Effluent Quality Assessment of CSX Transportation Inc. – Winston Yard Polk County NPDES # FL0032581 Sampled March 30, 2021

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

Oils and Greases detected in the effluent grab sample exceeded the Class III Water Quality Criterion for Fresh Waters (Subsection 62-302.530(50)(a), F.A.C.) and effluent permit limit. Oils and greases were also detected in the field blank between the method detection limit (MDL) and the practical quantitation limit (PQL). For comparative purposes only, the effluent grab single sample value for total phosphorus was greater than the West Central Numeric Nutrient Criteria (NNC) annual geometric mean value for the region. All other analytes complied with Class III Water Quality Criteria for Fresh Waters and effluent permit limits.

Facility Overview

The CSX Transportation Inc. – Winston Yard Facility is an industrial wastewater facility. A Facility Summary, including a description of the facility, summary of permit limits, and any relevant Administrative Order (AO), Consent Order (CO), and Discharge Monitoring Report (DMR) information is provided in Appendix A. The effluent is intermittently discharged based on rainfall into Winston Creek, a Class III Fresh Water [waterbody identification (WBID) 1543A] (Figure 1).

Winston Creek falls within the West Central Nutrient Watershed Region for Numeric Nutrient Criteria (NNC). For this region, the NNC, expressed as annual geometric means, are 0.49 mg/L total phosphorus and 1.65 mg/L total nitrogen (Paragraph 62-302.531(2)(c), F.A.C.). Winston Creek falls within the Peninsula bioregion; the daily average dissolved oxygen (DO) saturation shall not be below 38 percent in more than 10 percent of the values (Paragraph 62-302.533(1)(a), F.A.C.). This FYI event only provides single sample results. It should be noted that waterbody impairment assessments are based on longer-term data, and individual exceedances of a criterion do not indicate use impairment. http://ca.dep.state.fl.us/mapdirect/?focus=nutrientcriteria

Methods

Effluent samples were taken as grab samples from monitoring site location EFF-002 (Effluent from wetland cell) for outfall D-002 on March 30, 2021 (Figure 1). The permit requires chronic whole effluent toxicity testing however, acute definitive tests were scheduled and performed.

Samples were collected by Emily Larson, Margert Dorge, and Lance Kautz (DEP Southwest District Office). Analyses were performed by Eurofins Test America Laboratories in Tampa, Florida Department of Health in Tampa, 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 Rule 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.

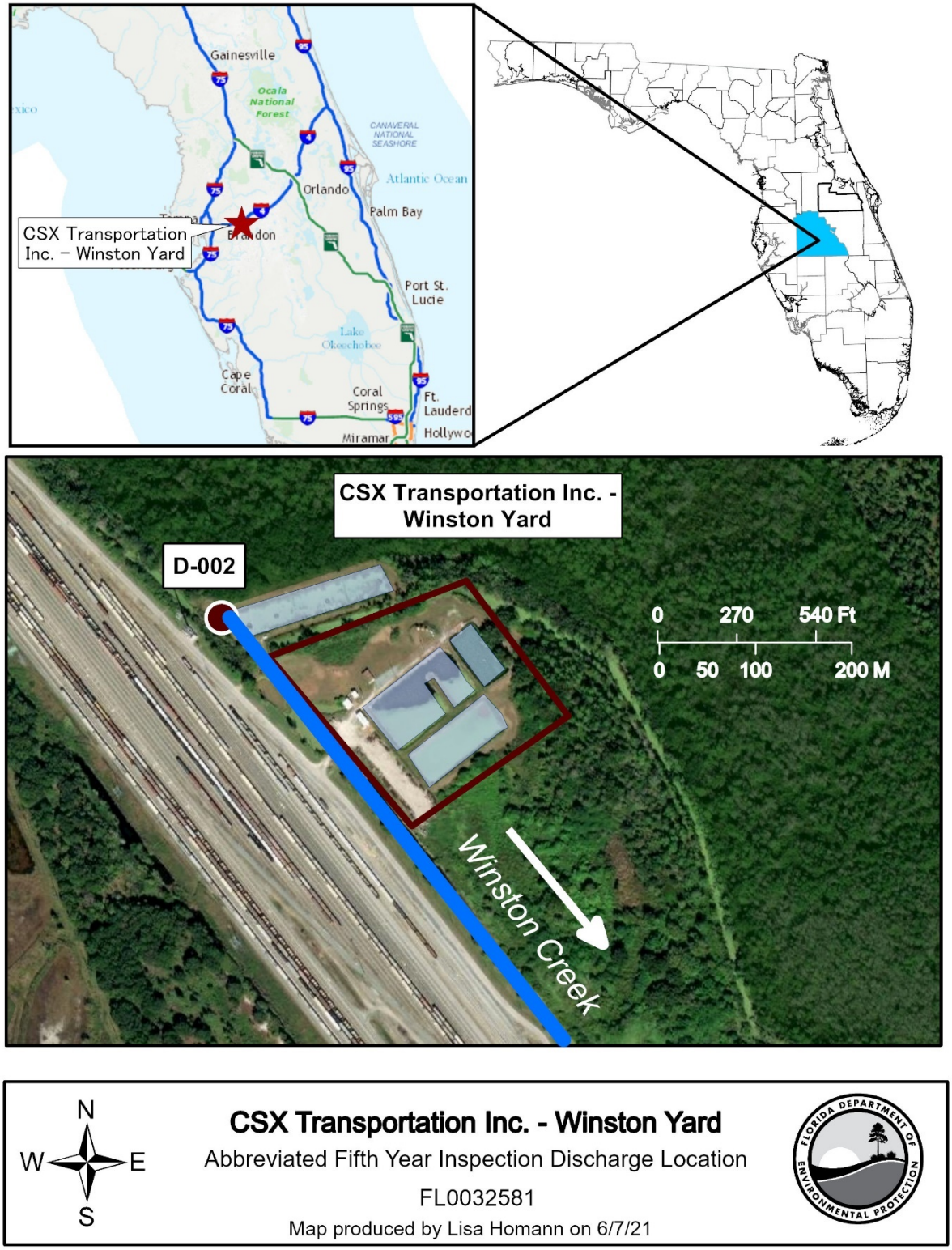


Figure 1. Map of Facility and Discharge Location

Results

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

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

Analytical Water Chemistry (See Table 2 and Appendix D)

- Oils and Greases detected in the effluent grab sample exceeded the Class III Water Quality Criterion for Fresh Waters (Subsection 62-302.530(50)(a), F.A.C.) and effluent permit limits. Oils and Greases was detected in the field blank between the MDL and PQL.

- For comparative purposes only, the effluent grab single sample value for total phosphorus was greater than the West Central Numeric Nutrient Criteria (NNC) annual geometric mean value for the region.

Microbiology (See Table 2 and Appendix B)

- Enterococci and fecal coliform were detected in the effluent grab sample. There are no Class III Water Quality Criteria for Fresh Waters or effluent permit limits for these fecal indicator bacteria.

Toxicity Whole Effluent Test (See Table 2)

- Tests were performed March 31, 2021 through April 4, 2021.

- The sample was aerated for 10 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.4 mg/L to 8.5 mg/L.

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

- For the 96-hour acute definitive test, the calculated LC50 for the water flea, *Ceriodaphnia dubia*, was >100% effluent with 5% mortality in 100% sample. The result was J qualified due to the test exceeding the acceptable temperature range. The calculated LC50 for the fish, *Pimephales promales*, was >100% effluent with 0% mortality in 100% sample. The effluent sample was not toxic to either test species during the 96-hour acute definitive bioassays. The chronic whole effluent toxicity test required in the permit was not performed.

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

Metals (See Table 3 and Appendix D)

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

Algal Growth Potential (See Table 4 and Appendix B)

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

- The effluent grab sample AGP result of 7.55 mg dry wt/L is within the AGP range (6.10 to 20.0 mg dry wt/L) suggested to be representative of high productivity for freshwater (Miller et al. 1978).

