Biological Assessment of

Gulf Power Crist Electric Generating Plant

Escambia County

NPDES # FL0002275

Sampled October 6, 2014

January 2015

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual

NELAC Certification No. E31780

CONTENTS

Facility Overview

Methods

Results

Conclusion

Literature Cited

Tables

Table 1. Effluent limits, Class III Freshwater Criteria and field parameters

Table 2. Effluent limits, Class III Freshwater Criteria and analytical water chemistry data

Table 3. Effluent limits, Class III Freshwater Criteria and analytical metals data

Table 4. Measured and predicted freshwater algal growth potential (AGP)

Table 5. Macroinvertebrate dipnet samples – qualitative

Appendices

Appendix A. Map of facility

Appendix B. Facility Summary

Appendix C. Explanation of measurements

Appendix D. Chain of Custody

Appendix E. Physical/Chemical and Habitat Assessment field sheets

Appendix F. Chemical analyses of effluent and receiving water

EPA End Sheet

Facility Overview

The Gulf Power Crist Electric Generating Plant uses non-process, once-through cooling water from Governor's Bayou for condenser cooling in two of the facility's four electric generating units. That water is discharged continuously at D-001 into a discharge canal that flows approximately 1,350 meters (m) into the Escambia River, a Class III Fresh Water (see map Appendix A). The permitted capacity of the wastewater system is 274 million gallons per day (MGD) maximum discharge. The annual daily average flow for October 2013 to September 2014 was 204.80 MGD, and the flow measured during this survey was 195.7 MGD.

Biological assessments are prepared by FDEP 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.

See the Facility Summary (Appendix B) for a description of the facility, summary of permit limits, and Discharge Monitoring Report (DMR) information.

Methods

The purpose of this investigation was to determine the discharge's effects on the biota of the receiving waters. Chemical and biological comparisons were made near the confluence of the discharge canal in the Escambia River between a Control Site (beginning 100 m upstream of the discharge canal and ending 200m upstream of the discharge canal) and a Test Site (beginning 200m downstream of the discharge canal and ending 100 m downstream of the discharge canal). Effluent samples were taken as grab and 24-hour time-proportioned composite samples from monitoring location EFF-01.

All field and laboratory biological methods followed Bureau of Laboratories and Biology Section Standard Operating Procedures (see http://www.dep.state.fl.us/labs/library/lab_sops.htm and http://www.dep.state.fl.us/water/sas/sop/sops.htm for details) and met DEP quality assurance/quality control standards (see http://www.dep.state.fl.us/water/sas/qa/index.htm). Explanations of specific methods and measurements can be found in Appendix C.

The following were involved in this investigation: Nathan Mulkey and Mike King (FDEP Northwest District Office, Pensacola), and FDEP Central Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Mike Tanski and Andrew Tintle).

Results

Physical and Chemical Parameters (See Table 1 and Appendices D, E, and F)

- Habitat Assessment scores were similar at the Test Site (111) and Control Site (113), which places both sites on the high end of the suboptimal category. Both sites received low scores for slow water velocity—this is due to the wind and tidal influences of this portion of the Escambia River. Both sites had similar substrate types and habitat availability.
- The pH (Standard Units), and dissolved oxygen (mg/L and % saturation) of the effluent, Test Site, and Control Site complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and effluent permit limits. The specific conductance (µmhos/cm) and salinity (ppth) of the effluent was approximately 3-4 times higher than at either of the in-stream sites. Tidal influence at the Test and Control Sites may explain their elevated specific conductance above the Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and higher-than-freshwater salinity values.

Organic Constituents (See Table 2 and Appendix F)

- 1,4 dioxane was detected in the effluent composite, Test Site, and Control Site samples between the method detection limit (MDL) and the practical quantitation limit (PQL), and was detected in a much higher amount in the field blank. Both the effluent composite and the field blank sample were improperly preserved (Y-qualifier).

Nutrients (See Table 2 and Appendix F)

- Effluent composite sample nutrient concentrations were low and similar to most of the nutrient concentrations detected in both the Test and Control Site samples. Ortho-phosphate was detected between the MDL and the PQL at the Control Site, and in slightly higher amounts in the effluent composite and Test

Site samples. All nutrient results complied with Class III Freshwater Criteria (62-302.530, F.A.C.), indicating there was no detectable nutrient enrichment from the effluent at the Test Site.

- The only nutrient detected in the field blank was total ammonia, which was reported at a value between the MDL and the PQL.

Analytical Water Chemistry (See Table 2 and Appendix F)

- Turbidity, alkalinity, and fluoride concentrations in the effluent composite, Test Site, and Control Site samples complied with the Class III Freshwater Criteria (62-302.530, F.A.C.).
- Chlorophyll *a* (corrected) was detected at similar levels in the effluent composite, Test Site, and Control Site samples.
- Oils and Greases of the effluent grab, Test Site, and Control Site samples complied with effluent permit limit and/or Class III Freshwater Criteria (62-302.530, F.A.C.).
- Total alpha was not detected in any of the samples and complied with effluent permit limit and/or Class III Freshwater Criteria (62-302.530, F.A.C.). Radium 226 was detected in low concentrations in the effluent composite and Test Site samples (estimated values, J-qualifier) and was not detected in the Control Site sample; radium 228 was not detected in any of the samples. Radium 226 + radium 228 values in the effluent grab, Test Site, and Control Site samples complied with effluent permit limit and/or Class III Freshwater Criteria (62-302.530, F.A.C.).
- None of the analytes were detected in the field blank.

Toxicity Whole Effluent Test (See Appendix F)

- The first toxicity tests were unable to be completed due to being scheduled as freshwater while the effluent salinity required marine testing. There was not enough sample collected to set up marine tests.
- The second toxicity tests were cancelled due to a late shipment of effluent renewal water. Effluent composite samples were taken to begin the toxicity tests, but the following shipment of effluent composite sample for test water renewal was held at the airport and did not arrive in time to continue the tests.
- The district staff declined sampling a third time.

Metals (See Table 3 and Appendix F)

- All metals detected in the effluent composite samples were present in concentrations that complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.) and effluent permit limits.
- Effluent composite sample arsenic, calcium, copper, magnesium, potassium, and sodium were detected in higher levels in the effluent than in either the Test or Control Site samples. Cadmium, selenium, and zinc were detected between the MDL and the PQL in the effluent composite sample and were not detected in either the Test or Control Site samples.
- All metals in Control and Test Site samples were either undetected or detected at levels that complied with Class III Freshwater Quality Criteria (62-302.530, F.A.C.). Aluminum, chromium, and nickel were each detected in higher concentrations in the Test Site sample than in the effluent composite or Control Site samples. The concentrations of aluminum detected in the effluent composite sample and Control Site sample were similar. Total chromium was detected between the MDL and the PQL in the effluent grab sample and was undetected in the Control Site sample. Nickel was detected in the effluent composite and Control Site samples between the MDL and the PQL.
- Cadmium and zinc were detected in the field blank between the MDL and the PQL.

Algal Growth Potential (See Table 4 and Appendix F)

- The salinity of the effluent and Test and Control Site samples required marine AGP analyses using the saltwater species, *Dunaliella tertiolecta*. Raschke and Shultz (1987) determined that AGP values above 10.0 mg dry weight/L, which represents a “problem” threshold, imply nutrient enrichment for marine receiving waters. The AGP value of the effluent was below the marine problem threshold. The AGP value of the Test Site sample was approximately half that of the effluent. The AGP value of the Control Site sample was below the detection limit. The analytical chemistry suggests that the effluent and Test and Control Sites are phosphate-limited.

Bioassessment

Periphyton (See Appendix E)

- The Rapid Periphyton Surveys (RPS) conducted at the Test Site showed no evidence of nutrient enrichment in comparison with the RPS of the Control Site. Filamentous mat-forming algae were not found at any of the sampled points at the Test Site, and were found at 4% of the sampled points at the Control Site.

Macroinvertebrates (See Table 5)

- The Stream Condition Index (SCI) tool is not appropriate for tidally influenced areas. Twenty dipnet composite samples were performed to capture qualitative community composition data at the sites during this sampling event.
- Sensitive taxa and Tanytarsini individuals were not found in either sample. The amphipod, *Gammarus sp* b, was the dominant taxon in each replicate sample for both sites. Ephemeroptera, Trichoptera, long-lived taxa, and clinger taxa were either absent or present in low numbers in both site samples. The Control Site sample had more suspension feeders and filterers, but also had a higher percentage of very tolerant individuals (see Appendix C for an explanation of how these metrics typically respond to human disturbance). The most pronounced differences in community composition between the Control and Test Site samples were the decrease in amphipods (~59% to 30.9%) and the increase in dipterans (~11% to 30%) and gastropods (~4% to ~13%). Community differences may be more related to conductivity effects than effluent impacts.
- For more information or to obtain a copy of the taxa lists, please contact the Biology Laboratory at 850-245-8177.

Conclusion

Effluent nutrient concentrations were similar to those found in the Test and Control Site samples. AGP values of the effluent and the Test and Control Sites were below the problem threshold. Along with low RPS scores at each site, these results provide evidence that the receiving waters are not being nutrient-enriched by the effluent. Macroinvertebrate communities at both sites are likely affected by tidal influences, including high specific conductivity, on that portion of the Escambia River.

Literature Cited

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Table 1. Effluent limits, Class III Freshwater Criteria and field parameters

Gulf Power Crist	Units	Class III Criteria	Effluent Permit Limits	Effluent Grab	Test Site	Control Site
Habitat Assessment	-	-	-	-	111	113
Sample Depth	m	-	-	-	0.15	0.15
Temperature	C	≥ 34.4	-	26.1	22.3	22.8
pH	SU	6.0 - 8.5	6.0 - 8.5	6.6	7.9	7.6
Dissolved Oxygen	% saturation	≥ 67	-	91.2	78.6	76.8
Dissolved Oxygen	mg/L	-	-	7.1	6.8	6.5
Specific Conductance	umhos/cm	≤ 1,275	-	14,340	3,618	4,454
Salinity	ppth	-	-	8.11 c	2 c	2.5 c

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

Table 2. Effluent limits, Class III Freshwater Criteria and analytical water chemistry data

Gulf Power Crist	Units	Class III Criteria	Effluent Permit Limits	Effluent 24-hr Composite	Test Site	Control Site	Field Blank
Analytical Organic and Pesticide data							
1,4-Dioxane	µg/L	-	-	0.030 IY	0.023 I	0.023 I	0.24 Y
Analytical Water Chemistry							
Ortho-phosphate	mg P/L	-	-	0.011	0.017	0.008 I	0.004 U
Total Phosphorus	mg P/L	-	-	0.028	0.026	0.025	0.002 U
Total Ammonia	mg N/L	-	-	0.10	0.052	0.050	0.003 I
Un-ionized Ammonia (calculated salinity)	mg N/L	≤ 0.02 s	-	< 0.02 c	< 0.02 c	< 0.02 c	-
Nitrate and Nitrite	mg N/L	-	-	0.28	0.39	0.40	0.004 U
Total Kjeldahl Nitrogen	mg N/L	-	-	0.34	0.25	0.26	0.080 U
Organic Nitrogen	mg N/L	-	-	0.24 c	0.2 c	0.21 c	0.037 c[1]
Total Nitrogen	mg N/L	-	-	0.62 c	0.64 c	0.66 c	0.042 c[1]
Total Organic Carbon	mg C/L	-	-	3.5	3.2	3.3	0.50 U
Chlorophyll *a* - Corrected	µg/L	-	-	2.4	1.7	2.0	-
Phaeophytin	µg/L	-	-	1.0 I	0.40 U	0.40 U	-
CBOD, 5 day, N - inhibited	mg/L	-	-	1.6 IJ	1.2 IJ	1.2 IJ	-
Hardness	mg/L	-	-	1,620 c	354 c	354 c	0.35 c
Total Suspended Solids	mg/L	-	-	9 I	5 I	4 I	-
Turbidity	NTU	< 29 t	-	3.8	4.5	4.3	0.10 U
Color (true)	PCU	-	-	10	21 A	19	2.5 U
Alkalinity	mg CaCO3/L	≥ 20	-	50	35	37	0.65 U
Chloride	mg Cl/L	-	-	4,800	990	1,000	0.20 U
Fluoride	mg F/L	≤ 10.0	-	0.32	0.097 I	0.099 I	0.035 U
Sulfate	mg SO4/L	-	-	670	140	150	0.20 U
Oils and Greases	mg/L	≤ 5.0	≤ 5.0 p	0.78 pU	0.80 U	0.77 U	0.77 U
Alpha, Total	pCi/L	≤ 15	≤ 15	55.4 U	21.8 U	16.1 U	1.37 U
Alpha-Counting Error	pCi/L	-	-	29.3	10.4	8.31	0.819
Radium 226	pCi/L	-	-	0.247 J	0.190 J	0.186 U	0.135 U
Radium 226-Counting Error	pCi/L	-	-	0.10	0.11	0.10	0.059
Radium 228	pCi/L	-	-	0.762 U	0.757 U	0.788 U	0.445 U
Radium 228-Counting Error	pCi/L	-	-	0.36	0.34	0.35	0.20
Radium 226 + 228	-	≤ 5	≤ 5	0.247 c[2]	0.190 c[2]	0 c[2]	0 c[2]

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

c - Value is calculated

p - Grab sample, not 24 hour time-proportioned composite

s - Single sample

t - Shall not exceed 29 NTUs above background

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

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.

