Biological Assessment of

Gulf Power Company – Lansing Smith Power Plant

Bay County

NPDES #FL0002267

Sampled September 15-18 and 20, 2013

April 2014

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration

2014 FDEP Bureau of Laboratories Quality Manual
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Facility Overview

Gulf Power Company – Lansing Smith Power Plant is an electric power generating facility which continuously discharges effluent (once-through non-contact cooling water, ash pond overflow, and cooling tower blowdown) into a conveyance which leads directly to Warren Bayou, a Class II Marine Water (see map Appendix A). The permitted discharge capacity flow of the wastewater system is 273.6 million gallons per day (MGD). The annual average flow for September 2012 to August 2013 was 199.3 MGD. The actual mean flow during this survey was 205 MGD (Northwest District sampling staff).

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 and a summary of permit limits.

Methods

The purpose of this investigation was to determine the discharger's effects on the biota of the receiving waters. The discharge enters into a manmade discharge conveyance at a point 1,980 m west of the power plant. Chemical and biological comparisons were made at a Test Site located approximately 999 m west of the point of discharge in the conveyance close to where it flows into Warren Bayou (within West Bay), and at a Control Site in West Bay approximately 3,475 m south of the Test Site. Sampling for the Test and Control Sites was conducted with an outgoing tide, less than two hours after high tide. The facility was discharging into the bayou when the effluent and Test Site sampling was conducted.

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: Rick Abad, Nathan Mulkey, Mike King, and Daniel Crean (DEP Northwest District) and FDEP Central Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Mike Tanski, Andrew Tintle, and Jennifer Weger).

Results

Organic Constituents - Water (See Table 1 and Appendix F)

- 1,4-dioxane was detected in all the effluent, Control Site, Test Site, and field blank samples; however, the level was much higher in the field blank than in any of the other samples which indicates sample or lab contamination for this analyte.
- Atrazine was measured in the effluent grab sample and in the Control Site grab sample at a level between the method detection limit (MDL) and the practical quantitation limit (PQL). Atrazine was not detected in the Test Site grab sample or in the field blank.

Nutrients (See Table 1 and Appendix F)

- Total phosphorus levels detected in the effluent composite sample and in the Test Site grab sample were slightly higher than the level in the Control Site grab sample.
- Total Kjeldahl nitrogen, along with total nitrogen and organic nitrogen, were elevated in the effluent grab sample and in the Control Site grab sample over the level detected in the Test Site grab sample. There was no detectable nitrogen enrichment from the effluent at the Test Site.
- Nitrate plus nitrite levels were elevated in the effluent grab and composite samples and in the Test Site grab sample over the level detected in the Control Site grab sample (which was between the MDL and the PQL). Total ammonia levels were similarly elevated in the effluent and Test Site grab samples over the level detected in the Control Site grab sample (which was between the MDL and the PQL).
- Nutrients were not detected in the field blank.

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

- The shoreline at the Test Site was natural with occasional riprap. The Control Site shoreline was entirely natural. The Test Site sediment was a mixture of sand and mud, or well-aerated mud, with moderate sand and silt smothering, whereas the Control Site sediment was a combination of sand, gravel, and shell. The Test Site receives freshwater input from extensive manmade discharges and canal inputs, whereas the Control Site only receives natural runoff as its freshwater input. Oyster bar, natural beach, and tidal creek communities were observed at both the Test and Control Sites. Marsh and sea grass bed communities were also observed at the Control Site.
- Dissolved oxygen (% saturation) and pH complied with the Class II Marine Water Quality Criteria (62-302.533, F.A.C. and 62-302.530, F.A.C.) in both the effluent and at the Test Site.
- Chlorophyll *a* was detected in the Control Site grab sample at a level approximately 2 times higher than in either the Test Site or effluent grab samples.

Microbiology (See Table 1 and Appendix F)

- Fecal coliforms were detected in the effluent, Control Site, and Test Site grab samples at levels that complied with the Class II Marine Water Quality Criterion.

Toxicity Whole Effluent Test (See Table 1 and Appendix G)

- Tests were performed September 17th through September 24th, 2013.
- The effluent grab sample was not toxic to the mysid, *Americamysis bahia,* during the chronic definitive bioassays and therefore, complied with effluent permit limits.
- The bioassay for the fish, *Menidia beryllina*, was terminated due to excess mortality in the control after 72 hours. The district declined to resample the effluent and did not run another test.
- For more information or to obtain copies of the toxicity bench sheets, please contact the Biology Laboratory at 850-245-8177.

Metals - Water (See Table 2 and Appendix F)

- Effluent iron was detected at a level that exceeded the Class II Marine Quality Criterion (62-302.530(38), F.A.C.) and the effluent permit limits.
- All other metals detected in the effluent sample were present at levels that complied with Class II Marine Water Quality Criteria and the effluent permit limits. Lead and nickel were detected in the effluent between the MDL and the PQL.
- All metals detected in the Control and Test Site samples were present at levels that complied with Class II Marine Water Quality Criteria (62-302.530, F.A.C.)
- Metals were not detected in the field blank.

Algal Growth Potential (See Table 3 and Appendix F)

- Raschke and Shultz (1987) determined that AGP values above 10.0 mg dry weight/L, which represents a "problem" threshold for marine receiving waters, imply nutrient enrichment. The AGP values of the effluent, Control Site, and Test Site samples were below the detection limit for the saltwater species *Dunaliella tertiolecta*. The ratio of total nitrogen to total phosphorus suggests that the effluent and Control Site are phosphorus limited and that the Test Site is nitrogen limited.

Sediments

- No analyses of sediment particle size, nutrients, chemicals, or metals were scheduled for this report, and thus no sediment samples were collected.

Bioassessment

Macroinvertebrates (See Table 4)

- Benthic macroinvertebrate samples were analyzed by Water and Air, Inc.
- Shannon-Weaver Diversity scores calculated at both the Control and Test Sites have the potential for negative bias because of low numbers (<300) of individuals collected (Lande 1996). While the Control Site was close to that threshold with 267 individuals collected, only 43 were collected at the Test Site.
- The Control Site had more than twice the number of different taxa represented than the Test Site, and was less dominated by a specific taxon than the Test Site was. The largest fraction of the community

composition at the Control Site was polychaetes (42.7%) with similar fractions of amphipods, bivalves, and bryozoans (11-15%). The Test Site was mostly composed of polychaetes (72.1%), with similarly small fractions of dipterans and nemerteans (both 7%).

- Although the sediment characteristics noted in the Habitat Assessments describe a habitat more suitable for polychaetes at the Test Site than at the Control Site, these community composition differences at the Test Site cannot be attributed to the effluent without having analyzed the sediment for evidence of effluent impact.
- For more information or to obtain a copy of the taxa lists, please call the Biology Laboratory at 850-245-8177.

Conclusion

AGP was undetected in the effluent and at the Control and Test Sites and does not reflect nutrient enrichment at the Test Site. Iron levels detected in the effluent exceeded the Class II Marine Quality Criterion and the effluent permit limits. Neither the Control nor the Test Site samples captured enough macroinvertebrates to avoid a negative bias in the Shannon-Weaver Index scores, though there were many fewer captured at the Test Site and noticeable community differences between the two sites. Without sediment data, it is unknown if these differences are driven by effluent contribution to the Test Site or by natural factors at the Test and Control Sites. Follow-up sampling of the sediments at the Test Site and Control Site would need to be conducted to elucidate whether the community differences are driven by possible effluent impacts, or natural differences between the two sites, such as food availability (organic content) or sediment particle sizes.