- Differences greater than an order of magnitude between actual and predicted AGP values are considered sufficient evidence to warrant follow up testing with the algal growth inhibition bioassay. True algal growth inhibition can only be determined by performing an actual algal growth inhibition test. Should algal growth inhibition be suspected, the district should request that the algal growth inhibition test be performed as a follow-up to the inspection.

Organic Constituents (See Table 7 and Appendix D)

- Atrazine, atrazine desethyl, bromacil, flutolanil, hexazinone, and metolachlor were detected in the effluent grab sample. Dithiopyr and oxadiazon were detected in both sample and method blank.

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

- There are no effluent permit limits for organic constituents.

Literature Cited

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

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

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

Table 1. Measured field parameters

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

Parameter	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Sample Depth	ft	-	-	1
Temperature	C	-	Report	25.1
pH	SU	6.0 - 8.5	6.0-8.5	7.5
Specific Conductance	µmhos/cm	≤ 1,275	≤ 1,275	516
Salinity	ppt	-	-	0.3
Dissolved Oxygen	% saturation	≥ 38	≥ 38	82.1

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

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

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

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Ortho-phosphate	mg P/L	-	-	1.3
Total Phosphorus	mg P/L	≤ 0.49 g	Report	1.5
Total Ammonia	mg N/L	≤ 2.57 s c	≤ 2.57 s c	0.032
Un-ionized Ammonia (calculated salinity)	mg N/L	-	-	< 0.02 c
Nitrate and Nitrite	mg N/L	-	≤ 5.5	0.01 I
Total Kjeldahl Nitrogen	mg N/L	-	≤ 11.0	1.3
Organic Nitrogen	mg N/L	-	-	1.3 c
Total Nitrogen	mg N/L	≤ 1.65 g	Report	1.3 c
Total Organic Carbon	mg C/L	-	-	18
Chlorophyll *a* - Corrected	µg/L	-	-	12
Phaeophytin	µg/L	-	-	5.5
CBOD, 5 day, N - inhibited	mg/L	-	-	2.0 U
Total Suspended Solids	mg/L	-	≤ 45.0	4 IA
Turbidity	NTU	≤ 29 t	≤ 29	5.0 A
Color (true)	PCU	-	-	75 A
Alkalinity	mg CaCO3/L	≥ 20	-	104
Chloride	mg Cl/L	-	Report	12
Fluoride	mg F/L	≤ 10.0	≤ 10.0	0.71
Sulfate	mg SO4/L	-	Report	130
Oils and Greases [1]	mg/L	≤ 5.0	≤ 5.0	16.4 e
Alpha, Total	pCi/L	≤ 15	≤ 15	2.74 U
Alpha-Counting Error	pCi/L	-	-	1.23
Fecal Coliforms	cfu/100 mL	-	-	4 B
Enterococci	cfu/100 mL	-	-	118
Bioassay - Water flea *(Ceriodaphnia dubia)*	% effluent	-	> 100	> 100 J
Bioassay - Fish *(Pimephales promelas)*	% effluent	-	> 100	> 100

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

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

c - Value is calculated

g - Value expressed as an annual geometric mean

s - Single sample

t - Shall not exceed 29 NTUs above background

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

B - Results based on colony counts outside the acceptance range

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

J - Estimated value

U - Material analyzed for but not detected; value reported is the method detection limit
1 - Analyte detected in the field blank at 1.9 I mg/L

Table 3. Analytical metals data

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

Analyte	Units	Effluent Grab Class III Criteria	Effluent Permit Limits	Effluent Grab
Hardness	mg CaCO3/L	-	Report	236 c
Aluminum	µg/L	-	Report	167
Arsenic	µg/L	≤ 50	≤ 50	7.31
Cadmium	µg/L	≤ 0.511 b	-	0.020 U
Calcium	mg/L	-	-	65.3
Chromium, Total [2]	µg/L	≤ 174 b	-	0.40 U
Copper	µg/L	≤ 19.4 b	-	0.40 U
Iron	µg/L	≤ 1,000	≤ 1,000	53 I
Lead	µg/L	≤ 9.47 b	-	0.20 U
Magnesium	mg/L	-	-	17.6
Nickel	µg/L	≤ 108 b	-	0.50 U
Potassium	mg/L	-	-	10.6
Selenium	µg/L	≤ 5.0	-	0.20 U
Silver	µg/L	≤ 0.07	-	0.010 U
Sodium	mg/L	-	Report	12.6
Zinc	µg/L	≤ 248 b	-	5.0 U
Manganese	µg/L	-	Report	41.8

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
b - Value is calculated based on hardness, (62-302.530(3))
c - Value is calculated
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
U - Material analyzed for but not detected; value reported is the method detection limit
2 - Class III Freshwater Quality Criterion (62-302.530(19)(a), F.A.C.) is for chromium-III

Table 4. Algal Growth Potential (AGP)

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

Location	Test Species	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Predicted AGP (TN) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent Grab	*Pseudokirchneriella subcapitata*	7.55 A	1.6 ± 0.3	559 ± 111.8	49.8 ± 10	645 ± 129	0	0.9

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

Table 5. Detected Organic Constituents

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

Analyte	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Atrazine	ng/L	-	-	4.8
Atrazine Desethyl	ng/L	-	-	2.2 I
Bromacil	ng/L	-	-	3.6
Dithiopyr	ng/L	-	-	0.19 IV
Flutolanil	ng/L	-	-	0.11 I
Hexazinone	ng/L	-	-	23
Metolachlor	ng/L	-	-	0.43 I
Oxadiazon [3]	ng/L	-	-	2.7 VJ

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J - Estimated value
V - Analyte was detected in both sample and method blank
3 - Analyte detected in the field blank at 0.35 IVQ ng/L

Appendix A. Facility Summary

PART I: Information gathered prior to sampling event	
Prepared By: Lance Kautz	**Contact Number:** (813) 470-5903
Facility Name (as it appears on permit): CSX Transportation Inc. – Winston Yard	**Former Names:** N/A
NPDES Permit Number: FL0032581	**Permit Expiration Date:** June 25, 2024
Physical Address: 1700 Wilkinson Rd. Lakeland Fl. 33803	
District: Southwest	**County:** Polk
Function of Facility: Railroad Terminal	
Facility Type: Industrial Wastewater	**Permitted Capacity (MGD):** N/A
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): D-002: 0.14mgd	
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):

Surface Water Sample Locations EFF-002 (D-006/D-002)

Monitoring Site Number	Description of Monitoring Site
OTH-001	Rain gauge located on site
FLW-002	Continuous electronic water level recorder for measuring flow out of the treatment wetlands
FLW-005	Staff gauge used to measure flow at emergency overflow from the Nugget Watershed
FLW-006	Continuous electronic water level recorder for measuring flow from the emergency overflow from the Industrial Activity Watershed
EFF-002	Effluent from wetland cell
EFF-005	Emergency overflow from Nugget Watershed
EFF-006	Emergency overflow from the Industrial Activity Watershed
OTH-SUM	Total nitrogen loading from EFF-002, EFF-005, and EFF-006

Description of Permitted Outfall(s):

Surface Water Discharge D-002: An existing permitted discharge to a ditch that ultimately discharges to Winston Creek, Class III Fresh Waters, (WBID# 1543A). The point of discharge is located approximately at latitude 28°0' 57" N, longitude 81°59' 58" W.

Surface Water Discharge D-005: An existing permitted discharge to a ditch that ultimately discharges to Winston Creek, Class III Fresh Waters, (WBID# 1543A). The point of discharge is located approximately at latitude 28°0' 56" N, longitude 81°59' 56" W.