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

2 – Value is calculated using zero for the value of the analyte(s) that were not detected

Table 3. Effluent limits, Class III Freshwater Criteria and analytical metals data

Gulf Power Crist	Units	Effluent Class III Criteria	Effluent Permit Limits	Effluent 24-hr Composite	Test Site Class III Criteria	Test Site	Control Site Class III Criteria	Control Site	Field Blank
Hardness	mg CaCO3/L	-	Report	1620 c	-	354 c	-	354 c	0.35 c
Aluminum	µg/L	-	-	117	-	158	-	126	5.0 U
Arsenic	µg/L	≤ 50	≤ 50	1.06	≤ 50	0.63 I	≤ 50	0.67 I	0.25 U
Cadmium	µg/L	≤ 0.756 b	≤ 0.756 b	0.094 I	≤ 0.69 b	0.050 U	≤ 0.691 b	0.050 U	0.065 I
Calcium	mg/L	-	-	107	-	31.2	-	31.2	0.075 U
Chromium, Total	µg/L	≤ 268 b[3]	≤ 11 [4]	0.47 I	≤ 243 b	1.8	≤ 243 b	0.30 U	0.30 U
Copper	µg/L	≤ 30.5 b	≤ 30.5 b	3.03	≤ 27.5 b	0.50 I	≤ 27.5 b	0.50 U	0.50 U
Iron	µg/L	≤ 1,000	≤ 1,000	470	≤ 1,000	570	≤ 1,000	520	30 U
Lead	µg/L	≤ 18.6 b	≤ 18.6 b	0.20 U	≤ 15.9 b	0.20 U	≤ 15.9 b	0.20 U	0.20 U
Magnesium	mg/L	-	-	328	-	67.0	-	67.1	0.040 U
Mercury	ng/L	-	12.0 p	1.4 p	-	1.4	-	1.4	0.10 U
Nickel	µg/L	≤ 169 b	≤ 169 b	0.69 I	≤ 152 b	1.40	≤ 152 b	0.41 I	0.25 U
Potassium	mg/L	-	-	93	-	20.4	-	20.4	0.30 U
Selenium	µg/L	≤ 5.0	≤ 5.0	0.31 I	≤ 5.0	0.20 U	≤ 5.0	0.20 U	0.20 U
Silver	µg/L	≤ 0.07	-	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	0.025 U
Sodium	mg/L	-	-	2640	-	546	-	550	0.50 U
Zinc	µg/L	≤ 388 b	≤ 388 b	8.2 I	≤ 350 b	5.0 U	≤ 350 b	5.0 U	5.4 I

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

p - Grab sample, not 24 hour time-proportioned composite

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

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

4 - Effluent permit limit is for chromium-VI

Table 4. 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

Gulf Power Crist								
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	*Dunaliella tertiolecta*	6.06	not applicable [5]	not applicable [5]	not applicable [5]	not applicable [5]	34.5	22.1
Test Site	*Dunaliella tertiolecta*	3.53	not applicable [5]	not applicable [5]	not applicable [5]	not applicable [5]	26	24.6
Control Site	*Dunaliella tertiolecta*	3.00 U	not applicable [5]	not applicable [5]	not applicable [5]	not applicable [5]	56.3	26.4

Dunaliella tertiolecta - saltwater species

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

5 - Predictions not applicable to marine matrix

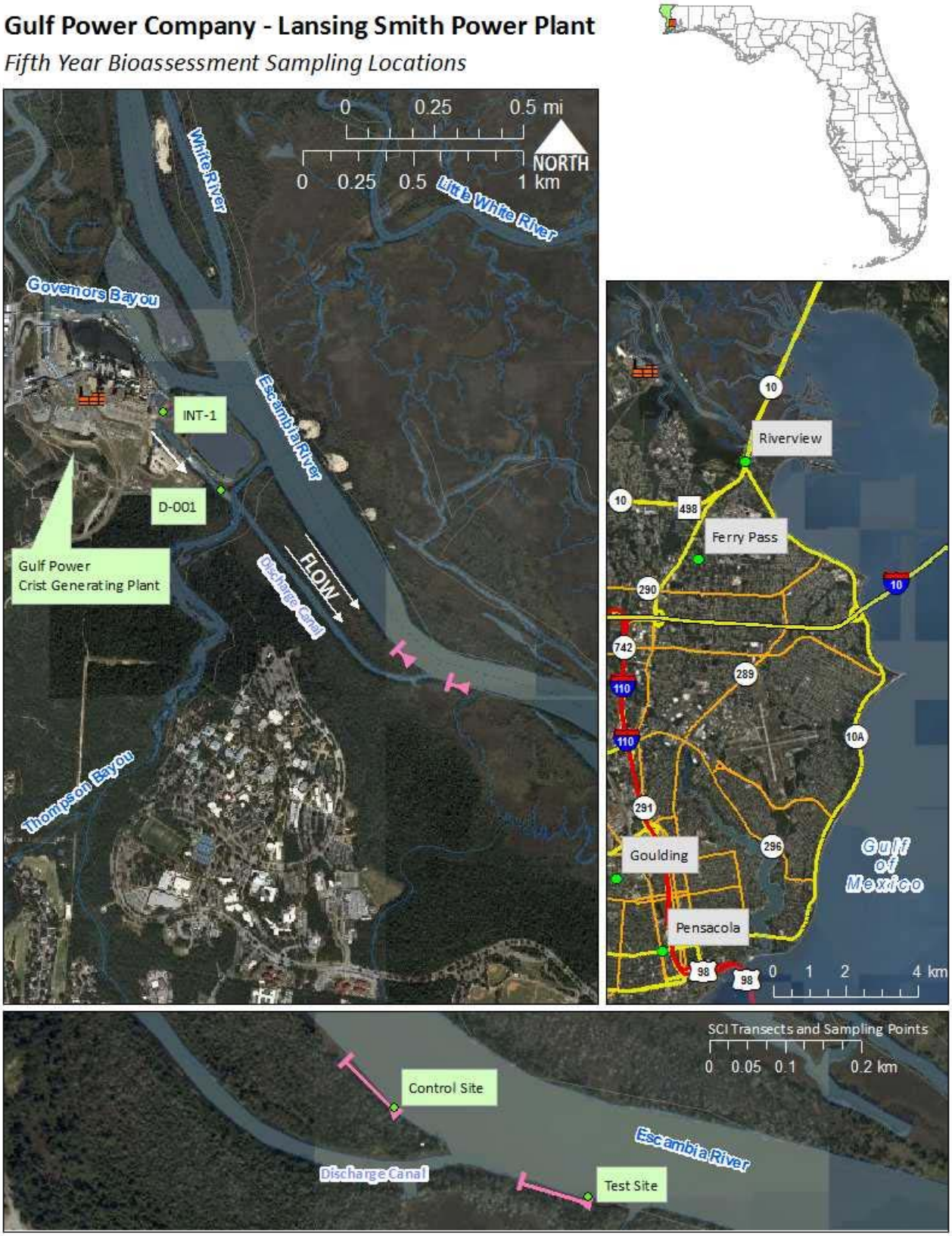
Table 5. Macroinvertebrate Dipnet Samples – Qualitative.

Gulf Power Crist	Test Site		Control Site	
Community Metrics	Rep 1	Rep 2	Rep 1	Rep 2
Number of Total Taxa	22	21	25	26
Number of Ephemeroptera Taxa	0	0	1	1
Number of Trichoptera Taxa	0	0	1	0
Number of Clinger Taxa	1	0	2	1
Number of Long-lived Taxa	2	2	4	4
Number of Sensitive Taxa	0	0	0	0
Percent of Dominant Taxon	28.2	31.8	19.1	14.8
Percent Suspension Feeders and Filterers	1.0	11.4	15.8	16.1
Percent of Tanytarsini Individuals	0.0	0.0	0.0	0.0
Percent of Very Tolerant Individuals	5.1	3.3	12.5	14.8
Total Number of Individuals	156	154	152	149
Community Composition: Percent of total				
Dominant Taxon Name	*Gammarus sp.* b (Amphipoda)	*Gammarus sp.* b (Amphipoda)	*Gammarus sp.* b (Amphipoda)	*Gammarus sp.* b (Amphipoda)
Acariformes	0.0	0.0	0.7	0.0
Amphipoda	56.4	61.0	32.2	29.5
Bivalvia	7.7	7.8	7.9	6.7
Coleoptera	1.3	0.7	0.0	0.0
Decapoda	5.8	3.3	7.9	5.4
Diptera	12.2	11.0	32.2	29.5
Ephemeroptera	0.0	0.0	0.7	1.3
Gastropoda	5.1	3.9	11.2	16.1
Heteroptera	0.0	0.0	2.6	5.4
Isopoda	1.3	3.9	1.3	5.4
Odonata	7.1	4.6	0.7	0.7
Polychaeta	1.9	3.9	0.7	0.0
Trichoptera	0.0	0.0	2.0	0.0
Other	1.3	0.0	0.0	0.0
Functional Feeding Groups: Percent of total				
Browser-Grazers	15.7	9.7	2.0	4.4
Piercers	0.0	0.0	2.0	0.0
Predators	10.9	7.5	7.6	6.7
Scavengers	31.7	26.6	14.1	12.4
Scrapers	0.6	0.0	0.0	0.7
Shredders	4.8	4.9	10.9	13.4
Surface Deposit Feeders	23.1	27.0	29.3	26.9
Suspension Feeders	1.0	11.4	15.8	16.1
Unknown	10.3	9.1	17.8	19.5

A - Value reported is the mean of two determinations

Appendix A

Map of Facility



Appendix B

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

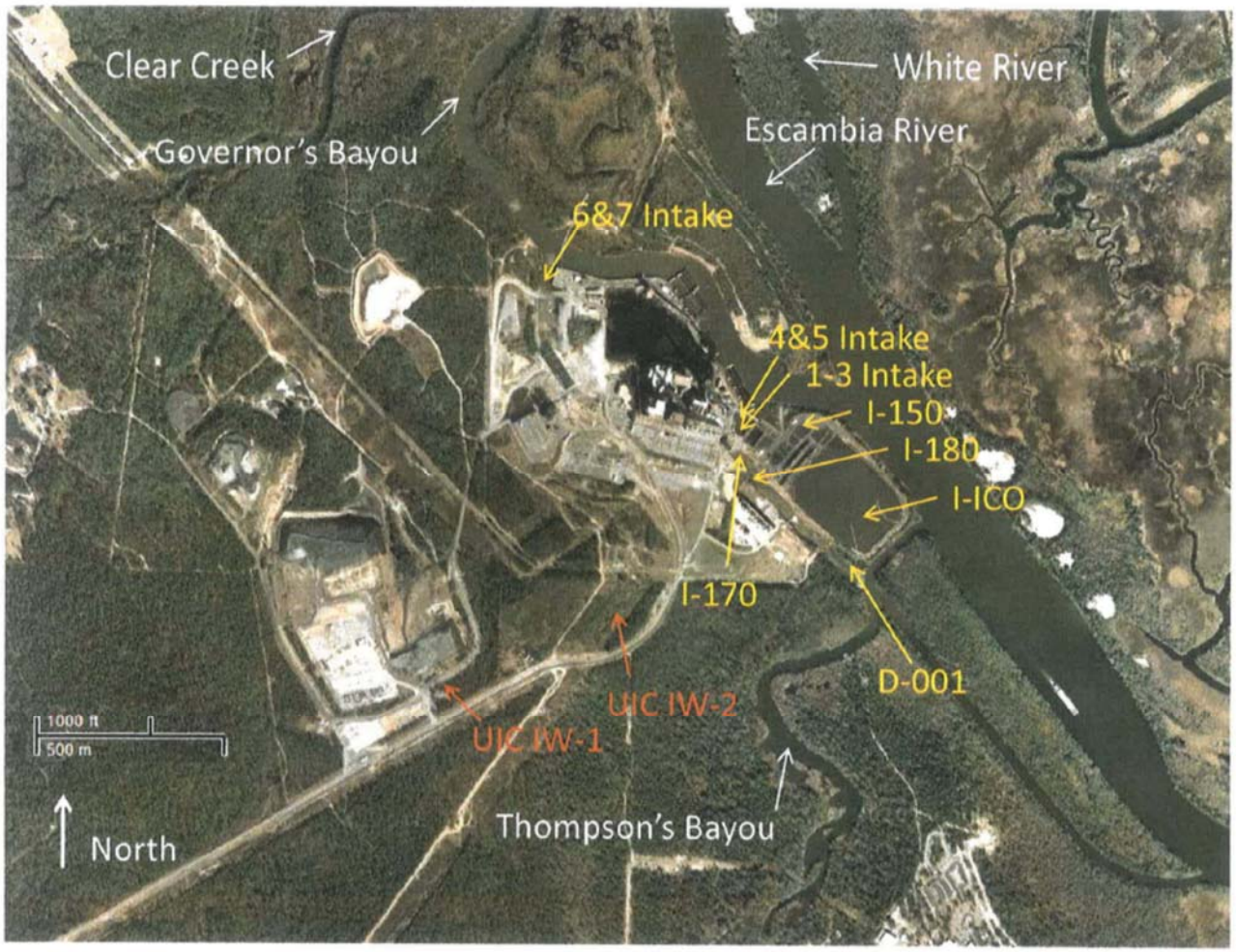
PART I: Information gathered prior to sampling event	
Prepared By: Shelley Alexander	**Contact Number:** 850-595-0677
Facility Name (as it appears on permit): Gulf Power Crist Electric Generating Plant	**Former Names:**
NPDES Permit Number: **FL0002275**	**Permit Expiration Date:** **January 27, 2016**
Physical Address: End of Pate Road, off Ten Mile Road	
District: NWD	**County:** Escambia
Function of Facility: Electric Generating Plant	
Facility Type: Power Plant	**Permitted Capacity (MGD):** 274 MGD max discharge
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): **10/31/2013-09/30/2014 204.80 MGD**	
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):

