

Effluent Quality Assessment of

Rock Tenn CP, LLC – Fernandina Beach Mill

Nassau County

NPDES # FL0001104

Sampled January 26, 27, 28 and 30, 2015

June 2015

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual

NELAC Certification No. E31780

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Rock Tenn CP, LCC – Fernandina Beach Mill, 600 North 8th Street, Fernandina Beach, Nassau County, Florida 32034. NPDES #FL0001104.

Facility Overview

Rock Tenn CP, LCC – Fernandina Beach Mill is an industrial wastewater treatment facility, treating wastewater generated by the production of unbleached Kraft linerboard. See Appendix A for a description of the facility, summary of permit limits, Administrative Order (AO) and Discharge Monitoring Report (DMR) information. The facility is operating under AO 145 NE that modifies the permitted toxicity limits at outfall D-001,

Methods

Effluent composite samples for toxicity testing were collected on January 26, 2015, January 28, 2015, and January 30, 2015. Effluent grab and composite samples for biological and chemical analyses for this facility were collected on January 26 and January 27, 2015. All samples were collected from the EFF-01 NPDES sampling point for Outfall D-001 by Jan Gruentzel, Amy Kalmbacher, Jacob Mast, and Sharon Piltz (FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling (see Appendix B).

The chronic definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_14, TA07_15, and TA08_01 through TA08_09 (see Appendix B).

Results

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

- Total residual chlorine (TRC) was measured in the lab in the initial bioassay sample and in the two subsequent renewal samples at 0.08, 0.08, and 0.05 mg/L, respectively. The TRC results are thought to be due to interfering substances within the effluent. Total ammonia was measured in the laboratory below the minimum detection limit (MDL) in the initial bioassay sample and in the two subsequent renewal samples at 0.0307 and 0.256 mg N/L, respectively. The total ammonia concentration in the grab sample collected and preserved for chemical analysis was 0.037 mg N/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg N/L.
- Carbonaceous biochemical oxygen demand (CBOD), and total suspended solids (TSS) in the effluent composite sample were detected between the MDL and the practical quantitation limit (PQL), and thus complied with the facility's permitted effluent limits.
- Aluminum, copper (detected between the MDL and the PQL) and nickel were detected in the effluent at levels that comply with Class III Marine Water Quality Criteria (62-302.530, F.A.C.) and effluent permit limits. Arsenic, chromium, iron, selenium, and zinc were detected between the MDL and the PQL, and thus complied with the Class III Marine Water Quality Criteria (62-302.530, F.A.C.).

Algal Growth Potential (See Table 3 and Appendix C)

- The effluent Algal Growth Potential (AGP) was 3.00 U) mg dry wt/L of the saltwater species *Dunaliella tertiolecta.* Raschke and Schultz determined that AGP values above 10.0 mg dry weight/L, which represents a "problem" threshold for marine receiving waters, imply nutrient enrichment (personal communication, Marshall Faircloth, et. al. FDEP, with Ron Raschke USEPA Region 4 1987). The analytical chemistry suggests that the effluent is nitrogen-limited (Maloney et al. 1974).

Toxicity Test Results (See Appendix C)

- Tests were performed January 27- February 03, 2015.

Americamysis bahia
7-day chronic definitive bioassay – IC25: No Result.

Menidia beryllina
7-day chronic definitive bioassay – IC25: > 100%

- The IC25 test for the mysid, *Americamysis bahia*, was invalidated due to low mysid weights in the control (See Appendix D). The bioassay samples for the fish, *Menidia beryllina*, were not chronically toxic to the test organisms.

Conclusion

The effluent sample collected from the EFF-01 NPDES sampling point for this facility on January 26, 2015, was not chronically toxic to the fish, *Menidia beryllina*, during the chronic definitive bioassay. The bioassay for the mysid, A*mericamysis bahia*, was invalidated due to low mysid weights in the control. AGP of the effluent was below the detection limit.

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

Literature Cited

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Maloney, T. E., W. E. Miller, and D. T. Specht. 1974. The Marine Algal Assay Procedure: Bottle Test. National Environmental Research Center Office of Research and Development. U. S. EPA, Corvallis, Oregon. 43 p.

Manahan, S. E. 1994. Environmental Chemistry, 6th edition. Lewis Publishers, USA. 811 pp

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

USEPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. 3th edition. EPA-821-R-02-014.

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

Table 1. Effluent limits, Class III Marine Criteria and field parameters, analytical water chemistry data, and toxicity data.