The comparisons between the Test Site and the Control Site in this study may not be appropriate, as the Test Site sampling was conducted within the conveyance before it empties into West Bay where the Control Site is located. For future Fifth year Inspections, a new Test Site should be selected close to the discharge conveyance, but within the Class II waters of West Bay to ensure that appropriate comparisons can be made with the Control Site.

Literature Cited

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Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The Selenastrum capricornutum Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Plafkin, J. L., M. T. Barbour, K. D. Porter, S. K. Gross and R. M. Hughes. 1989. Rapid bioassessment protocols for use in streams and rivers: Benthic macroinvertebrates and fish. U. S. EPA, Office of Water Regulations and Standards, Washington D.C., EPA 440-4-89-001

Table 1. Effluent limits, Class II Criteria for predominantly marine waters and chemical, microbiological and toxicological data

Gulf Power - Lansing Smith Generating Plant	Class II Criteria	Effluent Limits	Effluent (Grab)	Effluent (24-hour Composite)	Control Site	Test Site	Field Blank
Organic Constituents (µg/L)							
1,4-Dioxane	-	-	0.13	-	0.087 I	0.15	0.52
Atrazine	-	-	0.014 I	-	0.011 I	0.0098 U	0.011 U
Sucralose	-	-	0.032 I	-	0.046 I	0.059	0.011 U
Nutrients (mg/L)							
Ortho-phosphate	-	-	0.006 I	-	0.004 U	0.007 I	0.004 U
Total Phosphorus	-	-	-	0.027	0.020	0.032	0.002 U
Total Ammonia	-	-	0.017	-	0.004 I	0.017	0.002 U
Un-ionized Ammonia	-	-	< 0.02 c	-	< 0.02 c	< 0.02 c	-
Nitrate and Nitrite	-	Report	0.081	0.074	0.006 I	0.070	0.004 U
Total Kjeldahl Nitrogen	-	Report	0.61	0.36	0.50	0.23 I	0.080 U
Organic Nitrogen	-	-	0.59 c	-	0.50 c	0.21 c	0.04 c
Total Nitrogen	-	Report	0.69 c	-	0.51 c	0.30 c	0.04 c
Total Organic Carbon	-	-	5.4	-	8.3	5.3	0.500 U
General Physical and Chemical Parameters							
Habitat Assessment	-	-	-	-	83	65	-
Sample Depth (m) - top	-	-	0.15	-	0.103	0.112	-
Sample Depth (m) - bottom	-	-	-	-	1.103	1.216	-
Dissolved Oxygen (mg/L) - top	≥ 4.0	-	3.80	-	5.75	3.60	-
Dissolved Oxygen (mg/L) - bottom	≥ 4.0	-		-	4.89	3.64	
Dissolved Oxygen (% Saturation) - top	≥ 40.0 Γ	-	59.1 c	-	83.4 c	56.4 c	-
Dissolved Oxygen (% Saturation) - bottom	≥ 40.0 Γ	-	-	-	71.3 c	57.0 c	-
pH (SU) - top	6.5 - 8.5	6.5 - 8.5	6.75	-	7.79	7.63	-
pH (SU) - bottom	6.5 - 8.5	-	-	-	7.71	7.61	
Specific Conductance (µmhos/cm) - top	-	-	39,360	-	30,461	39,331	-
Specific Conductance (µmhos/cm) - bottom	-	-	-	-	31,646	39,339	-
Temperature (°C) - top	-	-	32.70	-	29.94	33.30	-
Temperature (°C) - bottom	-	-	-	-	30.00	33.21	-
Salinity (ppt)	-	-	21 c	-	17 c	21 c	-
Chlorophyll *a* (µg/L) - Corrected	-	-	3.4	-	6.3	3.0	-
Phaeophytin (µg/L)	-	-	1.2 I	-	1.0 I	0.65 I	-
Total Suspended Solids (mg/L)	-	-	-	7 I	6 I	14	-
Turbidity (NTU)	< 29 t	-	1.8	-	1.7	2.4	0.10 U
Color (true, PCU)	-	-	30	-	51	29	2.5 U
Alkalinity (mg CaCO3/L)	-	-	94	-	76	93	0.65 U
CBOD, 5 day (mg/L), N - inhibited	-	-	0.99 IV	1.5 IV	2.8	1.1 I	-
Oils and Greases (mg/L)	≤ 5.0	≤ 5.0	0.77 U	-	0.76 I	0.85 I	0.74 U
Chloride (mg/L)	-	-	13,500	-	10,300	13,400	0.20 U
Fluoride (mg/L)	≤ 5.0	-	0.93	-	0.72	0.94	0.035 U
Sulfate (mg/L)	-	-	1,900	-	1,500	1,900	0.20 U
Radium 226 (pCi/L)	-	-	-	0.7	0.2	0.6	0.2 U
Radium 226-Counting Error (pCi/L)	-	-	-	0.2	0.1	0.2	0.1
Radium 228 (pCi/L)	-	-	-	0.9 U	0.8 U	0.8 U	0.9 U
Radium 228-Counting Error (pCi/L)	-	-	-	0.6	0.6	0.5	0.5
Radium 226 + 228 (pCi/L)	≤ 5	-	-	0.7 c	0.2 c	0.6 c	0 c
Flow (MGD)	-	Report	205	-	-	-	-
Hardness (mg $CaCO_3$)	-	-	-	4380 c	3600 c	4670 c	0.35 c
Toxicity (Chronic Definitive, IC25, % effluent)							
Bioassay - Mysid *(Americamysis bahia)*	-	>100	>100	-	-	-	-
Bioassay - Fish *(Menidia beryllina)*	-	>100	No Result O$	-	-	-	-
Microbiology (Number of colony forming units/100ml)							
Fecal Coliforms ¥	≤ 800s #	-	3	-	6	5	-

Table 1. Qualifiers

A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
c - Value is calculated
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 (Appears in Appendix F)
L - Actual value is known to be greater than value given (Appears in Appendix F)
O - Sampled, but analysis lost or not performed
U - Material analyzed for but not detected; value reported is the method detection limit
V - Analyte was detected in both sample and method blank
IC25 - 25 percent inhibition concentration
¥ - Fecal coliform analysis performed by The Water Spigot Lab, E81105
- If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)
Γ - Value is not to be exceed in more than 10% of the values (62-302.533(2)(a), F.A.C)
$ - *Menidia beryllina* bioassay terminated at 72 hours due to excess control mortality

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

Gulf Power - Lansing Smith Generating Plant	Class II Criteria	Effluent Limits	Effluent (24-hour composite)	Control Site	Test Site	Field Blank
Metals (µg/L unless otherwise noted)						
Aluminum	≤ 1500	-	300	88	165	5.0 U
Arsenic	≤ 50	-	2.12	2.0 I	2.0 I	0.25 U
Cadmium	≤ 8.8	-	0.11 I	0.15 U	0.15 U	0.050 U
Calcium (mg/L)	-	-	281	229	301	0.075 U
Chromium, total	≤ 50 ψ	-	1.1 I	0.90 U	0.90 U	0.30 U
Copper	≤ 3.7	≤ 3.7	2.32	1.5 U	1.5 U	0.50 U
Iron	≤ 300	≤ 300	320	90 U	170 I	30 U
Lead	≤ 8.5	≤ 8.5	0.64 I	0.60 U	0.60 U	0.20 U
Magnesium (mg/L)	-	-	893	735	952	0.040 U
Mercury	≤ 0.025	-	0.00132	0.00133	0.00125	0.00052
Nickel	≤ 8.3	≤ 8.3	0.76 I	0.75 U	0.75 U	0.25 U
Potassium (mg/L)	-	-	264	215	277	0.30 U
Selenium	≤ 71	-	0.49 I	0.60 U	0.60 U	0.20 U
Silver	≤ 2.3	-	0.042 I	0.075 U	0.075 U	0.025 U
Sodium (mg/L)	-	-	7,300	5,820	7,580	0.50 U
Zinc	≤ 86	-	5.0 U	15 U	15 U	5.0 U

See Table 1 for calculated hardness.
A dash (-) indicates sample/measurement was not collected or criterion/limit does not exist.
Value exceeds the Class II Water Quality Criteria or permit limits.
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
ψ - Class II Marine Water Quality Criterion (62-302.530(19)(b), F.A.C.) for chromium-VI

Table 3. Measured and predicted algal growth potential (AGP; mg dry weight/L) for the saltwater species *Dunaliella tertiolecta*, and ratios of nitrogen to phosphorus.