FLW-1 Flow from condenser inlets
INT-1 Intake to condensers
EFF-1 Immediatley upstream of the underflow at Thompson's Bayou
FLW-3 Flow from ash pond discharge weir
EFF-2 Ash pond discharge weir
FLW-4 Flow from metal cleaning treatment pond
EFF-3 Metal cleaning treatment pond pump discharge
FLW-5 Flow of reclaimed water pipeline for makeup of Units 6 and 7 cooling towers
OUI-6 Cooling tower conveyance line, prior to valve that directs blowdown to either the intake structure or the ash pond
FLW-6 Flow of reclaimed and spent reclaimed water directed for reuse into the intake tunnel
FLW-7 Flow of reclaimed and spent reclaimed water directed for reuse into the discharge tunnel
OUI-5 Reclaimed water pipeline for makeup of Units 6 and 7 cooling towers
OUI-7 Reclaimed water pipeline prior to discharge into the discharge tunnel

Description of Permitted Outfall(s):

D-010 Surface Water Discharge into Escambia River
I-150 Internal Outfall, existing discharge to the on-site ash pond
I-170 Internal Outfall, existing discharge to the on-site ash pond
I-180 Internal Outfall, existing discharge to the intake tunnel for use as once-through cooling water
I-1C0 Internal Outfall, existing discharge to the main discharge canal prior to Outfall D-010


Clear Creek
White River
Governor's Bayou
Escambia River
6&7 Intake
4&5 Intake
1-3 Intake
I-150
I-180
I-ICO
I-170
D-001
UIC IW-2
UIC IW-1
1000 ft
500 m
North
Thompson's Bayou

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

FACILITY DESCRIPTION:

This facility consists of seven coal-fired steam electric generating units (Units 1-7). Units 1-3 are currently retired and Units 4-7 are in use. The total nameplate capacity is 930 megawatts (MW) with a gross generation capacity of 994 MW. Units 4 and 5 use once-through cooling water (OTCW) for condenser cooling. A once-through helper cooling tower located at the discharge canal may be operated during the summer months (based on discharge temperature) to lower the temperature of the combined once-through cooling water discharge.

The closed-loop cooling tower systems for Units 6 and 7 use either reclaimed water from the Emerald Coast Utilities Authority (ECUA) Central Water Reclamation Facility (CWRF), FLA559351, or water from the Escambia River as makeup water. When river water is used as makeup for the Units 6 and 7 cooling towers, blowdown is discharged to the ash pond. When reclaimed water from ECUA is used as makeup for the Units 6 and 7 cooling towers, a portion of the blowdown (spent reclaimed water) from the cooling towers is used as process water for the flue gas desulfurization (FGD) system, and the remaining portion is returned to the headworks of the ECUA CWRF via the sanitary sewer collection system. During cooling tower outages, reclaimed water is used in the Units 4 and 5 OTCW systems.

WASTEWATER TREATMENT:

Non-process, once-through cooling water from Units 4 and 5 discharges to the Escambia River, a Class III fresh water. All treated and untreated industrial process wastewater is discharged to the ash pond or via underground injection (permit number IW0085658). Wastewater streams that discharge to the ash pond include: ash sluice water, overflow from the bottom ash dewatering bins, neutralized demineralizer regeneration wastewater, cooling tower blowdown, boiler blowdown, floor drainage, auxiliary equipment cooling water and seal water, coal pile runoff, yard sump discharge, and treated metal cleaning wastewater. The wastewater streams listed above that have the potential to contain oil are first routed through the oil skimmer pond prior to discharge to the ash pond. All domestic wastewater generated at the facility is collected and piped to Emerald Coast Utilities Authority (ECUA) sanitary sewer collection system.

Combustion By-Products management areas and their wastewater treatment.

Ash Landfill: on-site 78-acre solid waste management facility
Fly Ash Storage Area
Bottom Ash Storage Area.
Surface water runoff from the on-site solid waste management facility shall be collected into the stormwater pond which discharges through evaporation and percolation to groundwater or by a pipeline to the recycling cooling tower basin for Units 6 or 7

Gypsum Storage Areas 1 and 2

The gypsum slurry is conveyed to either the new onsite lined gypsum storage area or the new gypsum dewatering system. Gypsum slurry that is transported to the storage area is stacked in piles. The gypsum solids will build up on the piles with the water separating from the solids by gravity. The produced water will be pumped into the return water pond.

Gypsum slurry that is routed to the gypsum dewatering system will be separated into two separate streams. One, referred to as filter cake, will contain mostly solids gypsum with little water while the other, referred to as filtrate, will be mostly water with little gypsum solids. The filter cake will be stored onsite until it is either loaded onto barges that are moored on Governor's Bayou or loaded to other types of transporters for delivery to wall board manufacturers. Gypsum determined not to meet the wall board manufacturing specifications may be marketed for agricultural use as authorized by the Florida Department of Agriculture and Consumer Services (FDACS) or other uses as authorized by the appropriate authorizing agency. The filtrate will be pumped to the return water pond.

Pumps will withdraw water from the return water pond to the return water tank for reuse back into the FGD system.

There are no surface water discharges associated with either the lined gypsum storage area or the gypsum dewatering system.

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)

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, thepermittee is authorized to discharge once-through non-contact cooling water, restricted supply of reclaimed water from ECUA, and ash pond overflow from Outfall D-010 to Escambia River. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.D.3.:

			Effluent Limitations		Monitoring Requirements			
Parameter	Units	Max/ Min	Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	Notes
Flow	MGD	Max Max	Report Report	Daily Average Daily Maximum	Daily; 24 hours	Calculated	FLW-1	
Temperature (F), Water	Deg F	Min	94.0	Daily Average	Continuous	Calculated	EFF-1	See I.A.4
pH	s.u.	Min Max	6.0 8.5	Daily Minimum Daily Maximum	Weekly	Grab	EFF-1	
Oxidants, Total Residual	mg/L	Max Max	0.01 0.01	Monthly Average Daily Maximum	Weekly	Multiple Grab[1]	EFF-1	See I.A.5, I.A.6
Total Residual Oxidants (TRO) Discharge Time	min/ day/ unit	Max Max	120 120	Monthly Average Daily Maximum	Quarterly	Meter	EFF-1	See I.A.5, I.A.6
Oil and Grease	mg/L	Max Min	5.0 5.0	Monthly Average Daily Maximum	Quarterly	Grab	EFF-1	
Arsenic, Total Recoverable	ug/L	Max Max	50.0 50.0	Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.8
Cadmium, Total Recoverable	ug/L	Max		Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.7, I.A.8
Chromium, Hexavalent Total Recoverable	ug/L	Max Max	11 11	Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.8, I.A.9
Copper, Total Recoverable	ug/L	Max		Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.7, I.A.8
Iron, Total Recoverable	mg/L	Max Max	1.0 1.0	Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.8
Lead, Total Recoverable	ug/L	Max		Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.7, I.A.8
Mercury, Total Recoverable	ug/L	Max Max	0.012 0.012	Monthly Average Daily Maximum	Quarterly	Grab	EFF-1 INT-1	See I.A.8
Nickel, Total Recoverable	ug/L	Max		Monthly Average Daily Maximum	Annually	24-hr TPC	EFF-1 INT-1	See I.A.7, I.A.8
Selenium, Total Recoverable	ug/L	Max Max	5.0 5.0	Monthly Average Daily Maximum	Annually	24-hr TPC	EFF-1 INT-1	See I.A.8

Zinc, Total Recoverable	ug/L	Max		Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.7, I.A.8
Hardness, Total (as CaCO3)	mg/L	Max	Report	Single Sample	Quarterly	24-hr TPC	EFF-1	
Alpha, Gross Particle Activity	pCi/L	Max Max	15.0 15.0	Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.8
Radium 226 + Radium 228, Total	pCi/L	Max Max	5.0 5.0	Monthly Average Daily Maximum	Quarterly	24-hr TPC	EFF-1 INT-1	See I.A.8

[1] Multiple grabs for Total Residual Oxidants shall consist of grab samples collected at approximately the beginning of the period of expected oxidant discharge and once every 15 minutes thereafter until the end of the period of expected oxidant discharge.

			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 (Ceriodaphnia dubia/ Mysidopsis bahia)	percent	Min	100	Single Sample	Quarterly	24-hr TPC	EFF-1	See I.A.13
Chronic Whole Effluent Toxicity, 7-Day IC25 (Pimephales promelas/ Menidia beryllina)	percent	Min	100	Single Sample	Quarterly	24-hr TPC	EFF-1	See I.A.13

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Escambia River	**Class III Freshwater**

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

13. The permittee shall comply with the following requirements to evaluate chronic whole effluent toxicity of the discharge from outfall D-010.

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 issuance 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 13.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 13.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 requirem nt 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 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) If the composite effluent salinity is less than 1.0 parts per thousand (ppt) measured as conductivity, the permittee shall conduct a daphnid, Ceriodaphnia dubia, Survival and Reproduction Test and a fathead minnow, Pimephales promelas, Larval Survival and Growth Test, concurrently. If the composite effluent sample salinity is greater than or equal to 1 ppm, measured as conductivity, the permittee may conduct 7-day survival and growth chronic toxicity tests with a mysid shrimp, Americamysis (Mysidopsis) bahia, Method 1007.0, and an inland silverside, Menidia beryllina, Method 1006.0, concurrently. When using freshwater species, the permittee should consider whether the salinity of the composite effluent in the second and third sample will continue to be less than 1 ppt.

(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 if using freshwater species; and Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd Edition, EPA-821-R-02-014, if using saltwater species. 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) (a) If freshwater species are used, the control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7.2.3.

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

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

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

iii. 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 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 test does not meet "test acceptability criteria", 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**); and EPA-821-R-02-014, Section 14.12 (**Americamysis bahia**) and Section 13.12 (**Menidia beryllina**). The repeat test shall begin within 21 days after the last day of the invalid test.

(3) If 100% mortality occurs in all effluent concentrations for either 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, or EPA-821-R-02-014 Section 10.2.6., and the evaluation shall be included with the bioassay laboratory reports.

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

Facility Mixing Zone Details (if applicable):

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year: **Date: 12/31/2013**	Parameter and Units **P 11503 Total Radium 226+Radium 228 pCi/L**	Limit **0.0 pCi/L**	Result **0.4 pCi/L**
Date: 2/28/2013	**P TRPC6 IC25 Statre 7 Day Chr Pimephales %**	**9.5 %**	**100 %**

Date	Parameters	Permit Limit	Analytical Value
July 2014	**Oil and Grease**	**10.0 mg/l**	**21.0 mg/l**
April-July 2014	**Lead, Total Recoverable**	**0.0 ug/l**	**0.3 ug/l**

Note: During the CEI inspection the facility staff stated the total recoverable lead was resampled and it was non detected for lead; however, there was no explanation for this, it was just noted as an exceedance. Note: Facility note on July 2014 DMR cover letter reads: "Gulf Power is reporting one exceedance for Plant Crist for July 2014. One Oil and Grease exceedance is reported for internal outfall I-1CO, the Ash Pond Discharge to the Discharge Canal. The result of the sample collected on July 15, 2014 is 21 mg/l. All prior and subsequent samples collected in July 2014 were below the detection limit for oil and grease. Gulf Power believes this sample to be anomalous."

Describe previous FYI and WQBEL study:

Describe previous or current Enforcement Actions (including WLs):

Describe any violations or problems noted in previous inspection:

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

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

PART II: Sampling Event Information	Sampler(s): Shelley Alexander, Kevin Holler
Date(s) sample collected: 10/6/2014	pH (SU):6.56
Temperature (Deg C): 78.95 Farenheit	Conductivity (umhos/cm): 14.34 M
Dissolved Oxygen (mg/L): 7.06 mg/L	Total Residual Chlorine - after Disinfection (mg/L): NE
Total Residual Chlorine (mg/L): NE	Method of De-chlorination: NE
Method of Chlorination: NE	
Flow During Sample Collection for each outfall(MGD): 195.7 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): 10/31/2013-09/30/2014 204.80 MGD	
Describe Discharge during Sampling Event: ☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify	
Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here: **Effluent samples for toxicity testing were taken by the Department; however, sampling was discontinued on the third day of sampling due to the second day effluent sample shipment being delayed at airport due to fog.**	

Appendix C

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/qa/index.htm.