Rock Tenn – Fernandina Beach Mill	Units	Class III Criteria	Effluent Permit Limits	Effluent Composite	Effluent Grab
Field Parameters					
Sample Depth	m	-	-	-	0.3
Temperature	C	≤ 42.2	≤ 42.2	-	35.6
pH	SU	6.5 - 8.5	6.5 - 8.5	-	6.5
Specific Conductance	umhos/cm	-	Report	-	3059
Salinity	ppth	-	-	-	1.57
Dissolved Oxygen	% saturation	≥ 42.2	-	-	84.1 c
Dissolved Oxygen	mg/L	-	≥ 1.7	-	5.7
Analytical water chemistry data					
1,4-Dioxane	ug/L	-	-	-	0.30
Ortho-phosphate	mg P/L	-	-	-	0.34
Total Phosphorus	mg P/L	-	Report	-	0.58
Total Ammonia	mg N/L	-	Report	-	0.037
Un-ionized Ammonia (calculated salinity)	mg N/L	-	-	-	< 0.02 c
Nitrate and Nitrite	mg N/L	-	-	-	0.011
Total Kjeldahl Nitrogen	mg N/L	-	Report	-	1.3
Organic Nitrogen	mg N/L	-	-	-	1.3 c[1]
Total Nitrogen	mg N/L	-	Report	-	1.3 c[1]
Total Organic Carbon	mg C/L	-	-	-	33 A
Chlorophyll *a* - Corrected	ug/L	-	-	-	0.68 I
Phaeophytin	ug/L	-	-	-	0.40 U
CBOD, 5 day, N - inhibited	mg/L	-	-	-	3.0 AJ
BOD, 5 day, N - uninhibited	mg/L	-	90.1 mg/L [2]	3.8	-
Hardness	-	-	-	-	260 c
Total Residual Chlorine	-	-	-	-	-
Total Suspended Solids	mg/L	-	136 mg/L [3]	8 I	-
Turbidity	NTU	< 29 t	Report	-	8.4
Color (true)	PCU	-	-	-	140
Alkalinity	mg CaCO3/L	-	-	-	217 A
Chloride	mg Cl/L	-	-	-	83 A
Cyanide		≤ 1.0	-	-	
Fluoride	mg F/L	≤ 5.0	-	-	0.43
Sulfate	mg SO4/L	-	-	-	1100 A
Toxicity (IC25, percent inhibition in 100% effluent)					
Bioassay - Mysid *(Americamysis bahia)*	%	≥ 100	No Result	-	-
Bioassay - Fish *(Menidia beryllina)*	%	≥ 100	≥ 100	-	-

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

c - Value is calculated

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

1 - Value is calculated using half the MDL value of the analyte(s) that were not detected

2 - calculated from daily maximum permitted limit (28,200 lbs/day) assuming maximum permitted flow (37.5 MGD).

3 - calculated from daily maximum permitted limit (42,000 lbs/day) assuming maximum permitted flow (37.5 MGD).

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

Rock Tenn – Fernandina Beach Mill	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab
Aluminum	ug/L	≤ 1500	-	226
Arsenic	ug/L	-	-	0.80 I
Cadmium	ug/L	≤ 8.8	-	0.050 U
Calcium	mg/L	-	-	53.2
Chromium, Total [h]	ug/L	≤ 50	-	0.84 I
Copper	ug/L	≤ 3.7	12.8	0.50 I
Iron	ug/L	≤ 300	-	63 I
Lead	ug/L	≤ 8.5	-	0.20 U
Magnesium	mg/L	-	-	31.0
Nickel	ug/L	≤ 8.3	40.1	1.58
Potassium	mg/L	-	-	22.5
Selenium	ug/L	≤ 71	-	0.22 I
Silver	ug/L	≤ 2.3	-	0.025 U
Sodium	mg/L		-	630
Zinc	ug/L	≤ 86	-	8.8 I

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

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

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

Table 3. Measured algal growth potential (AGP; mg dry weight/L) and ratios of nitrogen to phosphorus.

Rock Tenn – Fernandina Beach Mill				
Location	**AGP (measured)**	**Test Species**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent Grab	3.00 U	*Dunaliella tertiolecta*	0.1	2.3

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

Appendix A

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Kyle Watson	**Contact Number:** 904-256-1624
Facility Name (as it appears on permit): RockTenn CP, LLC – Fernandina Beach Mill	**Former Names:** Smurfit-Stone Container Corporation
NPDES Permit Number: FL0001104	**Permit Expiration Date:** 11/11/2015
Physical Address: 600 North 8th Street Fernandina Beach, Florida 32034	
District: Northeast	**County:** Nassau
Function of Facility: This facility produces unbleached kraft linerboard with the primary SIC code of 2631, Paperboard Mills. The production consists of the following general steps: wood preparation, pulping, pulp processing and chemical recovery, and paper and paperboard manufacturing that contribute to the wastewater	
Facility Type: Industrial Wastewater	**Permitted Capacity (MGD):** 37.5 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 18.3 MGD	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):	
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):

EFF-1	Nearest accessible point after final treatment
SWB-1	Ambient sampling location, approximately 200 m south of outfall near oil dock (STORET # 21FLA19020006)
SWD-1	Ambient sampling location, approximately 1000 m north of outfall near CM 4, north of Eagan's Creek (STORET # 21FLA19020010)
SWD-2	Ambient sample location within the mixing zone

Description of Permitted Outfall(s):

Surface Water Discharge D-001: An existing 30.0 MGD Annual Average Daily Flow permitted discharge to Amelia River, Class III Marine Waters, (WBID# 2124) which is a 36-inch diameter pipe, 37.5 MGD design capacity (30.0 MGD design wastewater flow and 7.5 MGD stormwater flow), discharging to the Amelia River is approximately 250 feet in length, with 20 ports at a spacing of 12.5 feet, 6 inch diameter ports, discharging at a depth of approximately 32 feet. The point of discharge is located approximately at latitude 30°41' 9" N, longitude 81°27' 30" W

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

Treatment system consists of a grit chamber, bar screen, primary clarifier, heat exchanger, cooling tower (for the non-contact cooling water), UNOX pure oxygen activated sludge treatment system, and dual secondary clarifiers, with discharge to outfall D-001. Spill collections and control systems include a lined, temporary wastewater holding pond to provide influent loading control and emergency sludge lagoons. Primary and secondary wastewater solids are handled by two dewatering screw presses and two belt presses or are conveyed to temporary storage area. Primary and secondary solids blending takes place in tank systems.