Gulf Power - Lansing Smith Generating Plant			
Location	**AGP**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent	3.0 U	16.3	25.6
Control Site	3.0 U	2.5	25.3
Test Site	3.0 UA	12.4	9.4

A - Value reported is the mean of two or more determinations
U - Material analyzed for but not detected; value reported is the method detection limit

Table 4. Macroinvertebrate petite ponar samples – quantitative

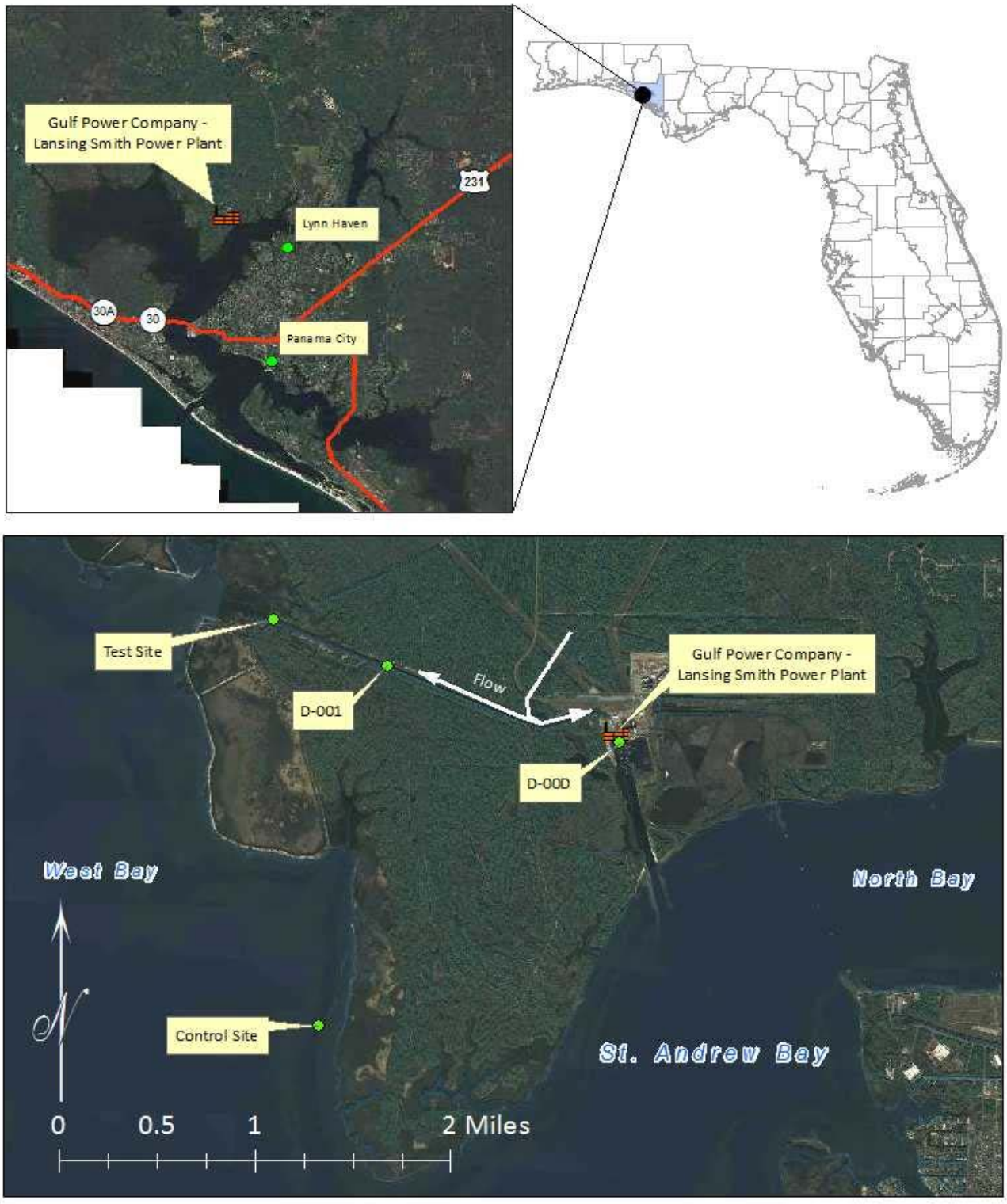
Gulf Power	Control Site	Test Site
Summary Statistics		
Shannon-Weaver Diversity	3.88 *	2.85 *
Number of Taxa	27	11
Percent Dominant Taxon	16.4	41.6
Dominant Taxon Name	*Polydora cornuta* (Polychaeta)	*Leitoscoloplos* sp. (Polychaeta)
Number of samples/site	6	6
Total Number of Individuals (counted)	267 *	43 *
Community Composition: Percent of total		
Amphipoda	11.2	4.7
Bivalvia	11.2	4.7
Cnidaria	1.5	4.7
Decapoda	0.4	0.0
Diptera	0.4	7.0
Bryozoa	15.0	0.0
Gastropoda	6.0	0.0
Isopoda	0.4	0.0
Nemertea	5.6	7.0
Oligochaeta	1.5	0.0
Polychaeta	42.7	72.1
Sipuncula	4.1	0.0
Other	0.0	0.0

* - Shannon Weaver Diversity scores calculated on samples with < 300 individuals have the potential for negative bias (lower diversity scores compared to sites with more individuals) (Lande 1996).

Appendix A
Map of Facility

Gulf Power Company - Lansing Smith Power Plant

Fifth Year Bioassessment Sampling Locations



State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Nathan Mulkey	**Contact Number:** x10553
Facility Name (as it appears on permit): Gulf Power Company – Lansing Smith Power Plant	**Former Names:**
NPDES Permit Number: FL0002267	**Permit Expiration Date:** 12/1/14
Physical Address: Bay County Road 2300, Southport, FL 32409	
District: NWD	**County:** Bay
Function of Facility: Electric Generating Plant	
Facility Type: Power Plant	**Permitted Capacity (MGD):** 273.6 mgd daily max
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months):	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months):	
Description of type of Discharge: ☒ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**	

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s):

EFF-2 (for D-001): immediately downstream of the center of the second roadway embankment across the discharge canal downstream of the discharge structure.

OTH-1 (for D-001): The difference between the temperature at the once-through cooling water condenser inlet and once-through cooling water discharge structure

INT-2 (for D-001): Once-through cooling water circulator pumps logs

EFF-5 (for D-00D): The main yard sump at the nearest accessible point prior to discharge

EFF-3 (for I-015): Discharge from metal cleaning waste treatment pond prior to discharge to the ash pond

EFF-4 (for I-01C): Ash pond discharge parshall flume.