(2) Chemical Analyses of the Effluent

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

(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) Habitat Assessment

Habitat assessment is used to evaluate the physical structure and extent of disturbance in a waterbody. Eight aspects are ranked, with 20 possible points for each aspect (QA Rule SOP FT 3100). The Habitat Assessment score includes types and amounts of benthic substrates, water velocity, amount of sand or silt accumulation, extent of artificial channelization, bank stability, and riparian zone width and vegetation type. All scores are summed to yield an overall Habitat Assessment score. Habitat Assessment score ranges from 11-160 and overall habitat quality is assigned to one of four categories: Optimal (120-160 points), Suboptimal (80-119 points), Marginal (40-79 points), and Poor (11-39 points).

(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 5.0 mg dry weight/L represents a “problem” threshold for fresh 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 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 (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 62-302.530(61), F.A.C.

(6) Benthic Macroinvertebrate Assemblages

Qualitative collections are made using 20 dipnet sweeps (QA Rule SOP FS7420). Benthic macroinvertebrates were sorted and identified to the lowest practical taxonomic level, usually species.

Taxa richness: Taxa richness is the number of distinct macroinvertebrate taxa present in a sample. Stress, habitat destruction and pollution tend to reduce the number of different types of organisms present (Karr and Chu 1998). Decreases in taxa richness related to a facility’s effluent may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), F.A.C..

Percent Contribution of Dominant Taxon: Percent contribution of the dominant taxon is calculated by dividing the number of individuals in the most abundant taxa by the total number of individuals counted. Percent contribution of the dominant taxon tends to increase with increasing perturbation (Plafkin *et al*., 1989). Increases in the percent contribution of the dominant taxon related to a facility’s effluent 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..

Community Composition: Shifts in proportions of major groups of organisms downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Fore et. al. 2007, Karr and Chu 1998). Shifts in community composition related to a facility's effluent may constitute exceedances of 62-302.530(46) F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), F.A.C.

Functional Feeding Groups: Environmental degradation may differentially affect groups of invertebrates based on how the group feeds (e.g. predators, deposit feeders, etc.). In Florida, pollution may be responsible for reducing the numbers of filter feeders and shredders (Fore et. al. 2007). Changes in the proportions of functional feeding groups related to a facility's effluent may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C. and/or 62-302.530(61), F.A.C..

The Stream Condition Index (SCI): The SCI is a composite macroinvertebrate metric developed for Florida (Fore et. al. 2007). This Index was revised in 2007 using data from qualitative dipnet samples. The SCI now assigns points to ten parameters; depending on how closely each parameter approaches an expected value (QA Rule SOP LT 7200). Points are assigned according to in which bioregion (Panhandle, Northeast, or Peninsula) the sampling location exists -and summed to yield a final SCI score (range 0-100). Included in the calculation of SCI are taxa richness, number of Ephemeroptera taxa, number of Trichoptera taxa, percent contribution of the dominant taxon, number of sensitive taxa, number of clinger taxa, number of long-lived taxa, percent contribution of Tanytarsini, percent contribution of very tolerant, and the percent contribution of suspension and filter feeders. As human disturbance increases, it is expected that taxa richness, the number of Ephemeroptera taxa, Trichoptera taxa, sensitive taxa, clinger taxa, long-lived taxa, and the percent contribution of Tanytarsini and suspension and filter feeders will decrease while percent contribution of dominant taxon, and percent contribution of very tolerant taxa will increase.

Scores are broken into three categories (1, 2, and 3). Sites in Category 1 are described as having higher diversity than Category 2 sites, particularly for Ephemeroptera and Trichoptera. A Category 1 site may have several more clinger and sensitive taxa, a higher proportion of Tanytarsini, and a lower percent of a dominant taxon than a site in Category 2. The site will also have a very small percentage of very tolerant individuals, if any.

Sites in Category 2 are described as having an average of 30 species with several different taxa of Ephemeroptera and Trichoptera. A Category 2 site also has several different long-lived taxa and, on average, 5 clinger and 6 sensitive taxa. There is a slight increase in dominance by a single taxon relative to sites in Category 1. Very tolerant taxa represent a small percentage of individuals but are noticeably increased as compared to sites in Category 1.

Sites in Category 3 are described as having a notable loss in taxonomic diversity, and Ephemeroptera, Trichoptera, long-lived, clinger and sensitive taxa are uncommon or rare. Filter feeders are reduced by at least 50%. The site is dominated by a tolerant taxon, and very tolerant individuals represent a large proportion of the individuals collected.

SCI 2007 categories are from Table LT 7200-2 of DEP-SOP-002/01 as referenced in Draft Quality Assurance Rule (62-160, F.A.C.), December 3, 2008. A decrease in ordinal SCI score from the Control to the Test site may be evidence of degradation related to a facility's effluent. An SCI score in Category 3, if it is shown to be related to a facility's effluent, may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C., 62-302.530(47)(b), F.A.C., or of 62-302.530(61).

(7) 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 D

Chain of Custody

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-09-29-10
FYI Gulf Power Crist Steam Sampling Inspection

Requester: Adrienne E. Pennington
Field Report Prepared By:
Collected By:
Send Final Report To: Kim Allen
Sampling Agency:

Customer: NW-DIST
Project ID: FYI5
PMAS: 1143

Lab ID *	Location	Collection (comp begin or grab) Eastern	Composite end Eastern	Bottle Group(s)**
	Discharge Effluent Gulf Power	☐ Comp ☑ Grab Date 10/6/14 Time 0946 (Central)	Date Time Central	
	Field ID: D-010 Discharge	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 7.06	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): Effluent	Temp (C): 18.95 (F)	pH: 6.56	Sample Depth ☐ m ☐ ft: 8.3 14.34
		☑ Salinity (PPTh) m ☑ Sp Conductance (~~umho/cm~~)	NPDES Number	A
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: ~~ID: 0918 - T1 (A)~~ ID: 0918 - T1 (A) (1A bottle for oil and grease BROKE IN FIELD)	

Lab ID *	Location	Collection (comp begin or grab) Eastern	Composite end Eastern	Bottle Group(s)**
	Composite Gulf Power	☑ Comp ☐ Grab Date 10/5/14 Time 1000 (Central)	Date 10/6/14 Time 0900 (Central)	
	Field ID: D-010 Discharge	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): Effluent	Temp (C)	pH	Sample Depth ☐ m ☐ ft
		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number	B
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Lab ID *	Location	Collection (comp begin or grab) Eastern	Composite end Eastern	Bottle Group(s)**
	Gulf Power	☐ Comp ☑ Grab Date 10/6/14 Time 1015 (Central)	Date Time Central	
	Field ID: Field Blank	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): Deionized H_2O	Temp (C)	pH	Sample Depth ☐ m ☐ ft
		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number	E
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: ID: 0918 - T2 (E)	

Lab ID *	Location	Collection (comp begin or grab) Eastern	Composite end Eastern	Bottle Group(s)**
	Gulf Power Effluent Discharge	☑ Comp ☐ Grab Date 10/5/14 Time 1000 (Central)	Date 10/6/14 Time 0900 (Central)	
	Field ID: D-010	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): Effluent	Temp (C)	pH	Sample Depth ☐ m ☐ ft
		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number	A
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/6/14 1400	FED EX	[signature]	10/7/14 9:30			[signature]	10/7/14 9:30

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

C. Reichert
1058 10 7.14
2 bioassay bottles

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2014-09-29-10
FYI Gulf Power Crist Steam Sampling Inspection

Requester: Adrienne E. Pennington
Field Report Prepared By: N. Mulky
Collected By: Nathan Mulky / Mike King
Send Final Report To: Kim Allen
Sampling Agency: FDEP

Customer: NW-DIST
Project ID: FYI5
PMAS: 1143

Lab ID *	Location	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
	Escambia River below Gulf Power Discharge	☐ Comp ☑ Grab Date 10/6/14 Time 0930 (Central)	Date Time	C/D
	Field ID: GP Test	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 6.5	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C): 22.32	pH: 7.86	Sample Depth ☑ m ☐ ft: .15
	Salinity (PPTh) ☑ Sp Conductance (umho/cm): 3618	NPDES Number		
	Latitude: 30.55374 ☑ dd ☐ dms	Longitude: 87.20795 ☑ dd ☐ dms	Comments: Hg ID: 0918-T5	

Lab ID *	Location	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
	Escambia River above Gulf Power Discharge	☐ Comp ☑ Grab Date 10/6/14 Time 1005 (Central)	Date Time	C/D
	Field ID: GP (Control)	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 6.52	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C): 22.80	pH: 7.62	Sample Depth ☑ m ☐ ft: .15
	Salinity (PPTh) ☑ Sp Conductance (umho/cm): 4454	NPDES Number		
	Latitude: 30.55474 ☑ dd ☐ dms	Longitude: 87.21066 ☑ dd ☐ dms	Comments: Hg ID: T4	

Lab ID *	Location	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab Date Time	Date Time	
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C)	pH	Sample Depth ☐ m ☐ ft
	Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number		
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Lab ID *	Location	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab Date Time	Date Time	
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C)	pH	Sample Depth ☐ m ☐ ft
	Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number		
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments	

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	10/6/14	Fed Ex						10/7/14 9:30

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Appendix E

Physical/Chemical and Habitat Assessment field sheets

DEP-SOP-001/01: Form FD 9000-3 (9/19/12)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID 21FLPNS LATITUDE 30.55374 (water sample)

COUNTY Escambia STORET # _____ LONGITUDE 87.20795

DATE 10/6/14 TIME 0930 (water) SAMPLING AGENCY FDEP NW

SITE NAME Gulf Power Test Site

FIELD ID/NAME GPTCST RECEIVING BODY OF WATER Escambia Bay

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
✓	✓	✓	✓	✓		✓	

Landscape Development Intensity Index (LDI):

Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☑ Heavy

Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☑ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side — Left Bank: 18 Right Bank: 18

Hydrologic Modification Score (per FT 3101):

Typical Width (m) Depth (m)/Velocity (m/sec) Transect — m wide

0.0 m/s | 0.05 m/s | 0.05 m/s

High Water Mark: 0.5 (m) + 1.3 (above present water level) = 1.8 (present depth) (above bed)

Artificially Impounded ☐ Yes ☐ No

0.3 m deep | 0.5 m deep | 0.5 m deep

Artificially Channelized: ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe

Canopy Cover % ☐ Open ☑ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils: ☑ Absent ☐ Slight ☐ Moderate ☐ Profuse

Sediment Odors: ☑ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☑ Anaerobic ☐ Other (Specify):

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☐	☑	☐
Silt Smothering:	☐	☐	☑	☐
Algae Smothering:	☐	☑	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☑ SCI ☑ RPS ☑ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	12.5	7	
Undercut Banks / Roots		1	
Leaf Packs or Mat		1	
Aquatic Vegetation	19.3	7	
Rock or Shell Rubble..			
Sand.....		4	
Mud / Muck / Silt			
Other			
Other			

ABUNDANCE

	Absent	Rare	Common	Abundant
Periphyton:	☐	☐	☑	☐
Fish:	☐	☐	☑	☐
Aquatic Plants:	☐	☐	☑	☐
Iron/Sulfur Bacteria:	☐	☑	☐	☐

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.20	22.32	7.86	6.75	78.4	3618	1.91	1.6m
Mid:	1.581	25.57	7.52	4.32	57.7	19913	12.13	☐ VOB
Bottom	3.181	25.87	7.43	1.90	26.4	34652	21.80	SITE DEPTH

Meter ID: 132237 — 4.162

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☐ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: 13-6 Exp: 12/27/14

Color Tannic ☑ Green (Algae) ☐ Clear ☐ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☑ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Clarity Clear ☐ Slightly Turbid ☐ Turbid ☑ Opaque ☐

System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐ _____

WEATHER CONDITIONS / NOTES:

Mercury ID: 0918-TS

☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: Mike Kerr / Nathan Mulvey

SIGNATURE: _____ DATE: 10/6/14

DEP-SOP-001/01: Form FD 9000-5

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: DIELPNS SUBMITTING AGENCY NAME: FDEP	STORET STATION NUMBER:	DATE (MM/DD/YY): 10/6/14	RECEIVING BODY OF WATER: Escambia Bay	
REMARKS:	COUNTY: Escambia	LOCATION: Escambia River test site	FIELD ID/NAME: GP Test	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 9	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 (9) 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 16	Greater than 30% major productive habitat present at site 20 19 18 17 (16)	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 5	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 (5) 4 3 2 1
Habitat Smothering 8 Primary Score 38	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 (8) 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 9 Left Bank 9	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 (9)	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 10	Width of vegetation greater than 18 m (10) 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 8 Left Bank 7 Secondary Score 73	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. (8) 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