PART I: Continued

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

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Chronic Whole Effluent Toxicity, 7-Day IC_{25} (*Americamysis bahia*)	**percent**	**Min**	**100**	**Single Sample**	**Semi-Annually; twice per year**	**24-hr FPC**	**EFF-1**	**See I.A.4**
Chronic Whole Effluent Toxicity, 7-Day IC_{25} (*Menidia beryllina*)	**percent**	**Min**	**100**	**Single Sample**	**Semi-Annually; twice per year**	**24-hr FPC**	**EFF-1**	**See I.A.4**
Flow	**MGD**	**Max Max**	**Report Report**	**Daily Maximum Monthly Average**	**Continuous**	**Meter**	**EFF-1**	
BOD, 5-day, 20ºC	**lb/day**	**Max Max**	**11,560 28,200**	**Monthly Average Daily Maximum**	**3 Days/Week**	**24-hr FPC**	**EFF-1**	
Solids, Total Suspended	**lb/day**	**Max Max**	**21,250 42,500**	**Monthly Average Daily Maximum**	**3 Days/Week**	**24-hr FPC**	**EFF-1**	
pH	**s.u.**	**Min Max**	**6.0 8.5**	**Daily Minimum Daily Maximum**	**3 Days/Week**	**Grab**	**EFF-1**	**See I.A.9**
Turbidity	**NTU**	**Max**	**Report**	**Daily Maximum**	**Weekly**	**Grab**	**EFF-1**	
Oxygen, Dissolved (DO)	**mg/L**	**Min**	**1.7**	**Daily Minimum**	**3 Days/Week**	**Grab**	**EFF-1**	**See I.A.9**
Temperature (ºF), Water	**Deg F**	**Max**	**108.0**	**Daily Maximum**	**3 Days/Week**	**Grab**	**EFF-1**	**See I.A.9**
Nickel, Total Recoverable	**ug/L**	**Max**	**40.1**	**Daily Maximum**	**Monthly**	**Grab**	**EFF-1**	**See I.A.9**
Mercury, Total Recoverable	**See Specific Conditions I.B.1 and VI.4.**							
Copper, Total Recoverable	**ug/L**	**Max**	**12.8**	**Daily Maximum**	**Monthly**	**Grab**	**EFF-1**	**See I.A.9**
Phosphorus, Total (as P)	**mg/L**	**Max**	**Report**	**Daily Maximum**	**Quarterly**	**Grab**	**EFF-1**	
Nitrogen, Total (as N)	**mg/L**	**Max**	**Report**	**Daily Maximum**	**Quarterly**	**Grab**	**EFF-1**	
Nitrogen, Kjeldahl, Total (as N)	**mg/L**	**Max**	**Report**	**Daily Maximum**	**Quarterly**	**Grab**	**EFF-1**	
Nitrogen, Ammonia, Total (as N)	**mg/L**	**Max**	**Report**	**Daily Maximum**	**Quarterly**	**Grab**	**EFF-1**	

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site	Notes
Tide Stage	ft	Max	Report	Single Sample	Quarterly	Calculated	SWB-1, SWD-1, SWD-2	See I.A.10
Oxygen, Dissolved (DO)	mg/L	Min	Report	Single Sample	Quarterly	Meter	SWB-1, SWD-1, SWD-2	See I.A.10
pH	s.u.	Max	Report	Single Sample	Quarterly	Meter	SWB-1, SWD-1, SWD-2	See I.A.10
Temperature (C), Water	Deg C	Max	Report	Single Sample	Quarterly	Meter	SWB-1, SWD-1, SWD-2	See I.A.10
Specific Conductance	umhos/ cm	Max	Report	Single Sample	Quarterly	Meter	SWB-1, SWD-1, SWD-2	See I.A.10
BOD, Carbonaceous 5 day, 20C	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Solids, Total Suspended	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Nitrogen, Total	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Nitrogen, Organic, Total (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Phosphorus, Total (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10
Phosphate, Ortho (as P)	mg/L	Max	Report	Single Sample	Quarterly	Grab	SWB-1, SWD-1	See I.A.10

			Effluent Limitations		Monitoring Requirements			
Parameter	**Units**	**Max/Min**	**Limit**	**Statistical Basis**	**Frequency of Analysis**	**Sample Type**	**Monitoring Site**	**Notes**
Chlorophyll a	**mg/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Copper, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Nickel, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Silver, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Aluminum, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Iron, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Lead, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Zinc, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Arsenic, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**
Cadmium, Total Recoverable	**ug/L**	**Max**	**Report**	**Single Sample**	**Quarterly**	**Grab**	**SWB-1, SWD-1**	**See I.A.10**

PART I: Continued

Receiving Waters: Amelia River, (WBID# 2124)	**Classification (indicate whether fresh or marine):** Class III Marine Waters

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

1. 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 (IC_{25}) shall not be less than 100% effluent. [Rules 62-302.530(61) and 62-4.241(1)(b), F.A.C.]