EFF-7 (for I-017): The end of the discharge structure leading from the cooling tower exit and prior to being discharged to the discharge canal.

Description of Permitted Outfall(s):

Surface Water Discharge D-001: An existing 273.6 MGD Daily Maximum Flow permitted discharge to Warren Bayou, Class II Waters (WBID 1061A). The point of discharge is located approximately at latitude 30°16' 24" N, longitude 85°43' 15" W.

Surface Water Discharge D-00D: An existing 0.01 MGD Daily Maximum Flow permitted discharge to Alligator Bayou, Class III Marine Waters (WBID 1026). The point of discharge is located approximately at latitude 30°16' 04" N, longitude 85°42'03" W.

Internal Outfall I-015: An existing permitted discharge to the ash pond.

Internal Outfall I-017: An existing permitted discharge to the discharge canal, thence to Warren Bayou.

Internal Outfall I-01C: An existing permitted discharge to the discharge canal leading to Outfall D-001.

Internal Outfall I-01A: An existing 0.0075 MGD Annual Average Daily Flow permitted discharge to ash pond.

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

WASTEWATER TREATMENT:

Once-through cooling water (OTCW), cooling tower blowdown, and overflow from the ash pond discharge to the discharge canal. OTCW discharges without treatment. Wastewater streams that are routed to the cooling tower basin and thus discharged via cooling tower blowdown to the discharge canal are (1) evaporative cooler blowdown; and (2) clean drain effluent from the turbine/boiler building. The cooling tower blowdown valve will be closed during chlorination until chlorine residual concentration decreases to an acceptable concentration.

All other wastewaters from the operation of Units 1 and 2 are discharged to the ash pond. Wastewater streams that discharge to the ash pond include boiler blowdown, water treatment filter backwash, air preheater wash, ash and pyrite sluice, coal pile runoff, yard runoff, treated metal cleaning waste, treated demineralizer regeneration waste, treated domestic wastewater, and other minor process and non-process waste streams. Demineralizer regeneration waste is neutralized and allowed to settle in a retention pond prior to discharge to the ash pond. Metal cleaning waste is neutralized in pipe and is chemically precipitated and allowed to settle in a retention pond prior to discharge to the ash pond. Domestic wastewater receives secondary treatment in an extended aeration package treatment plant prior to on-site recycling at the ash pond. Demineralizer waste composed of (1) green sand filter backwash; (2) multimedia filter backwash; and (3) reverse osmosis concentrate will be routed to an existing stormwater sump to be discharged to the existing ash ponds.

Boiler blowdown from the two heat recovery steam generators (HRSGs) is routed to the main yard sump to be discharged to the existing ash ponds. Gas turbine and equipment waste are drained to the oil-water separator, from which wastewater will

be drained to the site wastewater sump before being pumped to the existing ash ponds. Transformer enclosure drains are used to drain and release collected stormwater to the site run-off water system. Chemical cleaning waste streams are diverted to the existing on-site metals cleaning pond for disposal.

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)

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Discharges

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Once-Through Non-Contact Cooling Water, Ash Pond Overflow, and Cooling Tower Blowdown** from **Outfall D-001** to Warren Bayou. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.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 Maximum Monthly Average	Hourly	Pump Logs	INT-2	
Temp. Diff. between Intake and Discharge	Deg F	Max Max	Report 18	Daily Maximum Monthly Average	4/Day	Calculated	OTH-1	April-Sept See I.A.4
		Max Max	Report 20	Daily Maximum Monthly Average				Oct.-March See I.A.4
pH	s.u.	Min Max	6.5 8.5	Daily Minimum Daily Maximum	Weekly	Grab	EFF-2	
Oxidants, Total Residual	mg/L	Max	0.01 0.01	Daily Maximum Monthly Average	Weekly	Grab	EFF-2	See I.A.6
Oil and Grease	mg/L	Max	5.0 5.0	Daily Maximum Monthly Average	Monthly	Grab	EFF-2	
Copper, Total Recoverable	ug/L	Max	3.7 3.7	Daily Maximum Monthly Average	Annually	8-hr TPC	EFF-2	See I.A.7
Iron, Total Recoverable	mg/L	Max	0.3 0.3	Daily Maximum Monthly Average	Annually	8-hr TPC	EFF-2	See I.A.7
Lead, Total Recoverable	ug/L	Max	8.5 8.5	Daily Maximum Monthly Average	Annually	8-hr TPC	EFF-2	See I.A.7
Nickel, Total Recoverable	ug/L	Max	8.3 8.3	Daily Maximum Monthly Average	Annually	8-hr TPC	EFF-2	See I.A.7
Chronic Whole Effluent Toxicity, 7-Day IC25 (Americamysis bahia)	percent	Min	100	Single Sample	Quarterly	24-hr TPC[1]	EFF-2	See I.A.10
Chronic Whole Effluent Toxicity, 7-Day IC25 (Menidia beryllina)	percent	Min	100	Single Sample	Quarterly	24-hr TPC[1]	EFF-2	See I.A.10

12. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge **Ash Pond Overflow** from **I-01C** to the Discharge Canal leading to Outfall D-001. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.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	Monthly Average Daily Maximum	Daily	Meter[4]	EFF-4	
pH	s.u.	Min Max	6.0 9.0	Daily Minimum Daily Maximum	Weekly	Grab	EFF-4	
Solids, Total Suspended	mg/L	Max Max	30.0 100.0	Monthly Average Daily Maximum	Weekly	Grab	EFF-4	
Oil and Grease	mg/L	Min Max	15.0 20.0	Monthly Average Daily Maximum	Weekly	Grab	EFF-4	
Arsenic, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Cadmium, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Chromium, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	See I.B.15
Copper, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Iron, Total Recoverable	mg/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Lead, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Mercury, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Nickel, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Selenium, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Zinc, Total Recoverable	ug/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Radium 226 + Radium 228, Total	pCi/L	Max	Report	Daily Maximum	Semi-Annually[5]	24-hr TPC	EFF-4	
Nitrite plus Nitrate, Total (as N)	mg/L	Max	Report	Monthly Average	Monthly	Grab	EFF-4	
Nitrogen, Ammonia, Total (as N)	mg/L	Max	Report	Monthly Average	Monthly	Grab	EFF-4	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Monthly Average	Monthly	Grab	EFF-4	
Nitrogen, Total	mg/L	Max	Report	Monthly Average	Monthly	Grab	EFF-4	

PART I: Continued

Receiving Waters:	**Classification (indicate whether fresh or marine):**
Warren Bayou	Class II Marine

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

    a. Effluent Limitation
    (1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC25) shall not be less than 100% effluent. *[62-302.530(61) and (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. *[62-302.500(1)(a)4. and 62-4.241(1)(a), F.A.C.]*

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) The permittee shall conduct 7-day survival and growth chronic toxicity tests with a mysid shrimp, **Americamysis (Mysidopsis) bahia**, Method 1007.0, and an inland silverside, **Menidia beryllina**, Method 1006.0, concurrently.
(3) All test species, procedures and quality assurance criteria used shall be in accordance with **Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms**, 3rd Edition, EPA-821-R-02-014. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct chronic toxicity testing in accordance with the revised method.
(4) The control water and dilution water used shall be artificial sea salts as described in EPA-821-R-02-014, Section 7.2. The test salinity shall be determined as follows:
(a) For the **Americamysis bahia** bioassays, the effluent shall be adjusted to a salinity of 20 parts per thousand (ppt) with artificial sea salts. The salinity of the control/dilution water (0% effluent) shall be 20 ppt. If the salinity of the effluent is greater than 20 ppt, no salinity adjustment shall be made to the effluent and the test shall be run at the effluent salinity. The salinity of the control/dilution water shall match the salinity of the effluent.
(b) For the **Menidia beryllina** bioassays, if the effluent salinity is less than 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.
(c) If the salinity of the effluent requires adjustment, a salinity adjustment control should be prepared and included with each bioassay. The salinity adjustment control is intended to identify toxicity resulting from adjusting the effluent salinity with artificial sea salts. To prepare the salinity adjustment control, dilute the control/dilution water to the salinity of the effluent and adjust the salinity of the salinity adjustment control at the same time and to the same salinity that the salinity of the effluent is adjusted using the same artificial sea salts.