111 **TOTAL SCORE**

Date:	Analyst:	Signature:
10/6/14	Mikal Kirby	

Form FD 9000-5 Revision Date: December 19, 2011

Form FD 9000-32 **FDEP Linear Stream Vegetation Survey (DEP SOP FS 7320)** Revised 10-11-11

Waterbody: Escambia River | Date: 10/6/14 | County: Escambia | Storet Number:

Analyst: Mike King, CREWMAD, FRANK BUTCH ID | Signature:

Comments: GP TEST

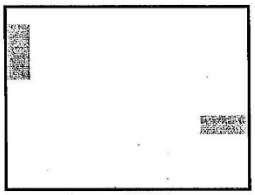
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Cephalanthus occidentalis											
Ceratophyllum demersum ✓				✓							
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Fontinalis											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Itea virginica											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Lobelia cardinalis											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with an "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage											
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage					X	X	X	X	X	X	
>25 and ≤50% Macrophyte Coverage	X	X	X	X							
> 50% Macrophyte Coverage											

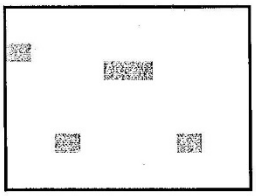
HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum non-native ✓				✓							
Najas guadelupensis				✓							
Nuphar ✓				✓				✓			
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia ✓					✓	✓					
Salix caroliniana											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Scirpus											
Sparganium americanum											
Typha											
Vallisneria americana D	D	D	D	D	D	D	D	D	D	D	
Zizania aquatica											
Zizaniopsis milacea ✓			✓				✓	✓			
Ottelia alismoides											

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

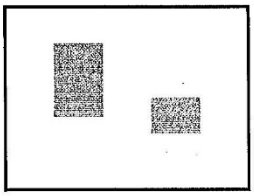
5% Macrophyte Coverage



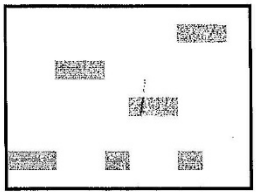
5% Macrophyte Coverage



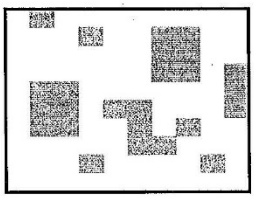
10% Macrophyte Coverage



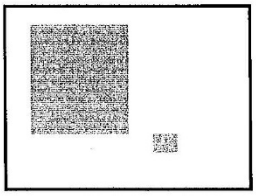
10% Macrophyte Coverage



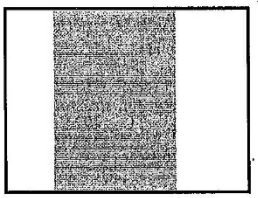
25% Macrophyte Coverage



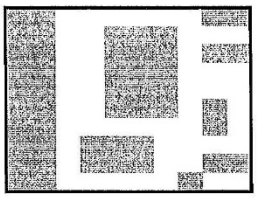
25% Macrophyte Coverage



50% Macrophyte Coverage

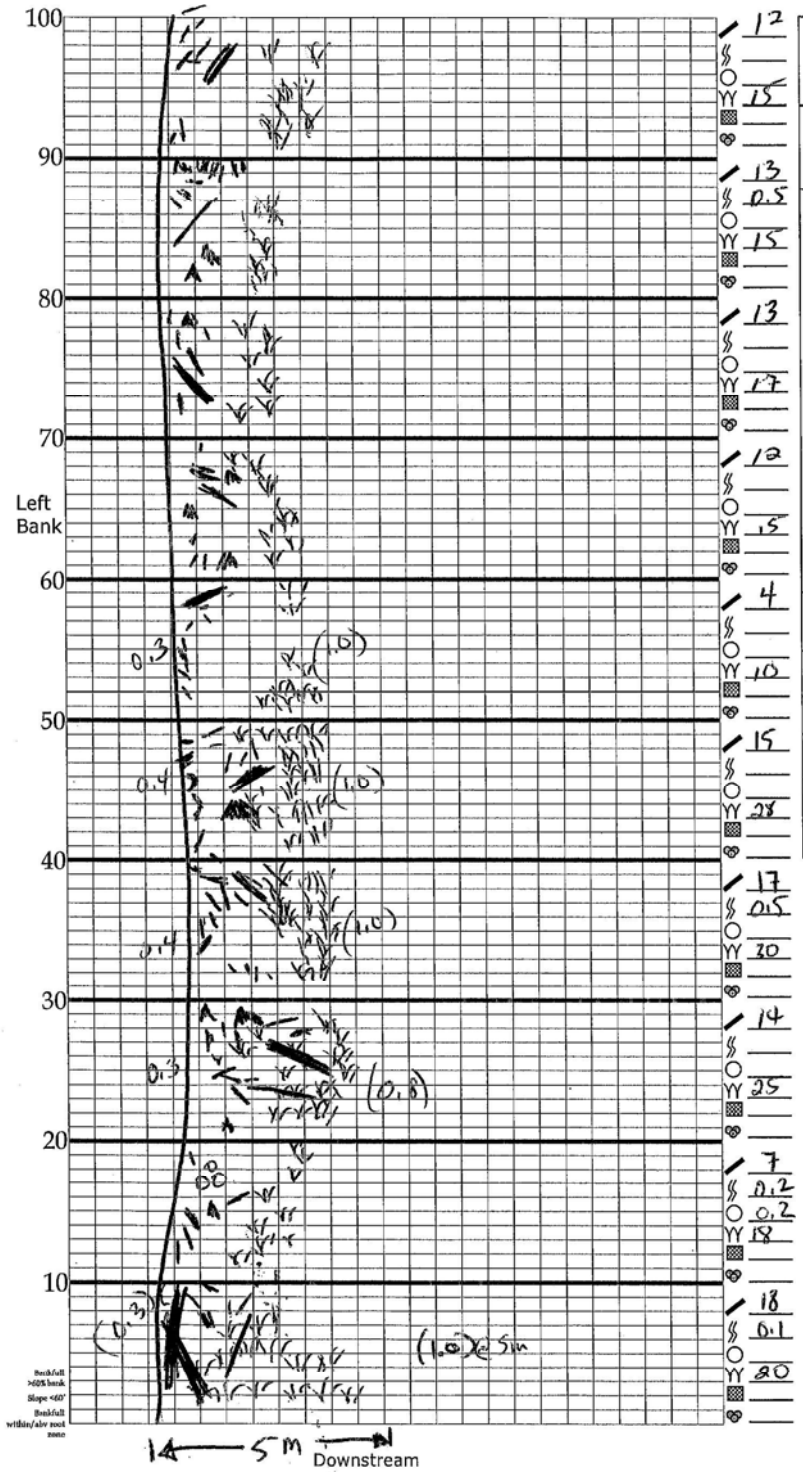


50% Macrophyte Coverage



DEP-SOP-001 Form FD 9000-4
Stream/River Habitat Sketch Sheet

Location: GP Test Date: 10/6/14 Sampler: Mike King



100m: Latitude	30.55388
Longitude	87.20891
0m: Latitude	30.55365
Longitude	87.20793

Substrates: Total 31.8%

Snags	125/100	12.5
Roots/undercut banks	0.8	
Leaf Packs (or mats)		
Aquatic Macrophytes		19.3
Rock		
Gravel		
Other		
Pools observed/expected	1	

Average width: 10 m
Average depth: 0.8 m

Velocity measured at: 100 meter mark

WQ & chemistry taken at 0 meter mark

Habitat smothering:

Bank stability:

Altered Riparian Buffer Width:

Plants observed & notes:

Form FD 9000-25 **FDEP Rapid Periphyton Survey (DEP SOP FS 7230)** Revised 6/12/12

Site: GP Test | County: Escambia | Date: 10/6/14 | Investigators: Mike Kirby

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
0	1	3	
	2	3	
	3	3	
	4	N	
	5	|	25
	6	↓	
	7	3	
	8	N	
	9	N	
10	1	3	
	2	3	
	3	N	
	4	3	
	5	3	30
	6	N	
	7	|	
	8	|	
	9	↓	
20	1	3	
	2	3	
	3	N	
	4	↓	
	5	|	10
	6	|	
	7	|	
	8	|	
	9	↓	
30	1	3	
	2	3	
	3	3	
	4	N	
	5	|	40
	6	↓	
	7	3	
	8	N	
	9	N	

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
40	1	3	
	2	3	
	3	N	
	4	|	
	5	|	30
	6	|	
	7	|	
	8	|	
	9	↓	
50	1	3	
	2	3	
	3	3	
	4	N	
	5	|	25
	6	|	
	7	|	
	8	|	
	9	↓	
60	1	3	
	2	3	
	3	N	
	4	|	
	5	|	20
	6	|	
	7	|	
	8	|	
	9	↓	
70	1	3	
	2	3	
	3	3	
	4	3	
	5	N	20
	6	|	
	7	|	
	8	|	
	9	↓	

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
80	1	N	
	2	3	
	3	3	
	4	N	
	5	3	20
	6	N	
	7	|	
	8	|	
	9	↓	
90	1	3	
	2	3	
	3	N	
	4	|	
	5	|	
	6	|	
	7	|	
	8	|	
	9	↓	
100	1	3	
	2	3	
	3	N	
	4	3	
	5	3	
	6	N	
	7	|	
	8	|	
	9	↓	

# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

Secchi depth:

Check accompanying data collected at same site/date.

Algal mat sample	
Habitat Assessment	✓
Linear Veg. Survey	✓
SCI/Biorecon (circle 1)	
Water sample	✓
RQ:	

Algal Thickness Rank

N	rough, no algae; slimy; algae to 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 10 cm
6	>10 cm

Record "N" for points deeper than the Secchi depth; algae are presumed absent. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. Note if thickness estimated for deep points which can be seen but not reached.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect an algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

DEP-SOP-001/01: Form FD 9000-3 (9/19/12)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID 21FLPN LATITUDE 30.55474 (water)

COUNTY Escambia STORET # _____ LONGITUDE 87.21066

DATE 10/06/14 TIME 1005 SAMPLING AGENCY FDEP

SITE NAME Gulf Power Control site

FIELD ID/NAME GP Control ~~Comm~~ RECEIVING BODY OF WATER Escambia Bay

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
✓	✓	✓	✓				

Landscape Development Intensity Index (LDI): _____

Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: >18 Right Bank: >18

Hydrologic Modification Score (per FT 3101): _____

High Water Mark: 0.5 (m) + 1.3 (present depth at sample area) = 1.8 (above bed) (above present water level)

Artificially Impounded: ☐ Yes ☑ No

Artificially Channelized: ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

Left Bank		
		m wide
0 m/s	.05 m/s	0.05 m/s
0.3 m deep	0.4 m deep	0.5 m deep

Canopy Cover %: ☐ Open ☑ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils: ☑ Absent ☐ Slight ☐ Moderate ☐ Profuse

Sediment Odors: ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☑ Anaerobic ☐ Other (Specify):

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☐	☑	☐
Silt Smothering:	☐	☐	☑	☐
Algae Smothering:	☐	☑	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☑ SCI ☑ RPS ☑ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	13	7	
Undercut Banks / Roots		1	
Leaf Packs or Mat		1	
Aquatic Vegetation	9.1	7	
Rock or Shell Rubble..			
Sand.....		5	
Mud / Muck / Silt			
Other			
Other			

ABUNDANCE

	Absent	Rare	Common	Abundant
Periphyton:	☐	☐	☑	☐
Fish:	☐	☐	☑	☐
Aquatic Plants:	☐	☐	☐	☑
Iron/Sulfur Bacteria:	☐	☑	☐	☐

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.20	22.80	7.62	6.52	76.7	4454	2.37	1.7
Mid:	1.501	25.41	7.39	3.98	52.9	25034	15.32	☐ VOB
Bottom	3.031	25.52	7.17	3.58	48.1	31022	19.37	SITE DEPTH
								3.651

Meter ID: 132237

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☐ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: 13-6 Exp: 12/27/14

Color Tannic ☑ Green (Algae) ☐ Clear ☐ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☑ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Clarity Clear ☐ Slightly Turbid ☐ Turbid ☑ Opaque ☐

System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐ _____

WEATHER CONDITIONS / NOTES:

Mercury ID T4

☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: Mike King / Nathan Mulvey

SIGNATURE: _____ DATE: 10/6/14

DEP-SOP-001/01: Form FD 9000-5

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: 21FLPNS SUBMITTING AGENCY NAME: FDEP		STORET STATION NUMBER:	DATE (MM/DD/YY): 10/6/14	RECEIVING BODY OF WATER: Escambia Bay
REMARKS:	COUNTY: Escambia	LOCATION: GP Control Site		FIELD ID/NAME: GP Control

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 9	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 (9) 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 13	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 22% 15 14 (13) 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 5	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 (5) 4 3 2 1
Habitat Smothering 10 Primary Score 37	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). (10) 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 10 Left Bank 10	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. (10) 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 10	Width of vegetation greater than 18 m (10) 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 8 Left Bank 8 Secondary Score ~~80~~ 76	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. (10) 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