(2) For acute whole effluent toxicity, the 96-hour LC_{50} shall not be less than 100% effluent in any test. [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 **once every six months**, the first starting within 60 days of the issuance date of this permit and lasting for the duration of this permit.

c. Sampling Requirements

(1) For each routine test or additional follow-up test conducted, a total of three flow-proportional 24-hour composite samples of final effluent shall be collected and used in accordance with the sampling protocol discussed in EPA-821-R-02-013, Section 8.

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

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

d. Test Requirements

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

(2) The permittee shall conduct 7-day survival and growth chronic toxicity tests with a mysid shrimp, ***Americamysis bahia***, Survival, Growth and Fecundity Test, and an inland silverside, ***Menidia beryllina***, 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 Marine and Estuarine Organisms, 3rd ed., 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 shall be prepared with 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 shall be 20 ppt. If the salinity of the effluent is greater than 20 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.

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

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

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 any other 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-02-014, 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 prior to the end of any test and the control mortality is less than 20% at that time, the test (including the control) shall be terminated with the conclusion that the test fails and constitutes non-compliance.

(4) 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 the calculated IC_{25} for each test species.

(2) A **bioassay laboratory report** for each routine test shall be prepared according to EPA-821-R-02-013, Section 10, Report Preparation and Test Review, and mailed or **e-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 or **e-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 mailed or **e-mailed** to Jacksonville ***only***:

Florida Department of Environmental Protection
Northeast District Office – Wastewater Section
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

g. Test Failures

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

(2) Additional Follow-up Tests:

(a) If a routine test does not meet the chronic toxicity limitation in 1.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 1.d.

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

(c) The additional follow-up tests shall be conducted using a control (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 additional follow-up tests to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control are run. All test results shall be statistically analyzed according to the Appendices in EPA-821-R-02-013.

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

test failure.

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

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

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

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

(e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 1.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 1.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-013, a repeat test shall be initiated within 21 days after the last day of the invalid routine test.

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

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

(4) If chronic toxicity test results indicate a 96-hour LC50 < 100% effluent, as derived from the chronic test survival data, then the Department may revise this permit to require acute definitive whole effluent toxicity testing.

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

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

AO 145 NE Revision executed June 26, 2013

During the term of this Order, the following effluent monitoring requirement for 7-day chronic toxicity (the 25 percent inhibition concentration, IC_{25}), and a 96-hr acute toxicity limit (the 50 percent lethal concentration, LC_{50}), shall apply at outfall D-001 in lieu of the applicable monitoring requirements contained in Part I.A.1 of the permit:

Facility Mixing Zone Details (if applicable): From permit fact sheet. Tox revised June 26, 2013

The previous permit had mixing zones established for chronic toxicity, dissolved oxygen, temperature, copper, nickel, and pH. The size of the mixing zone potentially required for chronic toxicity has yet to be determined. The new whole effluent toxicity requirement will be for the $IC_{25} \geq 100\%$ effluent compliance endpoint with chronic testing. This potential mixing zone evaluation requires an evaluation under an Administrative Order with the DEP (AO-145-NED).

To monitor whole effluent toxicity of the final effluent from outfall D-001, the previous permit required acute screening tests. During the previous permit cycle, the Permittee had requested to retain the stated mixing zone for chronic toxicity. This permit renewal will require chronic definitive tests in accordance with the new Rule 62-620.620(3)(b), FAC.

Pursuant to FAC Rule 62-4.244, the Permittee is hereby granted a mixing zone, for these five parameters: dissolved oxygen, temperature, copper, nickel, and pH, for the effluent discharge from Outfall D001 into the Amelia River. The Permittee's discharge shall not cause a violation of the Chapter 62-302, FAC, Class III Water Quality Standards, outside the boundaries of the mixing zone described below for the five parameters cited.

The dissolved oxygen standard set forth in FAC Rule 62-4.244(3)(a) shall apply within the mixing zone as the effluent minimum is 1.7 mg/L (end of pipe) and ambient sampling within and outside the mixing zone for DO will be conducted. In addition, outside the boundaries of the established mixing zone, all of Chapter 62-302, FAC, Class III Water Quality standards will apply.

The submerged discharge offers more flexibility in meeting the design goal. Submerged discharges allow the effluent to be directed at different angles to the ambient flow to maximize the initial dilution. Diffusers are effective in counteracting the buoyancy of the effluent and provide more dilution than single outlets. This preferred arrangement, directs the outlet into the current flow direction and/or vertically upward. To deal with the reversing currents of the receiving water, this preferred arrangement is a parallel diffuser alignment (tee diffuser). Strong jet mixing predominates over ambient mixing. Beyond this point, the mixing is controlled by ambient turbulence as the depth of the outfall is 32 feet and the river width is 1945 feet (593 m). The mixing zone width ratio is 59/1 or 1.7% of width (10 m width to river width 593 m).

The mixing zone boundary and extent of the zone has been reduced from 106.22 m in length by 20 m in width, has been reduced to 80 meters in length by 10 meters in width, although the allowed effluent concentration values have been changed as detailed below.

pH

Previous permit had a mixing zone for pH, for the range of 6.0 to 9.0 s.u. Review of the pH values for this discharge during the last 4 years of effluent data indicates that pH reached 9.2 s.u., but the overall average is 6.6 s.u. The current operation and treatment system maintains pH predominately in the 6.5 to 7.0 rage. The mixing zone increasing the ph of the Class III marine water quality standard from 8.5 to 9.0 s.u. is deemed not required for the permit renewal. However, the mixing zone for the pH lower range of 6.0 versus the water quality lower standard of 6.5 s.u. is needed as this treatment system has an occasional lower ph values in the 6.2 to 6.4 s.u., range.