Surface Water Discharge D-006: An existing permitted discharge to a ditch that ultimately discharges to Winston Creek, Class III Fresh Waters, (WBID# 1543A). The point of discharge is located approximately at latitude 28°0' 55" N, longitude 81°59' 56" W.

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

FACILITY DESCRIPTION:

The facility operates a railroad terminal that includes fueling and servicing locomotives as well as switching railcars to classify freight. In addition to the railroad operations, there is a former land spread area, also known as the Nugget, where the washings from former car cleaning operations were land spread in the former strip mine area. For the purposes of this permit, the facility will be divided into two entities referenced as the *Industrial Activity Watershed* and the *Nugget Watershed,* respectively.

WASTEWATER TREATMENT:

Industrial Activity Watershed:

Due to the railroad exemption, only the areas where locomotive fueling and servicing occur are subject to storm water management. The storm water from these areas is segregated and managed through a series of drains leading to a 200,000 gallon above-ground storage tank. Prior to discharge to the City of Lakeland's Publicly Owned Treatment Works (POTW), the water is sent through an above-ground oil water separator.

The water in the industrial ditch is solely composed of storm water from the tracks to the west and storm water from the western half of the Nugget to the east. The water in this ditch can either be stored and evaporated or discharged to the POTW. In the event water cannot be discharged to the POTW and there is no additional storage capacity in the existing storage ponds on site, water will discharge through an emergency outfall, D-006.

Nugget Watershed:

Approximately half of the storm water and groundwater from the Nugget drainage basin is managed through the industrial ditch. The remainder of the drainage will be managed through an engineered wetland treatment cell. The engineered wetland is designed to manage groundwater discharging into the ditch system surrounding the Nugget and surface water runoff from the Nugget watershed. The system includes the surface water conveyance system between the upstream reaches of the watershed between weir 3 and an overflow structure, D-005. An inlet structure (I-001) transfers water from the conveyance ditch system to the treatment wetlands. The wetland treatment consists of one one-acre treatment cell. The inlet structure is designed to provide a minimum retention time of 7 days for a 25-year, 24-hour storm event. In the event that water collected and stored in the ditch is at a stage that will prevent a residence time of less than 7 days it will bypass the wetland treatment system and discharge at the emergency overflow structure D-005. The effluent from the treatment wetlands is discharged through Outfall D-002. The treatment wetland system is designed to reduce the concentrations of nitrogen, phosphorous, and suspended solids. The removal mechanisms for each of these constituents include the following:

Suspended Solids	Sedimentation in the surface water conveyance system and sedimentation/filtration in the constructed wetland
Nitrogen	Microbial denitrification and plant uptake
Phosphorous	Adsorption with suspended solids and plant uptake

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 Number	Notes
Rainfall	in	Max Max	Report Report	Daily Maximum Monthly Total	Daily; 24 hours	Gauge	OTH-001	
Flow	MGD	Max Max	Report Report	Monthly Average Daily Maximum	Daily; 24 hours	Calculated	FLW-002 FLW-005 FLW-006	
Nitrogen, Total	ton/yr	Max	3.0	Annual Total	Monthly	Calculated	OTH-SUM	See I.A.8
Nitrogen, Total	ton/mth	Max	Report	Monthly Total	Monthly	Calculated	EFF-002 EFF-005 EFF-006 OTH-SUM	See I.A.8
Nitrogen, Total	ton/yr	Max	3.0	Annual Average (5 yr. average)	Monthly	Calculated	OTH-SUM	See I.A.8
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	See I.A.6
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Monthly Average	Monthly	Calculated	EFF-002 EFF-005 EFF-006	See I.A.6
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Monthly Average	Monthly	Calculated	EFF-002 EFF-005 EFF-006	See I.A.6
Nitrogen, Ammonia, Total (as N)	mg/L	Max	0.0	Maximum	Monthly	Calculated	EFF-002 EFF-005 EFF-006	See I.A.6
Nitrogen, Ammonia, Total (as N)	Ratio	Max	2.5	Maximum	Monthly	Calculated	EFF-002 EFF-005 EFF-006	See I.A.6

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Oxygen, Dissolved Percent Saturation	percent	Min	38	Daily Minimum	Monthly	Calculated	EFF-002 EFF-005 EFF-006	See I.A.7
Oxygen, Dissolved (DO)	mg/L	Min	Report	Daily Minimum	Monthly	In Situ	EFF-002 EFF-005 EFF-006	See I.A.7
pH	s.u.	Max Min	8.5 6.0	Daily Maximum Daily Minimum	Monthly	In Situ	EFF-002 EFF-005 EFF-006	See I.A.6
Specific Conductance	umhos/cm	Max	1275	Daily Maximum	Monthly	In Situ	EFF-002 EFF-005 EFF-006	
Temperature (C), Water	Deg C	Max	Report	Daily Maximum	Monthly	In Situ	EFF-002 EFF-005 EFF-006	See I.A.7
Turbidity	NTU	Max	29	Daily Maximum	Monthly	In Situ	EFF-002 EFF-005 EFF-006	
Alpha, Gross Particle Activity	pCi/L	Max	15	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Aluminum, Total Recoverable	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Arsenic, Total Recoverable	µg/L	Max	50	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Chloride (as Cl)	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Fluoride, Total (as F)	mg/L	Max	10.0	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Hardness, Total (as CaCO3)	mg/L	Max	Report	Single Sample	Monthly	Grab	EFF-002 EFF-005 EFF-006	

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Iron, Total Recoverable	mg/L	Max	1.0	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Lead, Total Recoverable	µg/L	Max	-	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	See I.A.4
Manganese, Total Recoverable	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	5.5	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	11.0	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Nitrogen, Nitrate, Total (as N)	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Oil and Grease	mg/L	Max	5.0	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Phosphorus, Total (as P)	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Sodium, Total Recoverable	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Solids, Total Suspended	mg/L	Max	45.0	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Sulfate, Total	mg/L	Max	Report	Daily Maximum	Monthly	Grab	EFF-002 EFF-005 EFF-006	
Chronic Whole Effluent Toxicity, 7-Day IC25 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Quarterly	Grab	EFF-002 EFF-005 EFF-006	See I.A.5

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas)	percent	Min	100	Single Sample	Quarterly	Grab	EFF-002 EFF-005 EFF-006	See I.A.5

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Winston Creek	Class III fresh waters (WBID No. 1543A)

1. The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-002.

   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. [Rule 62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]

   b. Monitoring Frequency
      (1) Routine toxicity tests shall be conducted once every three months, the first starting within 60 days of the effective date of this permit and lasting for the duration of this permit.
      (2) Upon completion of four consecutive, valid routine tests that demonstrate compliance with the effluent limitation in I.A.5.a.(1) above, the permittee may submit a written request to the Department for a reduction in monitoring frequency to once every six months. The request shall include a summary of the data and the complete bioassay laboratory reports for each test used to demonstrate compliance. The Department shall act on the request within 45 days of receipt. Reductions in monitoring shall only become effective upon the Department's written confirmation that the facility has completed four consecutive valid routine tests that demonstrate compliance with the effluent limitation in I.A.5.a.(1) above.
      (3) If a test within the sequence of the four is deemed invalid based on the acceptance criteria in EPA-821-R-02-013, but is replaced by a repeat valid test initiated within 21 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive valid tests for the purpose of evaluating the reduction of monitoring frequency.

   c. Sampling Requirements
      (1) For each routine test or additional follow-up test conducted, a total of three grab samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.
      (2) The first sample shall be used to initiate the test. The remaining two samples shall be collected according to the protocol and used as renewal solutions on Day 3 (48 hours) and Day 5 (96 hours) of the test.
      (3) Samples for routine and additional follow-up tests shall not be collected on the same day.

   d. Test Requirements
      (1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: **100%**, **50%**, **25%**, **12.5%**, and **6.25%** final effluent.
      (2) The permittee shall conduct a daphnid, **Ceriodaphnia dubia**, Survival and Reproduction Test and a fathead minnow, **Pimephales**

promelas, Larval Survival and Growth Test, concurrently.