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

N/A

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

List Permit Violations (DMR data) and plant upsets that occurred at the plant within the last year:			
Date	Parameter and Units	Limit	Result
Describe previous FYI and WQBEL study: See Attached Fact Sheet for WQBEL discussion.			
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

Date(s) sample collected: **9/16/13**	**Sampler(s):** **Nathan Mulkey/Rick Abad**
Temperature (Deg C): **32.70**	**pH (SU):** **6.75**
Dissolved Oxygen (mg/L): **3.80**	**Conductivity (umhos/cm):** **39360**
Total Residual Chlorine (mg/L):	**Total Residual Chlorine - after Disinfection (mg/L):**
Method of Chlorination:	**Method of De-chlorination:**

Flow During Sample Collection for each outfall(MGD):
205 MGD

Staff: 142,800 GPM (gallons per minute)

Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):

Describe Discharge during Sampling Event:
☒ Continuous ☐ Intermittent ☐ Seasonal ☐ Rainfall Dependent ☐ Other, please specify

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:

All samples taken at D-001 both as grabs and composites.

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/sop/sops.htm.

(2) Chemical Analyses of the Effluent

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

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedance of 62-302.500(1)a and/or a potential violation of 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 a potential violation of 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 a potential violation of facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

High levels of fecal coliform bacteria may constitute an exceedance of 62-302.530(6) and/or a potential violation of facility permit limits. Fecal coliform and enterococci results often are based on colony counts outside the acceptable range (B-qualifier). The dilutions performed on the sample did not yield results within the method acceptable range of 20- 60 colony forming units per plate. The B-qualifier does not affect data quality.

(5) Chlorophyll *a* Content

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

(6) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 10.0 mg dry weight/L represents a “problem” threshold for marine receiving waters, implying nutrient enrichment. High AGP values may constitute exceedances of 62-302.530(46), F.A.C., 62-302.530(47)(a), F.A.C. and/or 62-302.530(47)(b), F.A.C..

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

(7) Benthic Macroinvertebrate Assemblages

Benthic macroinvertebrates were collected using a petite ponar dredge at all sampling stations. Six replicate ponar samples were collected at each station and sieved through a 500 μm mesh. 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. 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 (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.). 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..

Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present in equitable abundance among taxa (Magurran 1988). A difference of 25% in Shannon-Weaver diversity between samples at test and control sites constitutes exceedances of 62-302.530(10), F.A.C..

(9) 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

Event ID *

Central Laboratory Sample Submittal Form

Request Number: RQ-2013-07-08-36
FYI Gulf Power Lansing Smith PP Sampling Inspection

Requester: Michelle Fish
Field Report Prepared By: N. Milky
Collected By: Nathan Milky
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)**
	Gulf Power Lansing Smith	☐ Comp ☑ Grab Date 9/16/13 Time 1100 (Central)	Date Time	A
	Field ID: Effluent	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 3.80	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C): 32.70	pH: 6.75	Sample Depth: .15 ☑ m ☐ ft
			☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm): 39340	NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: D-001	

Lab ID *	Location	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
	Gulf Power Lansing Smith	☐ Comp ☐ Grab Date 9/16/13 Time 1125 (Central)	Date Time	D/E
	Field ID: Field Blank	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)**
	Gulf Power Lansing Smith	☑ Comp ☐ Grab Date 9/16/13 Time 1300 (Central)	Date 9/16/13 Time 1300 (Central)	B
	Field ID: TOX 1	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)**
	Gulf Power Lansing Smith	☑ Comp ☐ Grab Date 9/16/13 Time 1300 (Central)	Date 9/16/13 Time 1300 (Central)	B
	Field ID: Effluent (Comp)	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	

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	9/16/13	Fed Ex		9/17/13 1027				9-17-13

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

4 Bromay Jugs

9:40

Page 1 of 6

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2013-07-08-36
FYI Gulf Power Lansing Smith PP Sampling Inspection

Requester: Michelle Fish
Field Report Prepared By: N. Mallory

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

Collected By: Nathan Mallory / Mike King
Sampling Agency: FDEP
Send Final Report To: Kim Allen

Lab ID *	Location: West Bay			☐ Comp ☑ Grab	Collection (comp begin or grab) Eastern Date: 9/17/13 Time: 1030 Central		Composite end Eastern Date Time Central			Bottle Group(s)**: C/D
	Field ID: Control			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 5.75		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C): 29.94	pH: 7.79	Sample Depth: .15 ☐ m ☐ ft	30,46	☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm)	NPDES Number			
	Latitude: 30.24590 ☑ dd ☐ dms	Longitude: 85.72625 ☑ dd ☐ dms		Comments: 6 Ponar Drops / Hg T11 mercury						
Lab ID *	Location: Warren Bayou			☐ Comp ☑ Grab	Collection (comp begin or grab) Eastern Date: 9/17/13 Time: 1130 Central		Composite end Eastern Date Time Central			Bottle Group(s)**: C/D
	Field ID: Test			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 3.60		Storet Station Number			
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C): 33.30	pH: 7.63	Sample Depth: .15 ☐ m ☐ ft	39,33	☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm)	NPDES Number			
	Latitude: 30.27675 ☑ dd ☐ dms	Longitude: 85.73064 ☑ dd ☐ dms		Comments: 6 Ponar Drops / Hg T10 mercury						
Lab ID *	Location			☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Date Time Central		Composite end Eastern Date Time Central			Bottle Group(s)**
	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			☐ Comp ☐ Grab	Collection (comp begin or grab) Eastern Date Time Central		Composite end Eastern Date Time Central			Bottle Group(s)**
	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						

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	9/17/13	FedEx		9-18-13 9:20				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2013-~~07-22-30~~ 07-08-36

FYI ~~Pensacola Beach WWTF Sampling Inspection~~ Gulf Power Lansing Smith

Requester: Jennifer G. Weger

Field Report Prepared By: Dan Crean

Customer: NW-DIST

Project ID: FYI5

PMAS: 1143

Collected By: Daniel Crean

Sampling Agency: FDEP

Send Final Report To: Kim Allen

Lab ID *	Location	Comp / Grab	Collection (comp begin or grab) Eastern Central	Composite end Eastern Central	Bottle Group(s)**
	Gulf Power Lansing Smith	☑ Comp ☐ Grab	Date 9/17/13 Time	Date 9/18/13 Time	B
	Field ID: TOX2	Tot Res Chlorine (mg/L): 0.0	Diss Oxygen (mg/L):	Storet Station Number:	
	Matrix (include type e.g. Salt, Fresh, etc): Salt	Temp (C):	pH:	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: 4 sample jugs		

Lab ID *	Location	Comp / Grab	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	Comp / Grab	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	Comp / Grab	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		

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A. Crean	10:30	FedEx	ABy	09-19-13 09:15				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