Temperature

The mixing zone measures 80 meters in length by 10 meters in width and includes the entire water column from the surface to the bottom and runs parallel to, and is centered on, the diffuser structure. This mixing zone contains 800 square meters and otherwise complies with the physical requirements of the FAC Rule 62-4.244.

The mixing zone for temperature in the past permit cycle was limited to a maximum of 105 º F. For this permit renewal the permittee has requested a mixing zone temperature increase to 108 º F. The BOD removal by aerobic bacteria generates energy in the form of heat as one by-product. This temperature increase has always been present in this system; however, in previous years the collection of foul condensates was in an open channel where some heat loss occurred. Now a closed pipe system collects the foul condensate directly to the reactor and increases the heat load. Under the Clean Condensate Alternative all named sources of foul condensate were collected in a feed tank and hard-piped directly to the UNOX reactor. In year 2007, foul condensate flows averaged 1.34 MGD with a temperature range of 105°F to 135° F, with the highest temperatures during the warm summer months.

A review of the effluent temperature data from the earlier permit cycle (7/1998 through 6/2003) indicates a maximum of 101º F, a low of 96°F, and an average T of 98.5º F. The effluent temperature data from the current past permit cycle (7/2003 through 2/2009) indicates a maximum of 105.7 º F, a low of 96.5ºF, and an average T of 100.89 º F. Thus the trend is upward due to the change required in operation. A review of PCS data indicates that the reported an effluent temperature maximum of 105.7 º F, occurred during the summer of 2008.

Based on the mixing zone analysis by the consultant (CH2M Hill) the existing mixing zone dimensions are reduced (80 m by 10 m) and can accommodate the change of temperature for the effluent from 105 º F to 108 º F.

Nickel and Copper

In recent months the mill has experienced three excursions in the Nickel permit limit. An investigation by the mill has not been able to identify any discernable source for these elevated concentrations. In addition, during the effective period of the current permit there have been other permit excursions for both Copper and Nickel. Since the mill's treatment system does not allow optimization for the removal of metals and since the permitted mixing zone would allow for an increase in the Nickel effluent limit, an adjustment to the Nickel and Copper limits is proposed.

An evaluation of the Copper and Nickel effluent quality was conducted over the effective period of the current permit (January 2004 through June 2008). An effluent data and statistical evaluation was conducted and although the evaluation indicates that the mill would be entitled to much higher discharge limits for copper and nickel, they proposed significantly lower values. To calculate the proposed permit limits, it is proposed that the maximum plus three standard deviations from the above referenced permit effluent data is used. The permittee requested copper and nickel permit limits of 23.7 ug/L and 62.6 ug/L, respectively (see Table 1 below).

However, based on a statistical review of the data, if the current copper limit of 12.8 ug/L is maintained, there was no effluent violation over the last permit cycle for copper. If the nickel effluent concentration limit is increased from 24.6 ug/L to 40.1 ug/L, there would be one effluent violation.

The mixing zone dimensions are reduced and the mixing zone allowable limit for nickel was increased. Recent test results from 2008 indicate the need for an increased limitation, but not for an increase in the aerial extent. The facility cannot reliably or technologically find a treatment method or determine any further means for a source reduction of these metals.
Ambient monitoring will be included for ph, temperature, salinity, total recoverable copper, and total recoverable nickel (and other parameters) at multiple locations in the Amelia River upstream and downstream from the mixing zone boundary and one site within the mixing zone. Mixing zone documents have been reviewed by DEP NED Staff, EPA staff and by DEP Tallahassee staff.

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

Date	Parameter and Units	Limit	Result

Describe previous FYI and WQBEL study:
The previous Third Year Sampling Inspection conducted on 8/16/2012 was considered 'In Compliance' with no sampling results exceeding respective water quality standards.

Describe previous or current Enforcement Actions (including WLs):
OGC # 94-3936 – Issued as a result of an unplanned primary clarifier outage. Closed 1/13/1994
OGC # 94-3609 – Issued as a result of an grit chamber overflow during cold mill outage. Closed 1/13/1994
OGC # 99-0231 – Issued as a result of nickel and copper exceedances. Closed 2/25/2000.
OGC #01-0056– Issued as a result of an grit chamber overflow during cold mill outage. Closed 6/25/2001
OGC #04-0982 – Issued as a result of copper and BOD exceedances. Closed 3/22/2011

Describe any violations or problems noted in previous inspection: None noted.
Discuss whether DMR trends within previous five years are improving or declining: Improving, especially with regards to BOD and TSS loading, and nickel concentrations.
Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information