Wind & tidal influence

H7 113 **TOTAL SCORE**

Date:	Analyst:	Signature:
10/6/14	MICHAEL KING	

Form FD 9000-5 Revision Date: December 19, 2011

Form FD 9000-32 **FDEP Linear Stream Vegetation Survey (DEP SOP FS 7320)** Revised 10-11-11

Waterbody: Escambia River | Date: 10/4/11 | County: Escambia | Storet Number:

Analyst: MIKE KING (RICKWOOD, F BUTLER ID) | Signature:

Comments: GP Control site

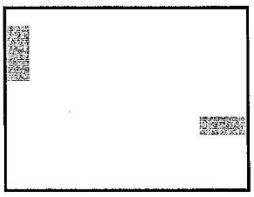
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Cephalanthus occidentalis											
Ceratophyllum demersum			✓				✓				
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Fontinalis											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Itea virginica											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Lobelia cardinalis											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with an "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage		X				X	X		X		
>5 and ≤10% Macrophyte Coverage	X		X	X	X		X		X		
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

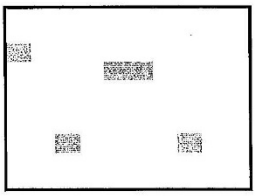
HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum ~~aquaticum~~ non-native					✓						
Najas guadelupensis											
Nuphar											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia			✓			✓					
Salix caroliniana											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Scirpus											
Sparganium americanum											
Typha											
Vallisneria americana	D	D	D	D	D	D	D	D	D	D	
Zizania aquatica											
Zizaniopsis milacea			✓	✓	✓						

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

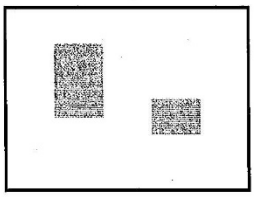
5% Macrophyte Coverage



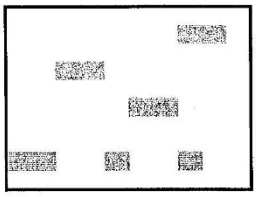
5% Macrophyte Coverage



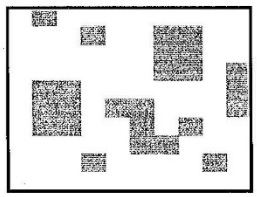
10% Macrophyte Coverage



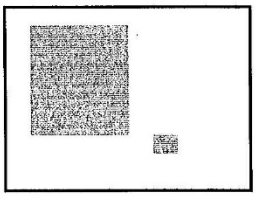
10% Macrophyte Coverage



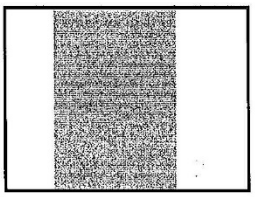
25% Macrophyte Coverage



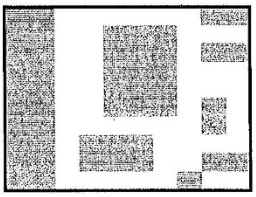
25% Macrophyte Coverage



50% Macrophyte Coverage

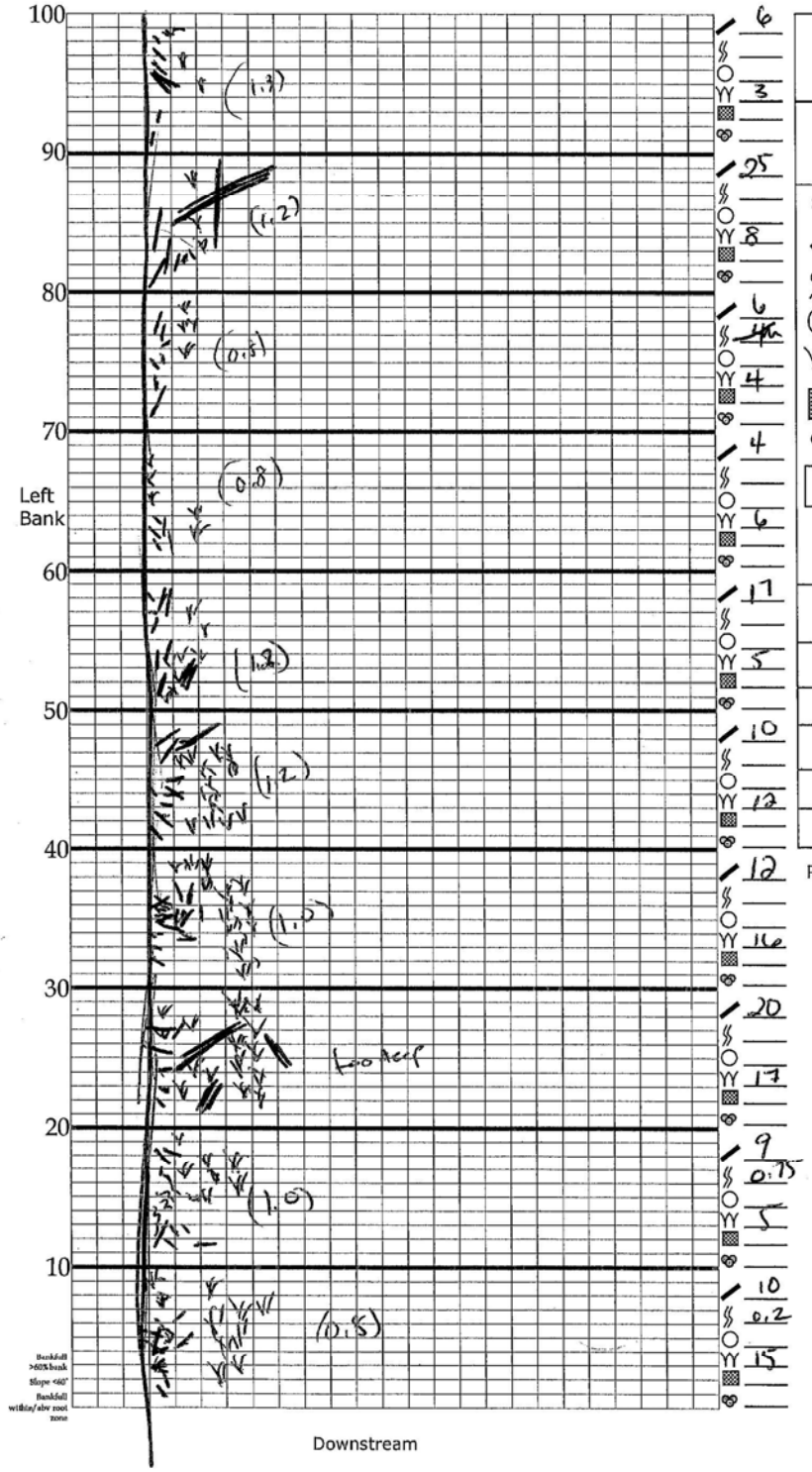


50% Macrophyte Coverage



DEP-SOP-001 Form FD 9000-4
Stream/River Habitat Sketch Sheet

Location: GP Control Site Date: 10/6/14 Sampler: Mike King



100m: Latitude 30.55528
Longitude 87.21136

0m: Latitude 30.55467
Longitude 87.21062

Substrates: Total 22 %

Snags	129/10	13
Roots/undercut banks		
Leaf Packs (or mats)		
Aquatic Macrophytes	91	9.1
Rock		
Gravel		
Other		

Pools observed/expected 1/

Average width: 10 m
Average depth: 0.7 m

Velocity measured at: 50 meter mark

WQ & chemistry taken at 0 meter mark

Habitat smothering:

Bank stability:

Altered Riparian Buffer Width:

Plants observed & notes:

Form FD 9000-25 **FDEP Rapid Periphyton Survey (DEP SOP FS 7230)** Revised 6/12/12

Site: GP Control Site | County: Escambia | Date: 10/6/14 | Investigators:

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
0	1	3	
	2	3	
	3	3	
	4	3	
	5	N	20
	6	|	
	7	|	
	8	|	
	9	↓	
10	1	3	
	2	3	
	3	3	
	4	3	
	5	N	20
	6	|	
	7	|	
	8	|	
	9	↓	
20	1	3	
	2	3	
	3	N	
	4	N	
	5	4	30
	6	N	
	7	|	
	8	|	
	9	↓	
30	1	3	
	2	3	
	3	4	
	4	N	
	5	|	30
	6	|	
	7	|	
	8	|	
	9	↓	
40	1	3	
	2	3	
	3	N	
	4	|	
	5	|	20
	6	|	
	7	|	
	8	|	
	9	↓	
50	1	2	
	2	3	
	3	3	
	4	4	
	5	N	30
	6	|	
	7	|	
	8	|	
	9	↓	
60	1	N	
	2	N	
	3	|	
	4	|	
	5	|	30
	6	|	
	7	|	
	8	|	
	9	↓	
70	1	N	
	2	3	
	3	N	
	4	|	
	5	|	30
	6	|	
	7	|	
	8	|	
	9	↓	
80	1	3	
	2	3	
	3	N	
	4	|	
	5	|	20
	6	|	
	7	|	
	8	|	
	9	↓	
90	1	3	
	2	3	
	3	N	
	4	4	
	5	N	30
	6	|	
	7	|	
	8	|	
	9	↓	
100	1	N	
	2	|	
	3	|	
	4	|	
	5	|	50
	6	|	
	7	|	
	8	|	
	9	↓	

# points ranked 4-6	4
total points assessed	99
% points ranked 4-6	4

Secchi depth: 1.7

Check accompanying data collected at same site/date.

Algal mat sample	
Habitat Assessment	✓
Linear Veg. Survey	✓
SCI/Biorecon (circle 1)	
Water sample	✓
RQ:	

Algal Thickness Rank

N	rough, no algae; slimy; algae to 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 10 cm
6	>10 cm

Record "N" for points deeper than the Secchi depth; algae are presumed absent. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. Note if thickness estimated for deep points which can be seen but not reached.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect an algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

Appendix F

Chemical analysis of effluent and receiving water

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, IC25	No Result	IC25		
10/06/14 10:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Fish, NOEC	No Result	NOEC		
10/06/14 10:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, IC25	No Result	IC25		
10/06/14 10:00	Effluent Comp	Toxicology	Bioassay-Chron-Def-SW-Mysid, NOEC	No Result	NOEC		
10/06/14 10:46	Effluent	AGP/LN	Algal Growth Potential	6.06	mg DryWt/L	3	3
10/06/14 10:46	Effluent	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.6 IJ	mg/L	0.2	2
10/06/14 10:46	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.4	ug/L	0.55	1.7
10/06/14 10:46	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.0 I	ug/L	0.4	1.2
10/06/14 10:46	Effluent	Metals	Aluminum	117	ug/L	5	20
10/06/14 10:46	Effluent	Metals	Arsenic	1.06	ug/L	0.25	1
10/06/14 10:46	Effluent	Metals	Cadmium	0.094 I	ug/L	0.05	0.2
10/06/14 10:46	Effluent	Metals	Calcium	107	mg/L	0.075	0.3
10/06/14 10:46	Effluent	Metals	Chromium	0.47 I	ug/L	0.3	1.2
10/06/14 10:46	Effluent	Metals	Copper	3.03	ug/L	0.5	1
10/06/14 10:46	Effluent	Metals	Hardness	1.62E+03	mg/L	4	16
10/06/14 10:46	Effluent	Metals	Iron	470	ug/L	30	120
10/06/14 10:46	Effluent	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Metals	Magnesium	328	mg/L	0.4	1.6
10/06/14 10:46	Effluent	Metals	Mercury	1.4	ng/L	0.1	0.4
10/06/14 10:46	Effluent	Metals	Nickel	0.69 I	ug/L	0.25	1
10/06/14 10:46	Effluent	Metals	Potassium	93	mg/L	3	12
10/06/14 10:46	Effluent	Metals	Selenium	0.31 I	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/06/14 10:46	Effluent	Metals	Sodium	2.64E+03	mg/L	10	40
10/06/14 10:46	Effluent	Metals	Zinc	8.2 I	ug/L	5	20
10/06/14 10:46	Effluent	Nutrients	Alkalinity	50	mg CaCO3/L	0.65	2.5
10/06/14 10:46	Effluent	Nutrients	Ammonia-N	0.10	mg N/L	0.002	0.005
10/06/14 10:46	Effluent	Nutrients	Chloride	4.8E+03	mg Cl/L	8	20
10/06/14 10:46	Effluent	Nutrients	Color (true)	10	PCU	2.5	6
10/06/14 10:46	Effluent	Nutrients	Dissolved Oxygen	7.06	mg/L		
10/06/14 10:46	Effluent	Nutrients	Fluoride	0.32	mg F/L	0.035	0.1
10/06/14 10:46	Effluent	Nutrients	Kjeldahl Nitrogen	0.34	mg N/L	0.08	0.2
10/06/14 10:46	Effluent	Nutrients	NO2NO3-N	0.28	mg N/L	0.004	0.01
10/06/14 10:46	Effluent	Nutrients	O-Phosphate-P	0.011	mg P/L	0.004	0.01