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9.19.13 1033 CR

4 bioassay bottles

Appendix E
Habitat Assessment Field Sheets

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25/00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
30.24590 / 85.72625		9/17/13	1030	St. Andrew Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID/NAME:
	Bay	West Bay	Gulf Power Control

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

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

Local Watershed Erosion (check box): None ☐ Slight ☒ Moderate ☐ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious sources ☒

Width of riparian vegetation (m) on least buffered side:

Draw aerial view sketch of sampling area including habitats and community types

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: ____ (m above present water level) + ____ (present depth in m) = ____ (m above bed)

Tide Types and Times

High	9:45	AM (PM)	AM / PM
Low	7:00	(AM) PM	AM / PM

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

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☐ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☒ Other: ☐ ____

Sediment Oils: Absent: ☒ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: (none) slight moderate severe Silt smothering: (none) slight moderate severe Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Seagrass	20	6	Point	Sand	20	6	Point
Rock or Shell Rubble	20	6	Point	Mud/Muck/Silt	20	6	Point
Aquatic Vegetation	20	6	Point	Other:			

Community Types

Mangroves ☐ Oyster bars ☒ Reef ☐ Natural beach ☒ Other: ☒ tidal creek

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):			Secchi (m):
Top	0.103	29.94	7.79	5.75	30461			VQB
Mid-depth								
Bottom	1.013	30.00	7.71	4.89	31646			

System Type : Stream: ☐ (1st - 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Estuary: ☒ Other: ☐ ____

Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐ ____

Water Surface Oils (check box): None: ☒ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☒ Slightly turbid: ☐ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☐ Clear: ☒ Other: ☐ ____

Weather Conditions/Notes:

outgoing tide

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☐	☐	☐	☐
Fish	☐	☐	☐	☐
Aquatic Macrophytes	☐	☐	☐	☐
Iron/sulfur Bacteria	☐	☐	☐	☐

SAMPLING TEAM:	SIGNATURE:	DATE:
Nathan Malloy / Mike King	Nathan Malloy	9/17/13

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD 9000-30 MARINE BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME: FDEP	STORET STATION NUMBER:	DATE (M/D/Y): 9/17/13	RECEIVING BODY OF WATER: St. Andrew Bay

REMARKS:	LOCATION: West Bay	FIELD ID/NAME: Gulf Power Control

Habitat Parameter / score	Excellent	Good	Fair	Poor
Littoral Alterations 9	None—Unaltered shoreline. **9-10 points**	Mostly natural shoreline, but with occasional riprap. **6-8 points**	Shoreline consisting mostly of riprap and vertical seawalls. **3-5 points**	Shoreline consisting almost entirely of vertical seawalls. **0-2 points**
Community Types Observed 40	At least four communities observed from the following list: mangrove swamp, marsh, oyster bar, grass bed, reef, saltern, natural beach, or tidal creek. **38-50 points**	Two or three communities observed from those listed. **26-37 points**	One community observed from those listed. **13-25 points**	No communities observed from those listed. **0-12 points**
Tidal Fluctuation 3	>0.75 m. **4-5 points**	0.5 - 0.75 m. **3 points**	0.25 - 0.5 m. **2 points**	<0.25 m. **0-1 point**
Freshwater Discharges/ Alterations 9	Only natural runoff.. **9-10 points**	Mostly natural runoff, but with a few, small stormwater sources. **6-8 points**	Considerable stormwater discharge from local roads, parking lots, etc. **3-5 points**	Extensive manmade discharges, especially from canals draining large tracts of land. **0-2 points**
Flow and Wave Action 9	Light to moderate wave action present except under the harshest weather conditions. Flow unrestricted by manmade structures. **9-10 points**	—	—	Heavy wave action sometimes present even during average weather conditions, or flow restricted by manmade structures so that velocities are very high. **0-2 points**
Sediment Type 13	Combination of sand, gravel, and shell. **12-15 points**	Primarily sand, with small areas of mud. **8-11 points**	Mixture of sand and mud, or well-aerated mud only. **4-7 points**	Anaerobic mud. **0-3 points**

TOTAL SCORE 83

COMMENTS:

ANALYSIS DATE: 9/17/13	ANALYST: Nathan Malloy	SIGNATURE: Nathan Malloy

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD9000-26 MARINE PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (4/25/00)

LAT/LONGS:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
30.2765/85.73064		9/17/13	1130	St. Andrew Bay

REMARKS:	COUNTY:	SITE LOCATION:	FIELD ID/NAME:
	Bay	Warren Bayou West Bay	Gulf Power Test

RIPARIAN ZONE/INSTREAM FEATURES

Predominant Land-Use in Watershed (specify relative percent in each category):

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

Local Watershed Erosion (check box): None ☐ Slight ☐ Moderate ☒ Heavy ☐

Local Watershed NPS Pollution (check box): No evidence ☐ Slight ☐ Moderate potential ☐ Obvious sources ☒

Width of riparian vegetation (m) on least buffered side: ____

Draw aerial view sketch of sampling area including habitats and community types

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☐ mostly recovered, more sinuous

Artificially Impounded ☐ yes

High Water Mark: ____ (m above present water level) + ____ (present depth in m) = ____ (m above bed)

Tide Types and Times

High 9:45 AM / PM

Low 7:00 AM / PM

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

SEDIMENT/SUBSTRATE

Sediment Odors: Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Anaerobic: ☐ Other: ☐ ____

Sediment Oils: Absent: ☒ Slight: ☐ Moderate: ☐ Profuse: ☐

Sediment Deposition: Sludge: ☐ Sand smothering: none / slight / (moderate) / severe Silt smothering: none / slight / (moderate) / severe Other:

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Seagrass				Sand	50	6	Ponar
Rock or Shell Rubble				Mud/Muck/Silt	50	6	Ponar
Aquatic Vegetation				Other:			

Community Types

Mangroves ☐ Oyster bars ☒ Reef ☐ Natural beach ☒ Other: ☒ tidal creek

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):			Secchi (m):
Top	AM 33.30	33.30	7.43	3.60	39331			VOB
Mid-depth	0.112							
Bottom	~~33.21.210~~	33.21	7.61	3.64	39339			

System Type : Stream: ☐ (1st - 2nd order / 3rd - 4th order / 5th - 6th order / 7th order or greater) Estuary: ☒ Other: ☐ ____

Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐ ____

Water Surface Oils (check box): None: ☒ Sheen: ☐ Globs: ☐ Slick: ☐

Clarity (check box): Clear: ☐ Slightly turbid: ☒ Turbid: ☐ Opaque: ☐

Color (check box): Tannic: ☐ Green (algae): ☐ Clear: ☒ Other: ☐ ____

Weather Conditions/Notes:

outgoing tide

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☐	☐	☐	☐
Fish	☐	☐	☐	☐
Aquatic Macrophytes	☐	☐	☐	☐
Iron/sulfur Bacteria	☐	☐	☐	☐

SAMPLING TEAM:	SIGNATURE:	DATE:
Nathan Malloy / Mike King	Nathan Malloy	9/17/13

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

FD 9000-30 MARINE BENTHIC HABITAT ASSESSMENT FIELD DATA SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME: FDEP	STORET STATION NUMBER:	DATE (M/D/Y): 9/17/13	RECEIVING BODY OF WATER: St. Andrew Bay