Date(s) sample collected: **1/26/15** **1/27/15 (Receiving water sampling only)** **1/28/15** **1/30/15**	**Sampler(s):** **Jann Gruentzel, Amy Kalmbacher, Sharon Piltz** **Amy Kalambacher, Jake Mast, Sharon Piltz** **Jeremy Parrish** **Amy Kalambacher, Sharon Piltz**
Temperature (Deg C): **1/26/15 – 35.65** **1/28/15 – 35.2** **1/30/15 – 35.57**	**pH (SU):** **1/26/15 – 6.45** **1/28/15 – 6.33** **1/30/15 – 6.34**
Dissolved Oxygen (mg/L): **1/26/15 – 5.74** **1/28/15 – 6.19** **1/30/15 – 5.92**	**Conductivity (umhos/cm):** **1/26/15 - 3059** **1/28/15 - 2960** **1/30/15 - 2708**
Total Residual Chlorine (mg/L): **NA**	**Total Residual Chlorine - after Disinfection (mg/L):** **NA**
Method of Chlorination: **NA**	**Method of De-chlorination:** **NA**
Flow During Sample Collection for each outfall(MGD): **1/26/15 – 16.82 MGD** **1/28/15 – 16.75 MGD** **1/30/15 – 15.66 MGD**	
Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):	

Describe Discharge during Sampling Event: **☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify**
Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here: **Receiving waters were sampled on Tuesday due to rough boating conditions on Monday.**

Appendix B

Explanation of Measurements

(1) Quality Assurance and Quality Control

FDEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (FDEP SOPs). Methods for all analyses are on file at the FDEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.dep.state.fl.us/labs/library/lab_sops.htm and/or http://www.dep.state.fl.us/water/sas/sop/sops.htm.

(2) Chemical Analyses of the Effluent

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

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(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 62-302.530(20), 62-302.530(61) and/or facility permit limits. A no observed effect concentration (NOEC) less than 100% effluent in a chronic test may constitute an exceedance of 62-302.530(61) and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Chlorophyll *a* Content

Chlorophyll *a* content is an estimate algal biomass. High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., and/or 62-302.530(47)(b), F.A.C..

(5) 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. Raschke and Shultz (1987) found that an AGP above 10.0 mg dry weight/L represents a “problem” threshold for marine receiving waters, implying nutrient enrichment. High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP in a low salinity sample under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N:P) is less than 10:1, nitrogen limitation of algal production is likely. When the N:P ratio is 20:1 or greater, phosphorus limitation is likely (EPA-822-B-00-002). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedance of 62-302.530(61) F.A.C. Expected AGP is not calculated for marine samples incubated with *Dunaliella*.

(6) Definition of Qualifiers

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.

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

Appendix C

Chemical analysis of effluent

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/30/15 9:20	Effluent Comp	Nutrients	Temperature	3.0	C		
01/28/15 9:55	Effluent Comp	Nutrients	Dissolved Oxygen	6.19	mg/L		
01/28/15 9:55	Effluent Comp	Nutrients	Temperature	4	C		
01/28/15 9:55	Effluent Comp	Nutrients	pH	6.33			
01/28/15 9:55	Effluent Comp	Nutrients	Specific Conductance	2960	umhos/cm		
01/26/15 9:30	Effluent Comp	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	3.8	mg/L	0.2	2
01/26/15 9:30	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, IC25	No Result	IC25		
01/26/15 9:30	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, NOEC	No Result	NOEC		
01/26/15 9:30	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, NOEC	100	NOEC		
01/26/15 9:30	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, IC25	100 L	IC25		
01/26/15 9:30	Effluent Comp	Nutrients	TSS	8 I	mg/L	2	10
01/26/15 9:30	Effluent Comp	Nutrients	Temperature	4.0	C		
01/26/15 9:45	Effluent Grab	AGP/LN	Algal Growth Potential	3.00 U	mg DryWt/L	3	3
01/26/15 9:45	Effluent Grab	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	3.0 AJ	mg/L	0.2	2
01/26/15 9:45	Effluent Grab	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
01/26/15 9:45	Effluent Grab	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.68 I	ug/L	0.55	1.7
01/26/15 9:45	Effluent Grab	Metals	Chromium	0.84 I	ug/L	0.3	1.2
01/26/15 9:45	Effluent Grab	Metals	Calcium	53.2	mg/L	0.075	0.3
01/26/15 9:45	Effluent Grab	Metals	Lead	0.20 U	ug/L	0.2	0.8
01/26/15 9:45	Effluent Grab	Metals	Arsenic	0.80 I	ug/L	0.25	1
01/26/15 9:45	Effluent Grab	Metals	Aluminum	226	ug/L	5	20
01/26/15 9:45	Effluent Grab	Metals	Copper	0.50 I	ug/L	0.5	1
01/26/15 9:45	Effluent Grab	Metals	Silver	0.025 U	ug/L	0.025	0.1
01/26/15 9:45	Effluent Grab	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
01/26/15 9:45	Effluent Grab	Metals	Iron	63 I	ug/L	30	120
01/26/15 9:45	Effluent Grab	Metals	Selenium	0.22 I	ug/L	0.2	0.8
01/26/15 9:45	Effluent Grab	Metals	Zinc	8.8 I	ug/L	5	20
01/26/15 9:45	Effluent Grab	Metals	Magnesium	31.0	mg/L	0.04	0.16
01/26/15 9:45	Effluent Grab	Metals	Potassium	22.5	mg/L	1.5	6
01/26/15 9:45	Effluent Grab	Metals	Sodium	630	mg/L	2.5	10
01/26/15 9:45	Effluent Grab	Metals	Nickel	1.58	ug/L	0.25	1
01/26/15 9:45	Effluent Grab	Nutrients	Sulfate	1.1E+03 A	mg SO4/L	4	10