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:46	Effluent	Nutrients	Organic Carbon	3.5	mg C/L	1	2
10/06/14 10:46	Effluent	Nutrients	pH	6.56			
10/06/14 10:46	Effluent	Nutrients	Sample Depth	6.56	m		
10/06/14 10:46	Effluent	Nutrients	Specific Conductance	14340	umhos/cm		
10/06/14 10:46	Effluent	Nutrients	Sulfate	670	mg SO4/L	8	20
10/06/14 10:46	Effluent	Nutrients	Temperature	26.08	C		
10/06/14 10:46	Effluent	Nutrients	Total-P	0.028	mg P/L	0.002	0.005
10/06/14 10:46	Effluent	Nutrients	TSS	9 I	mg/L	2	10
10/06/14 10:46	Effluent	Nutrients	Turbidity	3.8	NTU	0.1	0.1
10/06/14 10:46	Effluent	Overflow	Alpha, Total	55.4 U	pCi/L	55.4	3
10/06/14 10:46	Effluent	Overflow	Alpha-Counting Error	29.3	pCi/L	55.4	3
10/06/14 10:46	Effluent	Overflow	Oil and Grease	0.78 U	mg/L	0.78	2.8
10/06/14 10:46	Effluent	Overflow	Radium 226	0.247 J	pCi/L	0.148	1
10/06/14 10:46	Effluent	Overflow	Radium 226-Counting Error	0.10	pCi/L	0.148	1
10/06/14 10:46	Effluent	Overflow	Radium 228	0.762 U	pCi/L	0.762	1
10/06/14 10:46	Effluent	Overflow	Radium 228-Counting Error	0.36	pCi/L	0.762	1
10/06/14 10:46	Effluent	Pesticides	Alachlor	0.060 U	ug/L	0.06	0.24
10/06/14 10:46	Effluent	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.08
10/06/14 10:46	Effluent	Pesticides	Bromacil	0.040 U	ug/L	0.04	0.16
10/06/14 10:46	Effluent	Pesticides	Butylate	0.020 U	ug/L	0.02	0.08
10/06/14 10:46	Effluent	Pesticides	Chlorpyrifos Ethyl	0.010 UJ	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Demeton	0.024 UJ	ug/L	0.024	0.096
10/06/14 10:46	Effluent	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Disulfoton	0.0050 U	ug/L	0.005	0.02
10/06/14 10:46	Effluent	Pesticides	Ethion	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Ethoprop	0.0050 U	ug/L	0.005	0.02
10/06/14 10:46	Effluent	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
10/06/14 10:46	Effluent	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
10/06/14 10:46	Effluent	Pesticides	Malathion	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Metalaxyl	0.040 U	ug/L	0.04	0.16
10/06/14 10:46	Effluent	Pesticides	Metolachlor	0.060 U	ug/L	0.06	0.24
10/06/14 10:46	Effluent	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.08

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:46	Effluent	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Naled	0.040 U	ug/L	0.04	0.16
10/06/14 10:46	Effluent	Pesticides	Norflurazon	0.030 UJ	ug/L	0.03	0.12
10/06/14 10:46	Effluent	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.08
10/06/14 10:46	Effluent	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Pesticides	Phorate	0.0050 U	ug/L	0.005	0.02
10/06/14 10:46	Effluent	Pesticides	Prometon	0.020 U	ug/L	0.02	0.08
10/06/14 10:46	Effluent	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.08
10/06/14 10:46	Effluent	Pesticides	Simazine	0.010 U	ug/L	0.01	0.04
10/06/14 10:46	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	1,4-Dioxane	0.030 IY	ug/L	0.02	0.1
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	ug/L	10	40
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	60
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2-Chlorophenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	2-Nitrophenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
10/06/14 10:46	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8
10/06/14 10:46	Effluent	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	60
10/06/14 10:46	Effluent	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzidine	100 U	ug/L	100	400
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:46	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Diethyl phthalate	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8
10/06/14 10:46	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8
10/06/14 10:46	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8
10/06/14 10:46	Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	Pentachlorophenol	3.0 U	ug/L	3	12
10/06/14 10:46	Effluent	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.8
10/06/14 10:46	Effluent	Priority Organic Pollutants	Phenol	1.0 U	ug/L	1	4
10/06/14 10:46	Effluent	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 10:30	Test Site	AGP/LN	Algal Growth Potential	3.53	mg DryWt/L	3	3
10/06/14 10:30	Test Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.2 IJ	mg/L	0.2	2
10/06/14 10:30	Test Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	1.7	ug/L	0.55	1.7
10/06/14 10:30	Test Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
10/06/14 10:30	Test Site	Metals	Aluminum	158	ug/L	5	20
10/06/14 10:30	Test Site	Metals	Arsenic	0.63 I	ug/L	0.25	1
10/06/14 10:30	Test Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/06/14 10:30	Test Site	Metals	Calcium	31.2	mg/L	0.075	0.3
10/06/14 10:30	Test Site	Metals	Chromium	1.8	ug/L	0.3	1.2
10/06/14 10:30	Test Site	Metals	Copper	0.50 I	ug/L	0.5	1
10/06/14 10:30	Test Site	Metals	Iron	570	ug/L	30	120
10/06/14 10:30	Test Site	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/06/14 10:30	Test Site	Metals	Magnesium	67.0	mg/L	0.04	0.16

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:30	Test Site	Metals	Mercury	1.4	ng/L	0.1	0.4
10/06/14 10:30	Test Site	Metals	Nickel	1.40	ug/L	0.25	1
10/06/14 10:30	Test Site	Metals	Potassium	20.4	mg/L	1.5	6
10/06/14 10:30	Test Site	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/06/14 10:30	Test Site	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/06/14 10:30	Test Site	Metals	Sodium	546	mg/L	2.5	10
10/06/14 10:30	Test Site	Metals	Zinc	5.0 U	ug/L	5	20
10/06/14 10:30	Test Site	Nutrients	Alkalinity	35	mg CaCO3/L	0.65	2.5
10/06/14 10:30	Test Site	Nutrients	Ammonia-N	0.052	mg N/L	0.002	0.005
10/06/14 10:30	Test Site	Nutrients	Chloride	990	mg Cl/L	4	10
10/06/14 10:30	Test Site	Nutrients	Color (true)	21 A	PCU	2.5	6
10/06/14 10:30	Test Site	Nutrients	Dissolved Oxygen	6.75	mg/L		
10/06/14 10:30	Test Site	Nutrients	Dissolved Oxygen	6.75	mg/L		
10/06/14 10:30	Test Site	Nutrients	Fluoride	0.097 I	mg F/L	0.035	0.1
10/06/14 10:30	Test Site	Nutrients	Kjeldahl Nitrogen	0.25	mg N/L	0.08	0.2
10/06/14 10:30	Test Site	Nutrients	NO2NO3-N	0.39	mg N/L	0.004	0.01
10/06/14 10:30	Test Site	Nutrients	O-Phosphate-P	0.017	mg P/L	0.004	0.01
10/06/14 10:30	Test Site	Nutrients	Organic Carbon	3.2	mg C/L	0.5	1
10/06/14 10:30	Test Site	Nutrients	pH	7.86			
10/06/14 10:30	Test Site	Nutrients	pH	7.86			
10/06/14 10:30	Test Site	Nutrients	Sample Depth	.15	m		
10/06/14 10:30	Test Site	Nutrients	Sample Depth	.15	m		
10/06/14 10:30	Test Site	Nutrients	Specific Conductance	3618	umhos/cm		
10/06/14 10:30	Test Site	Nutrients	Specific Conductance	3618	umhos/cm		
10/06/14 10:30	Test Site	Nutrients	Sulfate	140	mg SO4/L	4	10
10/06/14 10:30	Test Site	Nutrients	Temperature	22.32	C		
10/06/14 10:30	Test Site	Nutrients	Temperature	22.32	C		
10/06/14 10:30	Test Site	Nutrients	Total-P	0.026	mg P/L	0.002	0.005
10/06/14 10:30	Test Site	Nutrients	TSS	5 I	mg/L	2	10
10/06/14 10:30	Test Site	Nutrients	Turbidity	4.5	NTU	0.1	0.1
10/06/14 10:30	Test Site	Overflow	Alpha, Total	21.8 U	pCi/L	21.8	3
10/06/14 10:30	Test Site	Overflow	Alpha-Counting Error	10.4	pCi/L	21.8	3
10/06/14 10:30	Test Site	Overflow	Oil and Grease	0.80 U	mg/L	0.8	2.9
10/06/14 10:30	Test Site	Overflow	Radium 226	0.190 J	pCi/L	0.184	1
10/06/14 10:30	Test Site	Overflow	Radium 226-Counting Error	0.11	pCi/L	0.184	1
10/06/14 10:30	Test Site	Overflow	Radium 228	0.757 U	pCi/L	0.757	1
10/06/14 10:30	Test Site	Overflow	Radium 228-Counting Error	0.34	pCi/L	0.757	1
10/06/14 10:30	Test Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.99 U	ug/L	0.99	4

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:30	Test Site	Priority Organic Pollutants	1,4-Dioxane	0.023 I	ug/L	0.02	0.1
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,4-Dichlorophenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,4-Dimethylphenol	9.9 U	ug/L	9.9	40
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	59
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,4-Dinitrotoluene	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2,6-Dinitrotoluene	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2-Chloronaphthalene	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2-Chlorophenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	2-Nitrophenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
10/06/14 10:30	Test Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	7.9
10/06/14 10:30	Test Site	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	59
10/06/14 10:30	Test Site	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzidine	99 U	ug/L	99	400
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	7.9
10/06/14 10:30	Test Site	Priority Organic Pollutants	Butyl benzyl phthalate	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Diethyl phthalate	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Dimethyl phthalate	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Di-n-butyl phthalate	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Di-n-octyl phthalate	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.79

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 10:30	Test Site	Priority Organic Pollutants	Hexachlorobenzene	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Isophorone	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	7.9
10/06/14 10:30	Test Site	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	7.9
10/06/14 10:30	Test Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	7.9
10/06/14 10:30	Test Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Pentachlorophenol	3.0 U	ug/L	3	12
10/06/14 10:30	Test Site	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.79
10/06/14 10:30	Test Site	Priority Organic Pollutants	Phenol	0.99 U	ug/L	0.99	4
10/06/14 10:30	Test Site	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.79
10/06/14 11:05	Control Site	AGP/LN	Algal Growth Potential	3.00 U	mg DryWt/L	3	3
10/06/14 11:05	Control Site	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.2 IJ	mg/L	0.2	2
10/06/14 11:05	Control Site	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.0	ug/L	0.55	1.7
10/06/14 11:05	Control Site	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.40 U	ug/L	0.4	1.2
10/06/14 11:05	Control Site	Metals	Aluminum	126	ug/L	5	20
10/06/14 11:05	Control Site	Metals	Arsenic	0.67 I	ug/L	0.25	1
10/06/14 11:05	Control Site	Metals	Cadmium	0.050 U	ug/L	0.05	0.2
10/06/14 11:05	Control Site	Metals	Calcium	31.2	mg/L	0.075	0.3
10/06/14 11:05	Control Site	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/06/14 11:05	Control Site	Metals	Copper	0.50 U	ug/L	0.5	1
10/06/14 11:05	Control Site	Metals	Iron	520	ug/L	30	120
10/06/14 11:05	Control Site	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Metals	Magnesium	67.1	mg/L	0.04	0.16
10/06/14 11:05	Control Site	Metals	Mercury	1.4	ng/L	0.1	0.4
10/06/14 11:05	Control Site	Metals	Nickel	0.41 I	ug/L	0.25	1
10/06/14 11:05	Control Site	Metals	Potassium	20.4	mg/L	1.5	6
10/06/14 11:05	Control Site	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/06/14 11:05	Control Site	Metals	Sodium	550	mg/L	2.5	10
10/06/14 11:05	Control Site	Metals	Zinc	5.0 U	ug/L	5	20
10/06/14 11:05	Control Site	Nutrients	Alkalinity	37	mg CaCO3/L	0.65	2.5
10/06/14 11:05	Control Site	Nutrients	Ammonia-N	0.050	mg N/L	0.002	0.005
10/06/14 11:05	Control Site	Nutrients	Chloride	1.0E+03	mg Cl/L	4	10