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

(4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.2.3.

e. Quality Assurance Requirements

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

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

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

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

f. Reporting Requirements

(1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:

(a) Routine and Additional Follow-up Test Results: The calculated IC25 for each test species shall be entered on the DMR.

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

(3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-013, Section 10, and 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 sent to:
Florida Department of Environmental Protection
Southwest District Office
13051 N Telecom Pkwy
Temple Terrace, Florida 33637-0926
Email: swd_iw@dep.state.fl.us

g. Test Failures
   (1) A test fails when the test results do not meet the limits in I.A.5.a.(1).
   (2) Additional Follow-up Tests:
      (a) If a routine test does not meet the chronic toxicity limitation in I.A.5.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with I.A.5.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 (0% effluent) are run. All test results shall be analyzed according to the procedures in EPA-821-R-02-013.
   (3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.
      (a) The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.
      (b) The Department shall review and approve the plan before initiation.
      (c) The plan shall be initiated within 30 days following the Department's written approval of the plan.
      (d) Progress reports shall be submitted quarterly to the Department at the address above.
      (e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 5.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 I.A.5.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.
      (f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in I.A.5.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. 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, 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 I.A.5.(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.):
N/A

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

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

Monitoring Site	Date	Monitoring	Description	Result	Limit	Units	Statistical Base
D-001	01/31/2021	EFD-01	Dibromochloromethane	58.6	56.0	µg/L	AB-Annual Average
D-001	12/31/2020	EFD-01	Dibromochloromethane	59.5	56.0	µg/L	AB-Annual Average
D-001		EFD-01	Dibromochloromethane	58.9	56.0	µg/L	AB-Annual Average
D-001		EFD-01	Dibromochloromethane	58.3	56.0	µg/L	AB-Annual Average
D-001		EFD-01	Dibromochloromethane	56.5	56.0	µg/L	AB-Annual Average

Describe previous FYI and WQBEL study:
N/A

Describe previous or current Enforcement Actions (including WLs):

N/A

Describe any violations or problems noted in previous inspection:

9.1 Deficiency: A review of the Discharge Monitoring Reports revealed the following exceedances during the review period.

Outfall D-002 Toxicity Failures

Monitoring Period	Toxicity Parameter	Result
11/30/2017	**IC25 Statre 7day Chr Ceriodaphnia**	**71.9% Failure**
12/05/2017	**IC25 Statre 7day Chr Ceriodaphnia**	**100% Pass**
12/12/2015	**IC25 Statre 7Day Chr Pimephales**	**100% Pass**

Rule/Permit Reference: Permit condition I.A.1. and I.A.5. Effluent Limitations and Monitoring Requirements.
Corrective Action: The facility failed a routine toxicity test on 11/30/2017.As required by the permit two additional tests were conducted, on 12/05/2017 and on 12/12/2017. Both additional test had passing scores as required by permit, no additional monitoring is required.

Discuss whether DMR trends within previous five years are improving or declining:
The facility effluent trends seem steady with Toxicity failures most years.

3/31/2020	EFF-002	R		P TRP6C	IC25 Statre 7Day Chr Pimephales		4.69	100.0	percent	ME - Minimum
2/29/2020	EFF-002	Q		P TRP6C	IC25 Statre 7Day Chr Pimephales		4.09	100.0	percent	ME - Minimum
1/31/2020	EFF-002	P		P TRP6C	IC25 Statre 7Day Chr Pimephales		63.77	100.0	percent	ME - Minimum
9/30/2018	EFF-002	P		P TRP3B	IC25 Statre 7day Chr Ceriodaphnia		62.34	100.0	percent	ME - Minimum
9/30/2018	EFF-002	P		P TRP6C	IC25 Statre 7Day Chr Pimephales		78.53	100.0	percent	ME - Minimum
8/31/2018	EFF-002	1		P 00612	Nitrogen, Ammonia, Total unionized (as N)		0.041189	0.02	mg/L	DD - Daily Maximum
7/31/2018	EFF-002	Q		P TRP3B	IC25 Statre 7day Chr Ceriodaphnia		88.3	100.0	percent	ME - Minimum
7/31/2018	EFF-002	R		P TRP3B	IC25 Statre 7day Chr Ceriodaphnia		17.5	100.0	percent	ME - Minimum
6/30/2018	EFF-002	P		P TRP3B	IC25 Statre 7day Chr Ceriodaphnia		22.2	100.0	percent	ME - Minimum

11/30/2017	EFF-002	P		P TRP3B	IC25 Statre 7day Chr Ceriodaphnia		71.9	100.0	percent	ME - Minimum
6/30/2016	EFF-002	1		P 00070	Turbidity		39.4	29.0	NTU	DD - Daily Maximum
4/30/2016	EFF-002	P		P TRP6C	IC25 Statre 7Day Chr Pimephales		48.8	100.0	percent	ME - Minimum

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 (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.

- **Algal Growth Potential (AGP)**

  The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. AGP results within the range 6.10 to 20.0 mg dry wt/L are suggested to be representative of high productivity for freshwaters (Miller et al. 1978). High AGP values may constitute exceedances of Subsection 62-302.530(47), F.A.C., Paragraph 62-302.530(48)(a), F.A.C. and/or Paragraph 62-302.530(48)(b), F.A.C.

  The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of ± 20%. When the ratio of nitrogen to phosphorus (N: P) is less than 10:1, nitrogen limitation of algal production is likely. When the N: P ratio is 20:1 or greater,

phosphorus limitation is likely (USEPA 2000). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedance of Subsection 62-302.530(62), F.A.C.

- **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-2021-03-15-13

FYI3 FL0032581 Csx Transportation - Winston Yard Sampling Inspection

Customer: SW-DIST

Project ID: FYI3

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Page 1 of 4

last revised Jan 25, 2018

Requester: Elaine Ignacio

Collected By: E. Isom, M. Dorgo, L. Rautz

Field Report Prepared By: Lance Kautz

Sampling Agency: FDEP - SWP

Location: D-002	☐ Comp ☒ Grab	Collection (comp begin or grab) Date: 3/30/21 Time: 1035	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2): A					
Field ID: CSX-Winston Effluent	Matrix (type, e.g., Salt, Fresh, etc): Fresh			Diss. Oxygen: 82.1	☐ mg/L ☒ % sat	Total Res. Chlorine (mg/L): N/A					
WIN/STORET#:	Temp (C): 25.1	pH: 7.47		Sample Depth: 1	☒ ft ☐ m	Sp. Conductance (umho/cm): 516					
Latitude: ☐ dd ☐ dms	Longitude: ☐ dd ☐ dms	Salinity (ppt): 0.25	Comments: 1 Bottle recived w/ Broken Lid								
Location:	☐ Comp ☒ Grab	Collection (comp begin or grab) Date: 3/30/21 Time: 1015	Eastern Central	Composite end Date	Time	Bottle Group(s): B					
Field ID: Field Blank	Matrix (type, e.g., Salt, Fresh, etc): Fresh			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: Wrong preservative used on one Bottle								
Location: D-002	☐ Comp ☒ Grab	Collection (comp begin or grab) Date: 3/30/21 Time: 1035	Eastern Central	Composite end Date	Time	Bottle Group(s): C					
Field ID: ~~D-002~~ CSX-Winston Effluent	Matrix (type, e.g., Salt, Fresh, etc): Fresh			Diss. Oxygen: 82.1	☐ mg/L ☒ % sat	Total Res. Chlorine (mg/L): N/A					
WIN/STORET #:	Temp (C): 25.1	pH: 7.47		Sample Depth: 1	☒ ft ☐ m	Sp. Conductance (umho/cm): 516					
Latitude: ☐ dd ☐ dms	Longitude: ☐ dd ☐ dms	Salinity (ppt): 0.25	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
Lance Rautz	3/30/21 5:00pm	FEDEX	5	Tyler Reynolds	03/31/2021 @ 9:30

Mission:
To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.

