichloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Chloroethane	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	m,p-Xylene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,2-Dichloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	cis-1,3-Dichloropropene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Toluene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,1-Dichloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,1,1-Trichloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,2-Dichlorobenzene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Bromomethane	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Chloroform	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Methylene chloride	1.0 U	µg/L	1.0	4.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	o-Xylene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Trichloroethene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,1-Dichloroethene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Chlorobenzene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	TRPH	0.63 U	mg/L	0.63	2.5
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,2-Dichloropropane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Benzene	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Bromoform	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Chloromethane	2.0 U	µg/L	2.0	8.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	trans-1,3-Dichloropropene	0.50 U	µg/L	0.50	2.0
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	1,1,2,2-Tetrachloroethane	0.20 U	µg/L	0.20	0.80
6/3/2024 12:20	Field Blank	Priority Organic Pollutants	Tetrachloroethene	0.20 U	µg/L	0.20	0.80
6/3/2024 11:00	Effluent Comp	Overflow	Carbonaceous Biochemical Oxygen Demand	21 JV	mg/L	2.0	2.0
6/3/2024 11:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, IC25	85.1	IC25		
6/3/2024 11:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, NOEC	100	NOEC		
6/3/2024 11:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, IC25	100 L	IC25		
6/3/2024 11:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, NOEC	50.0	NOEC		
6/3/2024 11:00	Effluent Comp	Metals	Lead	0.20 U	µg/L	0.20	0.40
6/3/2024 11:00	Effluent Comp	Metals	Iron	60 I	µg/L	30	120
6/3/2024 11:00	Effluent Comp	Metals	Copper	2.28	µg/L	0.40	0.80

Date_Sampled	Site ID	Analysis Group	Component	Result	Unit	MDL	PQL
6/3/2024 11:00	Effluent Comp	Metals	Nickel	5.3	µg/L	0.50	2.0
6/3/2024 11:00	Effluent Comp	Nutrients	TSS	6 I	mg/L	2.0	10
6/3/2024 11:00	Effluent Comp	Nutrients	Kjeldahl Nitrogen	9.6	mg N/L	0.80	2.0
6/3/2024 11:00	Effluent Comp	Nutrients	O-Phosphate-P	0.90	mg P/L	0.080	0.20
6/3/2024 11:00	Effluent Comp	Nutrients	NO2NO3-N	0.10	mg N/L	0.0040	0.010
6/3/2024 11:00	Effluent Comp	Nutrients	Ammonia-N	7.7	mg N/L	0.20	0.50
6/3/2024 11:00	Effluent Comp	Nutrients	Total-P	1.1	mg P/L	0.050	0.25
6/3/2024 11:00	Effluent Comp	Overflow	MBAS	0.11	mg/l LAS	0.067	0.10
5/6/2024 11:30	Equipment Blank	Metals	Iron	30 U	µg/L	30	120
5/6/2024 11:30	Equipment Blank	Metals	Copper	0.40 U	µg/L	0.40	0.80
5/6/2024 11:30	Equipment Blank	Metals	Lead	0.20 U	µg/L	0.20	0.40
5/6/2024 11:30	Equipment Blank	Metals	Nickel	0.50 U	µg/L	0.50	2.0
5/6/2024 11:30	Equipment Blank	Nutrients	Total-P	0.004 IY	mg P/L	0.0020	0.0050
5/6/2024 11:30	Equipment Blank	Nutrients	NO2NO3-N	0.030 Y	mg N/L	0.0040	0.010
5/6/2024 11:30	Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.080 UY	mg N/L	0.080	0.20
5/6/2024 11:30	Equipment Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.0040	0.010
5/6/2024 11:30	Equipment Blank	Nutrients	Ammonia-N	0.008 Y	mg N/L	0.0020	0.0050