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:05	Control Site	Nutrients	Color (true)	19	PCU	2.5	6
10/06/14 11:05	Control Site	Nutrients	Dissolved Oxygen	6.52	mg/L		
10/06/14 11:05	Control Site	Nutrients	Dissolved Oxygen	6.52	mg/L		
10/06/14 11:05	Control Site	Nutrients	Fluoride	0.099 I	mg F/L	0.035	0.1
10/06/14 11:05	Control Site	Nutrients	Kjeldahl Nitrogen	0.26	mg N/L	0.08	0.2
10/06/14 11:05	Control Site	Nutrients	NO2NO3-N	0.40	mg N/L	0.004	0.01
10/06/14 11:05	Control Site	Nutrients	O-Phosphate-P	0.008 I	mg P/L	0.004	0.01
10/06/14 11:05	Control Site	Nutrients	Organic Carbon	3.3	mg C/L	0.5	1
10/06/14 11:05	Control Site	Nutrients	pH	7.62			
10/06/14 11:05	Control Site	Nutrients	pH	7.62			
10/06/14 11:05	Control Site	Nutrients	Sample Depth	.15	m		
10/06/14 11:05	Control Site	Nutrients	Sample Depth	.15	m		
10/06/14 11:05	Control Site	Nutrients	Specific Conductance	4454	umhos/cm		
10/06/14 11:05	Control Site	Nutrients	Specific Conductance	4454	umhos/cm		
10/06/14 11:05	Control Site	Nutrients	Sulfate	150	mg SO4/L	4	10
10/06/14 11:05	Control Site	Nutrients	Temperature	22.80	C		
10/06/14 11:05	Control Site	Nutrients	Temperature	22.80	C		
10/06/14 11:05	Control Site	Nutrients	Total-P	0.025	mg P/L	0.002	0.005
10/06/14 11:05	Control Site	Nutrients	TSS	4 I	mg/L	2	10
10/06/14 11:05	Control Site	Nutrients	Turbidity	4.3	NTU	0.1	0.1
10/06/14 11:05	Control Site	Overflow	Alpha, Total	16.1 U	pCi/L	16.1	3
10/06/14 11:05	Control Site	Overflow	Alpha-Counting Error	8.31	pCi/L	16.1	3
10/06/14 11:05	Control Site	Overflow	Oil and Grease	0.77 U	mg/L	0.77	2.8
10/06/14 11:05	Control Site	Overflow	Radium 226	0.186 U	pCi/L	0.186	1
10/06/14 11:05	Control Site	Overflow	Radium 226-Counting Error	0.10	pCi/L	0.186	1
10/06/14 11:05	Control Site	Overflow	Radium 228	0.788 U	pCi/L	0.788	1
10/06/14 11:05	Control Site	Overflow	Radium 228-Counting Error	0.35	pCi/L	0.788	1
10/06/14 11:05	Control Site	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	1,4-Dioxane	0.023 I	ug/L	0.02	0.1
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,4-Dichlorophenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,4-Dimethylphenol	10 U	ug/L	10	40
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	60
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2-Chloronaphthalene	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2-Chlorophenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0 U	ug/L	3	12

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:05	Control Site	Priority Organic Pollutants	2-Nitrophenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40 U	ug/L	40	160
10/06/14 11:05	Control Site	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0 U	ug/L	2	8
10/06/14 11:05	Control Site	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	60
10/06/14 11:05	Control Site	Priority Organic Pollutants	Acenaphthene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Acenaphthylene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzidine	100 U	ug/L	100	400
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzo(a)anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzo(a)pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0 U	ug/L	2	8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Butyl benzyl phthalate	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Chrysene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Diethyl phthalate	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Dimethyl phthalate	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Di-n-butyl phthalate	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Di-n-octyl phthalate	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Fluoranthene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Fluorene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Hexachlorobenzene	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Hexachlorobutadiene	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Hexachloroethane	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Isophorone	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Naphthalene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Nitrobenzene	2.0 U	ug/L	2	8
10/06/14 11:05	Control Site	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0 U	ug/L	2	8
10/06/14 11:05	Control Site	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0 U	ug/L	2	8

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:05	Control Site	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Pentachlorophenol	3.0 U	ug/L	3	12
10/06/14 11:05	Control Site	Priority Organic Pollutants	Phenanthrene	0.20 U	ug/L	0.2	0.8
10/06/14 11:05	Control Site	Priority Organic Pollutants	Phenol	1.0 U	ug/L	1	4
10/06/14 11:05	Control Site	Priority Organic Pollutants	Pyrene	0.20 U	ug/L	0.2	0.8
10/06/14 11:15	Field Blank	Metals	Aluminum	5.0 U	ug/L	5	20
10/06/14 11:15	Field Blank	Metals	Arsenic	0.25 U	ug/L	0.25	1
10/06/14 11:15	Field Blank	Metals	Cadmium	0.065 I	ug/L	0.05	0.2
10/06/14 11:15	Field Blank	Metals	Calcium	0.075 U	mg/L	0.075	0.3
10/06/14 11:15	Field Blank	Metals	Chromium	0.30 U	ug/L	0.3	1.2
10/06/14 11:15	Field Blank	Metals	Copper	0.50 U	ug/L	0.5	1
10/06/14 11:15	Field Blank	Metals	Hardness	0.40 U	mg/L	0.4	1.6
10/06/14 11:15	Field Blank	Metals	Iron	30 U	ug/L	30	120
10/06/14 11:15	Field Blank	Metals	Lead	0.20 U	ug/L	0.2	0.8
10/06/14 11:15	Field Blank	Metals	Magnesium	0.040 U	mg/L	0.04	0.16
10/06/14 11:15	Field Blank	Metals	Mercury	0.10 U	ng/L	0.1	0.4
10/06/14 11:15	Field Blank	Metals	Nickel	0.25 U	ug/L	0.25	1
10/06/14 11:15	Field Blank	Metals	Potassium	0.30 U	mg/L	0.3	1.2
10/06/14 11:15	Field Blank	Metals	Selenium	0.20 U	ug/L	0.2	0.8
10/06/14 11:15	Field Blank	Metals	Silver	0.025 U	ug/L	0.025	0.1
10/06/14 11:15	Field Blank	Metals	Sodium	0.50 U	mg/L	0.5	2
10/06/14 11:15	Field Blank	Metals	Zinc	5.4 I	ug/L	5	20
10/06/14 11:15	Field Blank	Nutrients	Alkalinity	0.65 U	mg CaCO3/L	0.65	2.5
10/06/14 11:15	Field Blank	Nutrients	Ammonia-N	0.003 I	mg N/L	0.002	0.005
10/06/14 11:15	Field Blank	Nutrients	Chloride	0.20 U	mg Cl/L	0.2	0.5
10/06/14 11:15	Field Blank	Nutrients	Color (true)	2.5 U	PCU	2.5	6
10/06/14 11:15	Field Blank	Nutrients	Fluoride	0.035 U	mg F/L	0.035	0.1
10/06/14 11:15	Field Blank	Nutrients	Kjeldahl Nitrogen	0.080 U	mg N/L	0.08	0.2
10/06/14 11:15	Field Blank	Nutrients	NO2NO3-N	0.004 U	mg N/L	0.004	0.01
10/06/14 11:15	Field Blank	Nutrients	O-Phosphate-P	0.004 U	mg P/L	0.004	0.01
10/06/14 11:15	Field Blank	Nutrients	Organic Carbon	0.50 U	mg C/L	0.5	1
10/06/14 11:15	Field Blank	Nutrients	Sulfate	0.20 U	mg SO4/L	0.2	0.5
10/06/14 11:15	Field Blank	Nutrients	Total-P	0.002 U	mg P/L	0.002	0.005
10/06/14 11:15	Field Blank	Nutrients	Turbidity	0.10 U	NTU	0.1	0.1
10/06/14 11:15	Field Blank	Overflow	Alpha, Total	1.37 U	pCi/L	1.37	3
10/06/14 11:15	Field Blank	Overflow	Alpha-Counting Error	0.819	pCi/L	1.37	3
10/06/14 11:15	Field Blank	Overflow	Oil and Grease	0.77 U	mg/L	0.77	2.8
10/06/14 11:15	Field Blank	Overflow	Radium 226	0.135 U	pCi/L	0.135	1

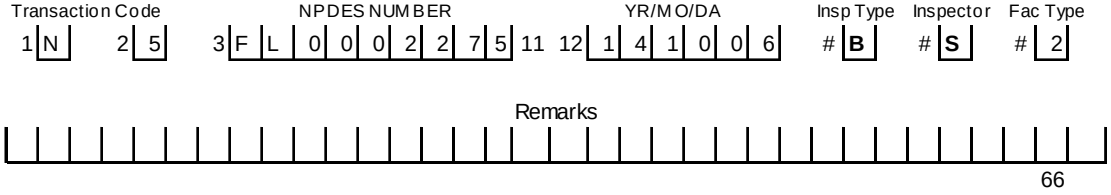
Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:15	Field Blank	Overflow	Radium 226-Counting Error	0.059	pCi/L	0.135	1
10/06/14 11:15	Field Blank	Overflow	Radium 228	0.445 U	pCi/L	0.445	1
10/06/14 11:15	Field Blank	Overflow	Radium 228-Counting Error	0.20	pCi/L	0.445	1
10/06/14 11:15	Field Blank	Pesticides	Alachlor	0.061 U	ug/L	0.061	0.24
10/06/14 11:15	Field Blank	Pesticides	Ametryn	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Atrazine	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Atrazine Desethyl	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Atrazine Desisopropyl	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Azinphos Methyl	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Bromacil	0.041 U	ug/L	0.041	0.16
10/06/14 11:15	Field Blank	Pesticides	Butylate	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Chlorpyrifos Ethyl	0.010 UJ	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Chlorpyrifos Methyl	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Demeton	0.024 UJ	ug/L	0.024	0.097
10/06/14 11:15	Field Blank	Pesticides	Diazinon	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Disulfoton	0.0051 U	ug/L	0.0051	0.02
10/06/14 11:15	Field Blank	Pesticides	Ethion	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Ethoprop	0.0051 U	ug/L	0.0051	0.02
10/06/14 11:15	Field Blank	Pesticides	Fenamiphos	0.030 U	ug/L	0.03	0.12
10/06/14 11:15	Field Blank	Pesticides	Fonofos	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Hexazinone	0.030 UJ	ug/L	0.03	0.12
10/06/14 11:15	Field Blank	Pesticides	Malathion	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Metalaxyl	0.041 U	ug/L	0.041	0.16
10/06/14 11:15	Field Blank	Pesticides	Metolachlor	0.061 U	ug/L	0.061	0.24
10/06/14 11:15	Field Blank	Pesticides	Metribuzin	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Mevinphos	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Naled	0.041 U	ug/L	0.041	0.16
10/06/14 11:15	Field Blank	Pesticides	Norflurazon	0.030 UJ	ug/L	0.03	0.12
10/06/14 11:15	Field Blank	Pesticides	Parathion Ethyl	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Parathion Methyl	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Pesticides	Phorate	0.0051 U	ug/L	0.0051	0.02
10/06/14 11:15	Field Blank	Pesticides	Prometon	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Prometryn	0.020 U	ug/L	0.02	0.081
10/06/14 11:15	Field Blank	Pesticides	Simazine	0.010 U	ug/L	0.01	0.041
10/06/14 11:15	Field Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	1,4-Dioxane	0.24 Y	ug/L	0.02	0.1
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.97 U	ug/L	0.97	3.9

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.7 U	ug/L	9.7	39
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15 U	ug/L	15	58
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2-Chlorophenol	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	2-Nitrophenol	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39 U	ug/L	39	160
10/06/14 11:15	Field Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9 U	ug/L	1.9	7.8
10/06/14 11:15	Field Blank	Priority Organic Pollutants	4-Nitrophenol	15 U	ug/L	15	58
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Acenaphthene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Acenaphthylene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Anthracene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzidine	97 U	ug/L	97	390
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	1.9 U	ug/L	1.9	7.8
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Butyl benzyl phthalate	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Chrysene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Diethyl phthalate	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Dimethyl phthalate	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Di-n-butyl phthalate	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Fluoranthene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Fluorene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Hexachlorobenzene	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9 U	ug/L	2.9	12

Date_Sampled	UDL	SCH_Group	Component	Result	Units	MDL	PQL
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Hexachloroethane	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Isophorone	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Naphthalene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Nitrobenzene	1.9 U	ug/L	1.9	7.8
10/06/14 11:15	Field Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9 U	ug/L	1.9	7.8
10/06/14 11:15	Field Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9 U	ug/L	1.9	7.8
10/06/14 11:15	Field Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Pentachlorophenol	2.9 U	ug/L	2.9	12
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Phenanthrene	0.19 U	ug/L	0.19	0.78
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Phenol	0.97 U	ug/L	0.97	3.9
10/06/14 11:15	Field Blank	Priority Organic Pollutants	Pyrene	0.19 U	ug/L	0.19	0.78

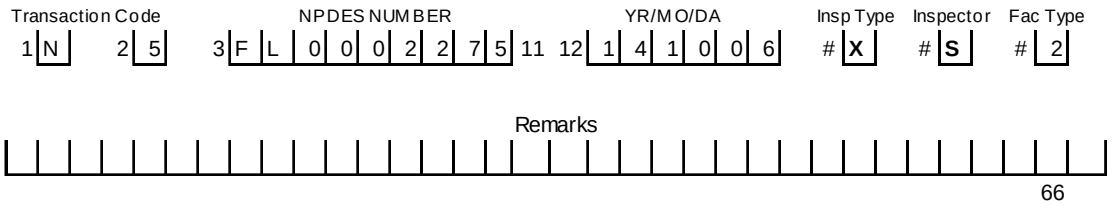
The Bioassay of the Gulf Power Crist Electric Generating Plant effluent sampled on October 6, 2011, NPDES #FL0002275

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



The Bioassay of the Gulf Power Crist Electric Generating Plant effluent sampled on October 6, 2011, NPDES #FL0002275

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



The Bioassay of the Gulf Power Crist Electric Generating Plant effluent sampled on October 6, 2011, NPDES #FL0002275

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