Florida HEALTH

Vision: To be the **Healthiest State** in the Nation

DRINKING WATER ENVIRONMENTAL MICROBIOLOGY CHAIN OF CUSTODY FORM

System Name:				Collector: Lance Kautz	
				Transporter: Lance Kautz	
Station #	**Location**	**Date**	**Time**	**Sample Type**	**Analysis Required**
D-002	CSX - Winston Yard	3/30/21	1035	IRW - Effluent	FC/ENT

Relinquished by: Lance Kautz	Received by: Seema Soni	3/30/21 Date	2:00pm Time

Method of shipment:

Stored in Refrigerator S/N:	Date and Beginning Time	Date and End Time
Tech: Seema Soni	3/30/21 1:18PM	3/31/21 1:00 PM
Set up by: Seema Soni		
Incubator S/N: 2001883/60101232		
Ready By: Seema Soni	~~3/30~~ 3/31/21 SS 12:50PM	3/31/21 1:05 PM
Reported By Seema Soni		
Approved by [illegible]		3/31/21 2:36PM

BOL-T EM007 (8/30)
Review 9/10/20

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

Contract Manager: Trenetta Wilson/Magan Bowden (850) 245-8084/ (850) 245-8095
2600 Blair Stone Rd., MS 6512
Tallahassee, FL 32399-2400

Contractor: Eurofins/TestAmerica Laboratories, Inc
5102 LaRoche Ave
Savannah, GA 31404
ATTN: Noel Savoie

160-41604 Chain of Custody

DEP Approval By: Trenetta L. Brinkley-Wilson Contractor Approval By: Project Manager

Contractor Representatives Contacted: Noel Savoie

Date: 3/30/2021
Means of Contact: Email

Task Assignment Number: OV206 Maximum Cost: **$95.00** Turnaround Time: 10 BD

Sample Delivery Date: 3/31/2021

Project Name/Description:
RQ-2021-03-15-13; SW-DIST-2021-03-31-01; CFYI3 FL0032581 CSX Transportation - Winston; TLH-2021-03-31-05

Deliverable Number/ Parameter Group/	Sample Matrix	# of Samples	# of Containers	DEP ID #	Unit Cost	% Mark-up (if any)	Cost
Method 201/Gross Alpha EPA 900.0	W	1	2 bottles	2234878, ~~2234880~~ (2)	$45.00		$90.00
217/Sample Disposal Fee:		1			$2.50		$5.00
Total Number of Containers Shipped:		2				**Total:**	**$95.00**

QC Instructions:

Comments:

Samples released to Contract Lab by: Date/Time: 03/31/2021 @ 1600

Delivery Method: Hand Delivery

Samples Accepted by: Date/Time 3/31/21 1600

* **Please sign and return by email to** Trenetta.L.Wilson@floridaDEP.gov and Magan.Bowden@dep.state.fl.us

Delivery: fedex Received: Siena Wallin 4/1/21 0925 ET #572

640-Tallahassee

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

680-197012 Chain of Custody

Contract Manager: Trenetta Wilson/Magan Bowden (850) 245-8084/ (850) 245-8095
2600 Blair Stone Rd., MS 6512
Tallahassee, FL 32399-2400

Contractor: Eurofins/TestAmerica Laboratories, Inc
5102 LaRoche Ave
Savannah, GA 31404
ATTN: Noel Savoie

DEP Approval By: Trenetta L. Brinkley-Wilson Contractor Approval By: Project Manager

Contractor Representatives Contacted: Noel Savoie

Date: 3/30/2021
Means of Contact: Email

Task Assignment Number: OV204 Maximum Cost: **$117.00** Turnaround Time: 10 BD

Sample Delivery Date: 3/31/2021

Project Name/Description:
RQ-2021-03-15-13; SW-DIST-2021-03-31-01; CFYI3 FL0032581 CSX Transportation - Winston; TLH-2021-03-31-05

Deliverable Number/ Parameter Group/ Method	**Sample Matrix**	**# of Samples**	**# of Containers**	**DEP ID #**	**Unit Cost**	**% Mark-up (if any)**	**Cost**
173/OV-OILGR-W EPA1664B	W	2	6 bottles	2234879, 2234881	$56.00		$112.00
217/Sample Disposal Fee:	2				$2.50		$5.00
Total Number of Containers Shipped:		6				**Total:**	**$117.00**

QC Instructions:

Comments:

Samples released to Contract Lab by: Date/Time: 03/31/2021 @ 1600

Delivery Method: Hand Delivery

Samples Accepted by: Date/Time 3/31/21 1600
Rel. 3/31/21 1650

* **Please sign and return by email to** Trenetta.L.Wilson@floridaDEP.gov and Magan.Bowden@dep.state.fl.us

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

Contract Manager: Trenetta Wilson/Magan Bowden (850) 245-8084/ (850) 245-8095
2600 Blair Stone Rd., MS 6512
Tallahassee, FL 32399-2400

Contractor: Eurofins/TestAmerica Laboratories, Inc
5102 LaRoche Ave
Savannah, GA 31404
ATTN: Noel Savoie

DEP Approval By: Trenetta L. Brinkley-Wilson Contractor Approval By: Noel Savoie
Project Manager

Contractor Representatives Contacted: Noel Savoie

Date: 3/16/2021
Means of Contact: Email

Task Assignment Number: OV196 Maximum Cost: **$36.25** Turnaround Time: 5 BD

Sample Delivery Date: 3/30/2021

Project Name/Description:
RQ-2021-03-15-13;FYI3 FL0032581_Winston Yard

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	1	1 bottle		$33.75		$33.75
217/Sample Disposal Fee:	1				$2.50		$2.50
Total Number of Containers Shipped:	1					**Total:**	**$36.25**

660-109196 Chain of Custody

Loc: 660
109196

QC Instructions:

Comments: Quote #66015426 - 0

Samples released to Contract Lab by: _____ Date/Time: 3/30/21 5:00pm

Delivery Method: _____Shipping_____

Samples Accepted by: _____ Date/Time 3/31/21 1070

* **Please sign and return by email to** Trenetta.L.Wilson@floridaDEP.gov and Magan.Bowden@dep.state.fl.us

1.6 / .5 cv-09

Request Number: RQ-2021-03-15-13

FYI3 FL0032581 Csx Transportation - Winston Yard Sampling Inspection

Customer: SW-DIST

Project ID: FYI3

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Page 1 of 4

last revised Jan 25, 2018

Requester: Elaine Ignacio

Field Report Prepared By: Lance Kautz

Collected By: E. Larson, M. Dorgo, L. Kautz

Sampling Agency: FDEP-SWD

Location: D-002	☐ Comp ☒ Grab	Collection (comp begin or grab) Date: 3/30/21	Time: 1035	Eastern / Central	Composite end Date	Time	Bottle Group(s) (See pg 2): D				
Field ID: CSX - Winston Effluent	Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen: 82.1	☐ mg/L ☒ % sat	Total Res. Chlorine (mg/L): N/A						
WIN/STORET #	Temp (C): 25.1	pH: 7.47	Sample Depth: 1	☒ ft ☐ m	Sp. Conductance (umho/cm): 516						
Latitude: -:- ☐ dd ☐ dms	Longitude: ☐ dd ☐ dms	Salinity (ppt): 0.25	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
Lance Kautz	3/30/21 5:00p	FEDEX	1		3/31/21 10:10