REMARKS:	LOCATION: Warren Bayou West Bay	FIELD ID/NAME: Gulf Power Test

Habitat Parameter / score	Excellent	Good	Fair	Poor
Littoral Alterations 7	None—Unaltered shoreline. **9-10 points**	Mostly natural shoreline, but with occasional riprap. **6-8 points**	Shoreline consisting mostly of riprap and vertical seawalls. **3-5 points**	Shoreline consisting almost entirely of vertical seawalls. **0-2 points**
Community Types Observed 37	At least four communities observed from the following list: mangrove swamp, marsh, oyster bar, grass bed, reef, saltern, natural beach, or tidal creek. **38-50 points**	Two or three communities observed from those listed. **26-37 points**	One community observed from those listed. **13-25 points**	No communities observed from those listed. **0-12 points**
Tidal Fluctuation 3	>0.75 m. **4-5 points**	0.5 - 0.75 m. **3 points**	0.25 - 0.5 m. **2 points**	<0.25 m. **0-1 point**
Freshwater Discharges/ Alterations 2	Only natural runoff.. **9-10 points**	Mostly natural runoff, but with a few, small stormwater sources. **6-8 points**	Considerable stormwater discharge from local roads, parking lots, etc. **3-5 points**	Extensive manmade discharges, especially from canals draining large tracts of land. **0-2 points**
Flow and Wave Action 9	Light to moderate wave action present except under the harshest weather conditions. Flow unrestricted by manmade structures. **9-10 points**	—	—	Heavy wave action sometimes present even during average weather conditions, or flow restricted by manmade structures so that velocities are very high. **0-2 points**
Sediment Type 7	Combination of sand, gravel, and shell. **12-15 points**	Primarily sand, with small areas of mud. **8-11 points**	Mixture of sand and mud, or well-aerated mud only. **4-7 points**	Anaerobic mud. **0-3 points**

TOTAL SCORE 65

COMMENTS:

ANALYSIS DATE: 9/17/13	ANALYST: Nathan Mulkey	SIGNATURE: Nathan Mulkey

Appendix F

Chemical analysis of effluent and receiving water

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	AGP/LN	Algal Growth Potential	3.0	U	mg DryWt/L	3	3
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.4		ug/L	0.55	1.7
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.99	IV	mg/L	0.2	2
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.2	I	ug/L	0.4	1.2
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Overflow	Fecal Coliforms-Membrane Filter	3		cfu/100 mL	1	
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Organic Carbon	5.4		mg C/L	1	2
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Sulfate	1,900		mg SO4/L	40	100
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Fluoride	0.93		mg F/L	0.18	0.5
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Kjeldahl Nitrogen	0.61		mg N/L	0.16	0.4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Alkalinity	94		mg CaCO3/L	0.65	2.5
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Chloride	13,500		mg Cl/L	40	100
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Turbidity	1.8		NTU	0.1	0.1
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Color (true)	30		PCU	2.5	6
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	O-Phosphate-P	0.006	I	mg P/L	0.004	0.01
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	NO2NO3-N	0.081		mg N/L	0.004	0.01
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Nutrients	Ammonia-N	0.017		mg N/L	0.002	0.005
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Overflow	Oil and Grease	0.77	U	mg/L	0.77	2.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Chlorpyrifos Methyl	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Hexazinone	0.030	U	ug/L	0.03	0.12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Malathion	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Naled	0.040	U	ug/L	0.04	0.16
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Norflurazon	0.030	U	ug/L	0.03	0.12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Butylate	0.020	U	ug/L	0.02	0.079
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Ethoprop	0.0049	U	ug/L	0.0049	0.02
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Metribuzin	0.020	U	ug/L	0.02	0.079
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Azinphos Methyl	0.020	U	ug/L	0.02	0.079
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Phorate	0.0049	U	ug/L	0.0049	0.02
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Bromacil	0.040	U	ug/L	0.04	0.16
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Alachlor	0.059	U	ug/L	0.059	0.24
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Sucralose	0.032	I	ug/L	0.01	0.05
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Prometryn	0.020	U	ug/L	0.02	0.079
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Metolachlor	0.059	U	ug/L	0.059	0.24
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Metalaxyl	0.040	U	ug/L	0.04	0.16
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Fenamiphos	0.030	U	ug/L	0.03	0.12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Diazinon	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Atrazine	0.014	I	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Simazine	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Ethion	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Parathion Ethyl	0.020	U	ug/L	0.02	0.079
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Fonofos	0.0099	U	ug/L	0.0099	0.04

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Ametryn	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Chlorpyrifos Ethyl	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Mevinphos	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Pesticides	Parathion Methyl	0.0099	U	ug/L	0.0099	0.04
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Chrysene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Hexachlorobenzene	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Hexachloroethane	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	1,4-Dioxane	0.13		ug/L	0.02	0.1
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Diethyl phthalate	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Phenanthrene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,4-Dichlorophenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2-Nitrophenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Acenaphthene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Butyl benzyl phthalate	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Nitrobenzene	2.0	U	ug/L	2	8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0	U	ug/L	2	8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	60
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Acenaphthylene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Anthracene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Di-n-octyl phthalate	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0	U	ug/L	2	8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Pentachlorophenol	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzidine	100	UJ	ug/L	100	400
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0	U	ug/L	2	8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Isophorone	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzo(a)anthracene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzo(a)pyrene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Di-n-butyl phthalate	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Fluoranthene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Hexachlorobutadiene	3.0	U	ug/L	3	12
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Naphthalene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	60
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2-Chloronaphthalene	1.0	U	ug/L	1	4

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2-Chlorophenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Dimethyl phthalate	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Fluorene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Phenol	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Pyrene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	U	ug/L	40	160
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0	U	ug/L	1	4
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20	U	ug/L	0.2	0.8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0	U	ug/L	2	8
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Field Parameter	Specific Conductance	39,360		umhos/cm		
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Field Parameter	pH	6.75				
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Field Parameter	Dissolved Oxygen	3.80		mg/L		
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Field Parameter	Temperature	32.70		C		
9/16/2013 12:00	Effluent	W-SURF-SLT	EFFLUENT	Field Parameter	Sample Depth	0.15		m		
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Mercury	0.52		ng/L	0.1	0.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Aluminum	5.0	U	ug/L	5	20
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Arsenic	0.25	U	ug/L	0.25	1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Magnesium	0.040	U	mg/L	0.04	0.16
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Chromium	0.30	U	ug/L	0.3	1.2
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Nickel	0.25	U	ug/L	0.25	1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Calcium	0.075	U	mg/L	0.075	0.3
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Potassium	0.30	U	mg/L	0.3	1.2
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Cadmium	0.050	U	ug/L	0.05	0.2
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Copper	0.50	U	ug/L	0.5	1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Silver	0.025	U	ug/L	0.025	0.1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Sodium	0.50	U	mg/L	0.5	2
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Zinc	5.0	U	ug/L	5	20
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Iron	30	U	ug/L	30	120
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Lead	0.20	U	ug/L	0.2	0.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Metals	Selenium	0.20	U	ug/L	0.2	0.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Turbidity	0.10	U	NTU	0.1	0.1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Chloride	0.20	U	mg Cl/L	0.2	0.5
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Color (true)	2.5	U	PCU	2.5	6
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Ammonia-N	0.002	U	mg N/L	0.002	0.005
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Organic Carbon	0.50	U	mg C/L	0.5	1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Total-P	0.002	U	mg P/L	0.002	0.005
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.080	U	mg N/L	0.08	0.2