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:45	Effluent Grab	Nutrients	Chloride	83 A	mg Cl/L	4	10
01/26/15 9:45	Effluent Grab	Nutrients	O-Phosphate-P	0.34	mg P/L	0.04	0.1
01/26/15 9:45	Effluent Grab	Nutrients	Kjeldahl Nitrogen	1.3	mg N/L	0.08	0.2
01/26/15 9:45	Effluent Grab	Nutrients	Fluoride	0.43	mg F/L	0.035	0.1
01/26/15 9:45	Effluent Grab	Nutrients	Organic Carbon	33 A	mg C/L	1	2
01/26/15 9:45	Effluent Grab	Nutrients	Total-P	0.58	mg P/L	0.005	0.05
01/26/15 9:45	Effluent Grab	Nutrients	Turbidity	8.4	NTU	0.1	0.1
01/26/15 9:45	Effluent Grab	Nutrients	NO2NO3-N	0.011	mg N/L	0.004	0.01
01/26/15 9:45	Effluent Grab	Nutrients	Ammonia-N	0.037	mg N/L	0.01	0.025
01/26/15 9:45	Effluent Grab	Nutrients	Color (true)	140	PCU	2.5	6
01/26/15 9:45	Effluent Grab	Nutrients	Alkalinity	217 A	mg CaCO3/L	0.65	2.5
01/26/15 9:45	Effluent Grab	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.24
01/26/15 9:45	Effluent Grab	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.24
01/26/15 9:45	Effluent Grab	Pesticides	Sucralose	0.010 UJ	ug/L	0.01	0.05
01/26/15 9:45	Effluent Grab	Pesticides	Prometon	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Demeton	0.024 U	ug/L	0.024	0.097
01/26/15 9:45	Effluent Grab	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Naled	0.040 U	ug/L	0.04	0.16
01/26/15 9:45	Effluent Grab	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
01/26/15 9:45	Effluent Grab	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
01/26/15 9:45	Effluent Grab	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
01/26/15 9:45	Effluent Grab	Pesticides	Chlorpyrifos Methyl	0.010 UJ	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Norflurazon	0.030 U	ug/L	0.03	0.12
01/26/15 9:45	Effluent Grab	Pesticides	Phorate	0.0051 UJ	ug/L	0.0051	0.02
01/26/15 9:45	Effluent Grab	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:45	Effluent Grab	Pesticides	Disulfoton	0.0051 U	ug/L	0.0051	0.02
01/26/15 9:45	Effluent Grab	Pesticides	Butylate	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
01/26/15 9:45	Effluent Grab	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.081
01/26/15 9:45	Effluent Grab	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
01/26/15 9:45	Effluent Grab	Pesticides	Ethoprop	0.0051 U	ug/L	0.0051	0.02
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzidine	94 UJ	ug/L	94	380
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Pentachlorophenol	0.94 UJ	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	1,4-Dioxane	0.30	ug/L	0.02	0.1
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
01/26/15 9:45	Effluent Grab	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
01/26/15 9:45	Effluent Grab	Nutrients	Temperature	35.65	C		
01/26/15 9:45	Effluent Grab	Nutrients	Dissolved Oxygen	5.74	mg/L		
01/26/15 9:45	Effluent Grab	Nutrients	Sample Depth	0.3	m		
01/26/15 9:45	Effluent Grab	Nutrients	pH	6.45			
01/26/15 9:45	Effluent Grab	Nutrients	Specific Conductance	3059	umhos/cm		
01/30/15 9:15	Effluent Grab	Nutrients	Dissolved Oxygen	5.92	mg/L		
01/30/15 9:15	Effluent Grab	Nutrients	pH	6.34			
01/30/15 9:15	Effluent Grab	Nutrients	Temperature	35.57	C		

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/30/15 9:15	Effluent Grab	Nutrients	Sample Depth	0.3	m		
01/30/15 9:15	Effluent Grab	Nutrients	Specific Conductance	2708	umhos/cm		
01/26/15 9:30	Field Blanks	Metals	Aluminum	5.0 U	ug/L	5	20
01/26/15 9:30	Field Blanks	Metals	Arsenic	0.25 U	ug/L	0.25	1
01/26/15 9:30	Field Blanks	Metals	Silver	0.025 U	ug/L	0.025	0.1
01/26/15 9:30	Field Blanks	Metals	Iron	30 U	ug/L	30	120
01/26/15 9:30	Field Blanks	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
01/26/15 9:30	Field Blanks	Metals	Lead	0.20 U	ug/L	0.2	0.8
01/26/15 9:30	Field Blanks	Metals	Potassium	0.30 U	mg/L	0.3	1.2
01/26/15 9:30	Field Blanks	Metals	Sodium	0.50 U	mg/L	0.5	2
01/26/15 9:30	Field Blanks	Metals	Nickel	0.25 U	ug/L	0.25	1
01/26/15 9:30	Field Blanks	Metals	Selenium	0.20 U	ug/L	0.2	0.8
01/26/15 9:30	Field Blanks	Metals	Calcium	0.075 U	mg/L	0.075	0.3
01/26/15 9:30	Field Blanks	Metals	Zinc	5.0 U	ug/L	5	20
01/26/15 9:30	Field Blanks	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
01/26/15 9:30	Field Blanks	Metals	Chromium	0.30 U	ug/L	0.3	1.2
01/26/15 9:30	Field Blanks	Metals	Copper	0.50 U	ug/L	0.5	1
01/26/15 9:30	Field Blanks	Nutrients	NO2NO3-N	0.004 I	mg N/L	0.004	0.01
01/26/15 9:30	Field Blanks	Nutrients	Color (true)	2.5 U	PCU	2.5	6
01/26/15 9:30	Field Blanks	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
01/26/15 9:30	Field Blanks	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
01/26/15 9:30	Field Blanks	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
01/26/15 9:30	Field Blanks	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
01/26/15 9:30	Field Blanks	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
01/26/15 9:30	Field Blanks	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
01/26/15 9:30	Field Blanks	Nutrients	Ammonia-N	0.002 I	mg N/L	0.002	0.005
01/26/15 9:30	Field Blanks	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
01/26/15 9:30	Field Blanks	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
01/26/15 9:30	Field Blanks	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
01/26/15 9:30	Field Blanks	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.24
01/26/15 9:30	Field Blanks	Pesticides	Norflurazon	0.030 U	ug/L	0.03	0.12

Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:30	Field Blanks	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Chlorpyrifos Ethyl	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Demeton	0.024 U	ug/L	0.024	0.097
01/26/15 9:30	Field Blanks	Pesticides	Ethoprop	0.0051 U	ug/L	0.0051	0.02
01/26/15 9:30	Field Blanks	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
01/26/15 9:30	Field Blanks	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Phorate	0.0051 UJ	ug/L	0.0051	0.02
01/26/15 9:30	Field Blanks	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Chlorpyrifos Methyl	0.010 UJ	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Simazine	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Sucralose	0.010 U	ug/L	0.01	0.05
01/26/15 9:30	Field Blanks	Pesticides	Prometon	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Disulfoton	0.0051 U	ug/L	0.0051	0.02
01/26/15 9:30	Field Blanks	Pesticides	Malathion	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Bromacil	0.041 U	ug/L	0.041	0.16
01/26/15 9:30	Field Blanks	Pesticides	Butylate	0.020 U	ug/L	0.02	0.081
01/26/15 9:30	Field Blanks	Pesticides	Ethion	0.010 U	ug/L	0.01	0.041
01/26/15 9:30	Field Blanks	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
01/26/15 9:30	Field Blanks	Pesticides	Metalaxyl	0.041 U	ug/L	0.041	0.16
01/26/15 9:30	Field Blanks	Pesticides	Naled	0.041 U	ug/L	0.041	0.16
01/26/15 9:30	Field Blanks	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.24
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2-Chlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2-Nitrophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Diethyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Dimethyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Pentachlorophenol	0.94 U	ug/L	0.94	3.8

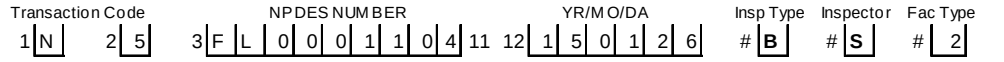
Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2-Chloronaphthalene	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzidine	94 U	ug/L	94	380
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Di-n-octyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.5
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	1,4-Dioxane	0.069 I	ug/L	0.02	0.1
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Hexachlorobutadiene	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.5
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,4-Dichlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Butyl benzyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,4-Dimethylphenol	9.4 U	ug/L	9.4	38
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	4-Nitrophenol	14 U	ug/L	14	57
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Di-n-butyl phthalate	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Isophorone	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.5
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Phenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2,4-Dinitrophenol	14 UJ	ug/L	14	57
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94 U	ug/L	0.94	3.8
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Hexachloroethane	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.75

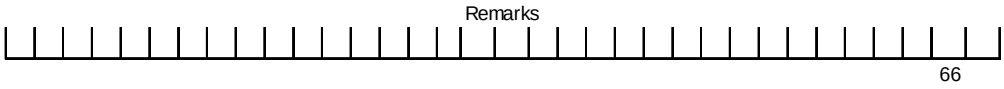
Date_Sampled	Field ID	Analysis Group	Component	Result	Units	MDL	PQL
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38 U	ug/L	38	150
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.5
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8 U	ug/L	2.8	11
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.5
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.75
01/26/15 9:30	Field Blanks	Priority Organic Pollutants	Hexachlorobenzene	0.94 U	ug/L	0.94	3.8

EPA End Sheet

The Bioassay of the Rock Tenn CP, LLC – Fernandina Beach Mill effluent sampled on January 26, 2015, NPDES #FL0001104

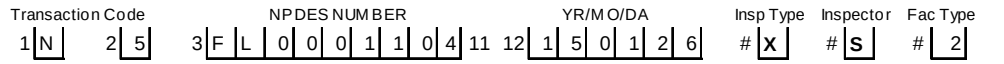
Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

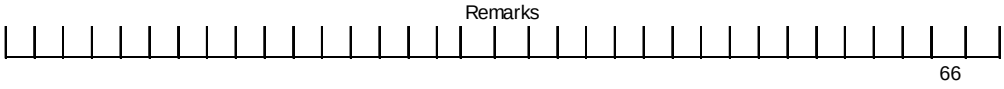




The Priority Pollutants Analysis of the Rock Tenn CP, LLC – Fernandina Beach Mill effluent sampled on January 26, 2015, NPDES #FL0001104

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





Biological Analyses of the Rock Tenn CP, LLC – Fernandina Beach Mill effluent sampled on January 26, 2015, NPDES #FL0001104

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