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4/5/2021

Appendix D. Chemical Analysis of Effluent

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	AGP/LN	Algal Growth Potential	7.55 A	mg DryWt/L	0.300	0.900
3/30/2021 10:35	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	5.5	µg/L	0.90	2.7
3/30/2021 10:35	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	12	µg/L	0.82	2.5
3/30/2021 10:35	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Uncorrected	16	µg/L	0.60	1.8
3/30/2021 10:35	Effluent Grab	Overflow	Fecal Coliforms-Membrane Filter	4 B	cfu/100 mL	2	2
3/30/2021 10:35	Effluent Grab	Overflow	Carbonaceous Biochemical Oxygen Demand	2.0 U	mg/L	2.0	2.0
3/30/2021 10:35	Effluent Grab	Overflow	Enterococci-Membrane Filter	118	cfu/100 mL	2	2
3/30/2021 10:35	Effluent Grab	Toxicology	Bioassay-Acute-Def-FW-C.dubia, LC50	100 LJ	LC50		
3/30/2021 10:35	Effluent Grab	Toxicology	Bioassay-Acute-Def-FW-Fish, LC50	100 L	LC50		
3/30/2021 10:35	Effluent Grab	Metals	Chromium	0.40 U	µg/L	0.40	1.6
3/30/2021 10:35	Effluent Grab	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
3/30/2021 10:35	Effluent Grab	Metals	Lead	0.20 U	µg/L	0.20	0.40
3/30/2021 10:35	Effluent Grab	Metals	Manganese	41.8	µg/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Metals	Magnesium	17.6	mg/L	0.040	0.16
3/30/2021 10:35	Effluent Grab	Metals	Selenium	0.20 U	µg/L	0.20	0.80
3/30/2021 10:35	Effluent Grab	Metals	Calcium	65.3	mg/L	0.075	0.30
3/30/2021 10:35	Effluent Grab	Metals	Iron	53 I	µg/L	30	120
3/30/2021 10:35	Effluent Grab	Metals	Potassium	10.6	mg/L	0.30	1.2
3/30/2021 10:35	Effluent Grab	Metals	Aluminum	167	ug/L	5.0	20
3/30/2021 10:35	Effluent Grab	Metals	Arsenic	7.31	µg/L	0.050	0.20
3/30/2021 10:35	Effluent Grab	Metals	Copper	0.40 U	µg/L	0.40	0.80
3/30/2021 10:35	Effluent Grab	Metals	Nickel	0.50 U	µg/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Metals	Hardness	236	mg/L	0.35	1.4
3/30/2021 10:35	Effluent Grab	Metals	Silver	0.010 U	µg/L	0.010	0.040
3/30/2021 10:35	Effluent Grab	Metals	Sodium	12.6	mg/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Metals	Zinc	5.0 U	µg/L	5.0	20
3/30/2021 10:35	Effluent Grab	Nutrients	Kjeldahl Nitrogen	1.3	mg N/L	0.080	0.20
3/30/2021 10:35	Effluent Grab	Nutrients	Sulfate	130	mg SO4/L	0.40	1.0
3/30/2021 10:35	Effluent Grab	Nutrients	Total-P	1.5	mg P/L	0.0050	0.050
3/30/2021 10:35	Effluent Grab	Nutrients	Organic Carbon	18	mg C/L	0.50	1.0
3/30/2021 10:35	Effluent Grab	Nutrients	TSS	4 IA	mg/L	2.0	10

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	Nutrients	Turbidity	5.0 A	NTU	0.10	0.13
3/30/2021 10:35	Effluent Grab	Nutrients	Chloride	12	mg Cl/L	0.40	1.0
3/30/2021 10:35	Effluent Grab	Nutrients	Ammonia-N	0.032	mg N/L	0.0020	0.0050
3/30/2021 10:35	Effluent Grab	Nutrients	Total Alkalinity	104	mg CaCO3/L	0.65	2.5
3/30/2021 10:35	Effluent Grab	Nutrients	NO2NO3-N	0.01 I	mg N/L	0.0040	0.010
3/30/2021 10:35	Effluent Grab	Nutrients	O-Phosphate-P	1.3	mg P/L	0.040	0.10
3/30/2021 10:35	Effluent Grab	Nutrients	Color (true)	75 A	PCU	2.5	6.0
3/30/2021 10:35	Effluent Grab	Nutrients	Fluoride	0.71	mg F/L	0.035	0.10
3/30/2021 10:35	Effluent Grab	Overflow	Alpha-Counting Error	1.23	pCi/L		
3/30/2021 10:35	Effluent Grab	Overflow	Alpha, Total	2.74 U	pCi/L	2.74	
3/30/2021 10:35	Effluent Grab	Overflow	HEM	16.4	mg/L	1.5	5.3
3/30/2021 10:35	Effluent Grab	Pesticides	Fipronil Desulfinyl	0.12 U	ng/L	0.12	0.50
3/30/2021 10:35	Effluent Grab	Pesticides	Fluazifop-P-butyl	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Metolachlor	0.43 I	ng/L	0.35	1.4
3/30/2021 10:35	Effluent Grab	Pesticides	Norflurazon	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Parathion Ethyl	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Prometon	0.90 U	ng/L	0.90	3.5
3/30/2021 10:35	Effluent Grab	Pesticides	Simazine	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Terbufos	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Ametryn	0.60 U	ng/L	0.60	2.4
3/30/2021 10:35	Effluent Grab	Pesticides	Sucralose	0.025 I	ug/L	0.010	0.040
3/30/2021 10:35	Effluent Grab	Pesticides	Bromacil	3.6	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Demeton	1.5 U	ng/L	1.5	6.0
3/30/2021 10:35	Effluent Grab	Pesticides	Dithiopyr	0.19 IV	ng/L	0.18	0.70
3/30/2021 10:35	Effluent Grab	Pesticides	Fenamiphos	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Flutolanil	0.11 I	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Molinate	0.30 U	ng/L	0.30	1.2
3/30/2021 10:35	Effluent Grab	Pesticides	Myclobutanil	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Oxadiazon	2.7 VJ	ng/L	0.30	1.2
3/30/2021 10:35	Effluent Grab	Pesticides	Prodiamine	0.18 U	ng/L	0.18	0.70
3/30/2021 10:35	Effluent Grab	Pesticides	Sulfentrazone	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Naproxen	0.0080 U	µg/L	0.0080	0.032
3/30/2021 10:35	Effluent Grab	Pesticides	EPTC	1.2 U	ng/L	1.2	5.0
3/30/2021 10:35	Effluent Grab	Pesticides	Ethion	0.15 UJ	ng/L	0.15	0.60

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	Pesticides	Iprodione	0.60 U	ng/L	0.60	2.4
3/30/2021 10:35	Effluent Grab	Pesticides	Mevinphos	1.0 U	ng/L	1.0	4.2
3/30/2021 10:35	Effluent Grab	Pesticides	Prometryn	0.20 U	ng/L	0.20	0.80
3/30/2021 10:35	Effluent Grab	Pesticides	Atrazine	4.8	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Azinphos Methyl	2.0 U	ng/L	2.0	8.0
3/30/2021 10:35	Effluent Grab	Pesticides	Butylate	0.40 U	ng/L	0.40	1.6
3/30/2021 10:35	Effluent Grab	Pesticides	Carbophenothion	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.050 U	ng/L	0.050	0.20
3/30/2021 10:35	Effluent Grab	Pesticides	Dimethenamid	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Disulfoton	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Fipronil	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Fipronil Sulfide	0.15 U	ng/L	0.15	0.60
3/30/2021 10:35	Effluent Grab	Pesticides	Hexazinone	23	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Naled	1.5 U	ng/L	1.5	6.0
3/30/2021 10:35	Effluent Grab	Pesticides	Phorate	0.52 U	ng/L	0.52	2.1
3/30/2021 10:35	Effluent Grab	Pesticides	Pronamide	0.15 U	ng/L	0.15	0.60
3/30/2021 10:35	Effluent Grab	Pesticides	Carfentrazone Ethyl	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Difenoconazole	0.60 U	ng/L	0.60	2.4
3/30/2021 10:35	Effluent Grab	Pesticides	Flumioxazin	1.8 U	ng/L	1.8	7.0
3/30/2021 10:35	Effluent Grab	Pesticides	Malathion	0.35 U	ng/L	0.35	1.4
3/30/2021 10:35	Effluent Grab	Pesticides	Metalaxyl	0.75 U	ng/L	0.75	3.0
3/30/2021 10:35	Effluent Grab	Pesticides	Metribuzin	3.2 U	ng/L	3.2	13
3/30/2021 10:35	Effluent Grab	Pesticides	Oxyfluorfen	0.15 U	ng/L	0.15	0.60
3/30/2021 10:35	Effluent Grab	Pesticides	Pendimethalin	1.0 U	ng/L	1.0	4.0
3/30/2021 10:35	Effluent Grab	Pesticides	Propiconazole	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Terbuthylazine	0.42 U	ng/L	0.42	1.7
3/30/2021 10:35	Effluent Grab	Pesticides	Acetochlor	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Fluxapyroxad	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Imazalil	0.75 U	ng/L	0.75	3.0
3/30/2021 10:35	Effluent Grab	Pesticides	Pyriproxyfen	0.12 U	ng/L	0.12	0.50
3/30/2021 10:35	Effluent Grab	Pesticides	Alachlor	0.25 U	ng/L	0.25	1.0
3/30/2021 10:35	Effluent Grab	Pesticides	Ibuprofen	0.020 U	µg/L	0.020	0.080
3/30/2021 10:35	Effluent Grab	Pesticides	Azoxystrobin	0.50 U	ng/L	0.50	2.0

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	Pesticides	Fludioxonil	0.12 U	ng/L	0.12	0.50
3/30/2021 10:35	Effluent Grab	Pesticides	Fonofos	0.20 U	ng/L	0.20	0.80
3/30/2021 10:35	Effluent Grab	Pesticides	Parathion Methyl	0.55 U	ng/L	0.55	2.2
3/30/2021 10:35	Effluent Grab	Pesticides	Tebuconazole	0.50 U	ng/L	0.50	2.0
3/30/2021 10:35	Effluent Grab	Pesticides	Diazinon	0.12 U	ng/L	0.12	0.50
3/30/2021 10:35	Effluent Grab	Pesticides	Ethoprop	0.10 U	ng/L	0.10	0.40
3/30/2021 10:35	Effluent Grab	Pesticides	Fipronil Sulfone	0.15 U	ng/L	0.15	0.60
3/30/2021 10:35	Effluent Grab	Pesticides	Atrazine Desethyl	2.2 I	ng/L	1.5	6.0
3/30/2021 10:35	Effluent Grab	Pesticides	Caffeine	7.5 U	ng/L	7.5	30
3/30/2021 10:35	Effluent Grab	Pesticides	Cyanazine	3.2 U	ng/L	3.2	13
3/30/2021 10:35	Effluent Grab	Pesticides	Fenbuconazole	0.12 U	ng/L	0.12	0.50
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	0.54 U	µg/L	0.54	2.2
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Pyrene	0.11 U	µg/L	0.11	0.43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	11 U	µg/L	11	43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzidine	11 U	µg/L	11	43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Fluorene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Isophorone	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	11 U	µg/L	11	43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.027 U	µg/L	0.027	0.11

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Anthracene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.11 U	µg/L	0.11	0.43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Phenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.3 U	µg/L	3.3	13
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	5.4 U	µg/L	5.4	22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	1.1 U	µg/L	1.1	4.3
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	2.2 U	µg/L	2.2	8.7
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Chrysene	0.027 U	µg/L	0.027	0.11
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2 U	µg/L	2.2	8.7
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.11 U	µg/L	0.11	0.43
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	2.2 U	µg/L	2.2	8.7
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.22 U	µg/L	0.22	0.87
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.054 U	µg/L	0.054	0.22
3/30/2021 10:35	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	11 U	µg/L	11	43
3/30/2021 10:35	Effluent Grab	Nutrients	Sample Depth	1	ft		
3/30/2021 10:35	Effluent Grab	Nutrients	Specific Conductance	516	umhos/cm		
3/30/2021 10:35	Effluent Grab	Nutrients	Temperature	25.1	C		
3/30/2021 10:35	Effluent Grab	Nutrients	Dissolved Oxygen %Sat	82.1	%Sat		
3/30/2021 10:35	Effluent Grab	Nutrients	Sample Depth	1	ft		

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:35	Effluent Grab	Nutrients	Specific Conductance	516	umhos/cm		
3/30/2021 10:35	Effluent Grab	Nutrients	Dissolved Oxygen %Sat	82.1	%Sat		
3/30/2021 10:35	Effluent Grab	Nutrients	Temperature	25.1	C		
3/30/2021 10:35	Effluent Grab	Nutrients	pH	7.47			
3/30/2021 10:35	Effluent Grab	Nutrients	pH	7.47			
3/30/2021 10:15	Blank	Metals	Magnesium	0.040 U	mg/L	0.040	0.16
3/30/2021 10:15	Blank	Metals	Nickel	0.50 U	µg/L	0.50	2.0
3/30/2021 10:15	Blank	Metals	Copper	0.40 U	µg/L	0.40	0.80
3/30/2021 10:15	Blank	Metals	Chromium	0.40 U	µg/L	0.40	1.6
3/30/2021 10:15	Blank	Metals	Arsenic	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Metals	Hardness	0.35 U	mg/L	0.35	1.4
3/30/2021 10:15	Blank	Metals	Aluminum	5.0 U	µg/L	5.0	20
3/30/2021 10:15	Blank	Metals	Selenium	0.20 U	µg/L	0.20	0.80
3/30/2021 10:15	Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.30
3/30/2021 10:15	Blank	Metals	Silver	0.010 U	µg/L	0.010	0.040
3/30/2021 10:15	Blank	Metals	Cadmium	0.020 U	µg/L	0.020	0.080
3/30/2021 10:15	Blank	Metals	Lead	0.20 U	µg/L	0.20	0.40
3/30/2021 10:15	Blank	Metals	Iron	30 U	µg/L	30	120
3/30/2021 10:15	Blank	Metals	Zinc	5.0 U	µg/L	5.0	20
3/30/2021 10:15	Blank	Metals	Sodium	0.50 U	mg/L	0.50	2.0
3/30/2021 10:15	Blank	Metals	Potassium	0.30 U	mg/L	0.30	1.2
3/30/2021 10:15	Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.50	1.0
3/30/2021 10:15	Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.10
3/30/2021 10:15	Blank	Nutrients	Total-P	0.002 U	mg P/L	0.0020	0.0050
3/30/2021 10:15	Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.0040	0.010
3/30/2021 10:15	Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.080	0.20
3/30/2021 10:15	Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.20	0.50
3/30/2021 10:15	Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.20	0.50
3/30/2021 10:15	Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.0040	0.010
3/30/2021 10:15	Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6.0
3/30/2021 10:15	Blank	Nutrients	Total Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
3/30/2021 10:15	Blank	Nutrients	Turbidity	0.10 U	NTU	0.10	0.13
3/30/2021 10:15	Blank	Nutrients	Ammonia-N	0.002 U	mg N/L	0.0020	0.0050
3/30/2021 10:15	Blank	Overflow	HEM	1.9 I	mg/L	1.5	5.2

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:15	Blank	Pesticides	Ametryn	0.59 U	ng/L	0.59	2.3
3/30/2021 10:15	Blank	Pesticides	Bromacil	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Chlorpyrifos Ethyl	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Chlorpyrifos Methyl	0.049 U	ng/L	0.049	0.20
3/30/2021 10:15	Blank	Pesticides	Ethion	0.15 UJ	ng/L	0.15	0.59
3/30/2021 10:15	Blank	Pesticides	Fludioxonil	0.12 U	ng/L	0.12	0.49
3/30/2021 10:15	Blank	Pesticides	Malathion	0.34 U	ng/L	0.34	1.4
3/30/2021 10:15	Blank	Pesticides	Pyriproxyfen	0.12 U	ng/L	0.12	0.49
3/30/2021 10:15	Blank	Pesticides	Terbuthylazine	0.41 U	ng/L	0.41	1.7
3/30/2021 10:15	Blank	Pesticides	Acetochlor	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Alachlor	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Atrazine	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Carfentrazone Ethyl	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Difenoconazole	0.59 U	ng/L	0.59	2.3
3/30/2021 10:15	Blank	Pesticides	Fonofos	0.20 U	ng/L	0.20	0.78
3/30/2021 10:15	Blank	Pesticides	Metribuzin	3.2 U	ng/L	3.2	13
3/30/2021 10:15	Blank	Pesticides	Molinate	0.29 U	ng/L	0.29	1.2
3/30/2021 10:15	Blank	Pesticides	Propiconazole	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Simazine	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Terbufos	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	EPTC	1.2 U	ng/L	1.2	4.9
3/30/2021 10:15	Blank	Pesticides	Fipronil Sulfide	0.15 U	ng/L	0.15	0.59
3/30/2021 10:15	Blank	Pesticides	Flumioxazin	1.7 U	ng/L	1.7	6.8
3/30/2021 10:15	Blank	Pesticides	Metolachlor	0.34 U	ng/L	0.34	1.4
3/30/2021 10:15	Blank	Pesticides	Pendimethalin	0.98 U	ng/L	0.98	3.9
3/30/2021 10:15	Blank	Pesticides	Ibuprofen	0.020 U	µg/L	0.020	0.080
3/30/2021 10:15	Blank	Pesticides	Caffeine	7.3 U	ng/L	7.3	29
3/30/2021 10:15	Blank	Pesticides	Atrazine Desethyl	1.5 U	ng/L	1.5	5.9
3/30/2021 10:15	Blank	Pesticides	Butylate	0.39 U	ng/L	0.39	1.6
3/30/2021 10:15	Blank	Pesticides	Fenbuconazole	0.12 U	ng/L	0.12	0.49
3/30/2021 10:15	Blank	Pesticides	Fluazifop-P-butyl	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Prodiamine	0.17 U	ng/L	0.17	0.68
3/30/2021 10:15	Blank	Pesticides	Prometon	0.88 U	ng/L	0.88	3.4
3/30/2021 10:15	Blank	Pesticides	Naled	1.5 U	ng/L	1.5	5.9

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:15	Blank	Pesticides	Azoxystrobin	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Diazinon	0.12 U	ng/L	0.12	0.49
3/30/2021 10:15	Blank	Pesticides	Ethoprop	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Fipronil Desulfinyl	0.12 U	ng/L	0.12	0.49
3/30/2021 10:15	Blank	Pesticides	Hexazinone	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Metalaxyl	0.73 U	ng/L	0.73	2.9
3/30/2021 10:15	Blank	Pesticides	Myclobutanil	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Tebuconazole	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Sucralose	0.010 U	µg/L	0.010	0.040
3/30/2021 10:15	Blank	Pesticides	Naproxen	0.0080 U	µg/L	0.0080	0.032
3/30/2021 10:15	Blank	Pesticides	Carbophenothion	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Demeton	1.5 U	ng/L	1.5	5.9
3/30/2021 10:15	Blank	Pesticides	Dithiopyr	0.18 UQ	ng/L	0.18	0.73
3/30/2021 10:15	Blank	Pesticides	Fluxapyroxad	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Parathion Ethyl	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Pronamide	0.15 U	ng/L	0.15	0.59
3/30/2021 10:15	Blank	Pesticides	Sulfentrazone	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Cyanazine	3.2 U	ng/L	3.2	13
3/30/2021 10:15	Blank	Pesticides	Disulfoton	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Fenamiphos	0.49 U	ng/L	0.49	2.0
3/30/2021 10:15	Blank	Pesticides	Fipronil	0.24 U	ng/L	0.24	0.98
3/30/2021 10:15	Blank	Pesticides	Imazalil	0.73 U	ng/L	0.73	2.9
3/30/2021 10:15	Blank	Pesticides	Iprodione	0.59 U	ng/L	0.59	2.3
3/30/2021 10:15	Blank	Pesticides	Parathion Methyl	0.54 U	ng/L	0.54	2.1
3/30/2021 10:15	Blank	Pesticides	Oxadiazon	0.35 IVQ	ng/L	0.31	1.3
3/30/2021 10:15	Blank	Pesticides	Azinphos Methyl	2.0 U	ng/L	2.0	7.8
3/30/2021 10:15	Blank	Pesticides	Dimethenamid	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Fipronil Sulfone	0.15 U	ng/L	0.15	0.59
3/30/2021 10:15	Blank	Pesticides	Flutolanil	0.098 U	ng/L	0.098	0.39
3/30/2021 10:15	Blank	Pesticides	Mevinphos	1.0 U	ng/L	1.0	4.1
3/30/2021 10:15	Blank	Pesticides	Oxyfluorfen	0.15 U	ng/L	0.15	0.59
3/30/2021 10:15	Blank	Pesticides	Phorate	0.51 U	ng/L	0.51	2.0
3/30/2021 10:15	Blank	Pesticides	Prometryn	0.20 U	ng/L	0.20	0.78
3/30/2021 10:15	Blank	Pesticides	Norflurazon	0.49 U	ng/L	0.49	2.0

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:15	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	µg/L	3.0	12
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	9.9 U	µg/L	9.9	40
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Hexachlorobenzene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Chrysene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.99 U	µg/L	0.99	4.0
3/30/2021 10:15	Blank	Priority Organic Pollutants	Fluoranthene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Nitrobenzene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Phenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	2-Chlorophenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	2-Nitrophenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	9.9 U	µg/L	9.9	40
3/30/2021 10:15	Blank	Priority Organic Pollutants	Acenaphthene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Anthracene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	5.0 U	µg/L	5.0	20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Fluorene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Diethyl phthalate	2.0 U	µg/L	2.0	7.9
3/30/2021 10:15	Blank	Priority Organic Pollutants	Hexachloroethane	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Naphthalene	0.099 U	µg/L	0.099	0.40
3/30/2021 10:15	Blank	Priority Organic Pollutants	Pentachlorophenol	0.50 U	µg/L	0.50	2.0
3/30/2021 10:15	Blank	Priority Organic Pollutants	Acenaphthylene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.025 U	µg/L	0.025	0.099

Date Sampled	Site ID	Analysis Group	Component	Result	Units	MDL	PQL
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	µg/L	2.0	7.9
3/30/2021 10:15	Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	4-Nitrophenol	9.9 U	µg/L	9.9	40
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzidine	9.9 U	µg/L	9.9	40
3/30/2021 10:15	Blank	Priority Organic Pollutants	Isophorone	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Phenanthrene	0.099 U	µg/L	0.099	0.40
3/30/2021 10:15	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	2.0 U	µg/L	2.0	7.9
3/30/2021 10:15	Blank	Priority Organic Pollutants	Dimethyl phthalate	0.20 U	µg/L	0.20	0.79
3/30/2021 10:15	Blank	Priority Organic Pollutants	Hexachlorobutadiene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Pyrene	0.099 U	µg/L	0.099	0.40
3/30/2021 10:15	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.050 U	µg/L	0.050	0.20
3/30/2021 10:15	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.025 U	µg/L	0.025	0.099
3/30/2021 10:15	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.050 U	µg/L	0.050	0.20