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Sulfate	0.20	U	mg SO4/L	0.2	0.5
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.080	U	mg N/L	0.08	0.2
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Overflow	Radium 228	0.9	U	pCi/L	0.9	
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Overflow	Radium 226	0.2	U	pCi/L	0.2	
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Overflow	Radium 228-Counting Error	0.5		pCi/L		
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Overflow	Oil and Grease	0.74	U	mg/L	0.74	2.6
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Overflow	Radium 226-Counting Error	0.1		pCi/L		
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Bromacil	0.043	U	ug/L	0.043	0.17
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Ethion	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Azinphos Methyl	0.022	U	ug/L	0.022	0.087
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Norflurazon	0.033	U	ug/L	0.033	0.13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Parathion Ethyl	0.022	U	ug/L	0.022	0.087
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Sucralose	0.011	U	ug/L	0.011	0.053
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Ametryn	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Butylate	0.022	U	ug/L	0.022	0.087
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Diazinon	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Malathion	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Fonofos	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Metalaxyl	0.043	U	ug/L	0.043	0.17
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Metribuzin	0.022	U	ug/L	0.022	0.087
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Prometryn	0.022	U	ug/L	0.022	0.087
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Fenamiphos	0.033	U	ug/L	0.033	0.13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Hexazinone	0.033	U	ug/L	0.033	0.13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Naled	0.043	U	ug/L	0.043	0.17
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Parathion Methyl	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Phorate	0.0054	U	ug/L	0.0054	0.022
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Alachlor	0.065	U	ug/L	0.065	0.26
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Atrazine	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Chlorpyrifos Ethyl	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Metolachlor	0.065	U	ug/L	0.065	0.26
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Chlorpyrifos Methyl	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Mevinphos	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Ethoprop	0.0054	U	ug/L	0.0054	0.022
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Pesticides	Simazine	0.011	U	ug/L	0.011	0.043
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	11	U	ug/L	11	44
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Pyrene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.2	U	ug/L	2.2	8.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Chrysene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Naphthalene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Phenanthrene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2-Chloronaphthalene	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.3	U	ug/L	3.3	13

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.2	U	ug/L	2.2	8.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Hexachlorobenzene	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Isophorone	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2-Nitrophenol	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	66
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Acenaphthene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Hexachlorobutadiene	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2-Chlorophenol	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.2	U	ug/L	2.2	8.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Hexachloroethane	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	1,4-Dioxane	0.52		ug/L	0.02	0.1
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	16	UJ	ug/L	16	66
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Fluoranthene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Fluorene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Nitrobenzene	2.2	U	ug/L	2.2	8.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Anthracene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2	U	ug/L	2.2	8.8
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Pentachlorophenol	3.3	U	ug/L	3.3	13
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Phenol	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	44	U	ug/L	44	180
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Acenaphthylene	0.22	U	ug/L	0.22	0.88
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Benzidine	110	U	ug/L	110	440
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Diethyl phthalate	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	Dimethyl phthalate	1.1	U	ug/L	1.1	4.4
9/16/2013 12:25	Field Blank	W-FIELD-BK	FIELD BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1	U	ug/L	1.1	4.4
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.5	IV	mg/L	0.2	2

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Toxicology	Bioassay-Chron-Def-SW-Mysid, NOEC	100		NOEC		
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Toxicology	Bioassay-Chron-Def-SW-Fish, IC25	No Result	O	IC25		
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Toxicology	Bioassay-Chron-Def-SW-Fish, NOEC	No Result	O	NOEC		
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Toxicology	Bioassay-Chron-Def-SW-Mysid, IC25	100	L	IC25		
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Zinc	5.0	U	ug/L	5	20
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Arsenic	2.12		ug/L	0.25	1
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Mercury	1.32		ng/L	0.1	0.4
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Selenium	0.49	I	ug/L	0.2	0.8
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Cadmium	0.11	I	ug/L	0.05	0.2
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Silver	0.042	I	ug/L	0.025	0.1
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Nickel	0.76	I	ug/L	0.25	1
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Copper	2.32		ug/L	0.5	1
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Chromium	1.1	I	ug/L	0.3	1.2
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Calcium	281		mg/L	1.5	6
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Potassium	264		mg/L	6	24
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Magnesium	893		mg/L	0.8	3.2
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Aluminum	300		ug/L	60	240
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Iron	320		ug/L	30	120
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Lead	0.64	I	ug/L	0.2	0.8
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Metals	Sodium	7,300		mg/L	50	200
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Nutrients	TSS	7	I	mg/L	3	10
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Nutrients	NO2NO3-N	0.074		mg N/L	0.004	0.01
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Nutrients	Total-P	0.027		mg P/L	0.002	0.005
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Nutrients	Kjeldahl Nitrogen	0.36		mg N/L	0.08	0.2
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Overflow	Radium 226	0.7		pCi/L	0.2	
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Overflow	Radium 228-Counting Error	0.6		pCi/L		
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Overflow	Radium 228	0.9	U	pCi/L	0.9	
9/16/2013 14:00	Effluent	W-EFFLUENT	TOX 1 EFFLUENT (COMP)	Overflow	Radium 226-Counting Error	0.2		pCi/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Overflow	Macroinvert-Marine-Quan-NatSubstr-# Taxa	27		# Taxa		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	pH	7.79				
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Specific Conductance	30,461		umhos/cm		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Dissolved Oxygen	5.75		mg/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Temperature	29.94		C		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Sample Depth	0.15		m		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Dissolved Oxygen	5.75		mg/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	pH	7.79				
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Specific Conductance	30,461		umhos/cm		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Temperature	29.94		C		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL	Field Parameter	Sample Depth	0.15		m		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	AGP/LN	Algal Growth Potential	3.0	U	mg DryWt/L	3	3
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.8		mg/L	0.2	2
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.0	I	ug/L	0.4	1.2
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	6.3		ug/L	0.55	1.7
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Fecal Coliforms-Membrane Filter	6		cfu/100 mL	1	
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Calcium	229		mg/L	0.22	0.9

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Potassium	215		mg/L	15	60
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Cadmium	0.15	U	ug/L	0.15	0.6
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Nickel	0.75	U	ug/L	0.75	3
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Aluminum	88		ug/L	15	60
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Magnesium	735		mg/L	2	8
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Sodium	5,820		mg/L	25	100
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Copper	1.5	U	ug/L	1.5	3
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Mercury	1.33		ng/L	0.1	0.4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Iron	90	U	ug/L	90	360
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Lead	0.60	U	ug/L	0.6	2.4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Selenium	0.60	U	ug/L	0.6	2.4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Zinc	15	U	ug/L	15	60
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Arsenic	2.0	I	ug/L	0.75	3
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Chromium	0.90	U	ug/L	0.9	3.6
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Metals	Silver	0.075	U	ug/L	0.075	0.3
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	TSS	6	I	mg/L	3	10
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Kjeldahl Nitrogen	0.50		mg N/L	0.16	0.4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	NO2NO3-N	0.006	I	mg N/L	0.004	0.01
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Total-P	0.020		mg P/L	0.004	0.01
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Color (true)	51		PCU	2.5	6
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Ammonia-N	0.004	I	mg N/L	0.002	0.005
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Chloride	10,300		mg Cl/L	40	100
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Organic Carbon	8.3		mg C/L	1	2
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Alkalinity	76		mg CaCO3/L	0.65	2.5
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Fluoride	0.72		mg F/L	0.18	0.5
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Sulfate	1,500		mg SO4/L	40	100
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Nutrients	Turbidity	1.7		NTU	0.1	0.1
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Radium 226-Counting Error	0.1		pCi/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Oil and Grease	0.76	I	mg/L	0.76	2.7
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Radium 226	0.2		pCi/L	0.1	
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Radium 228	0.8	U	pCi/L	0.8	
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Overflow	Radium 228-Counting Error	0.6		pCi/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Bromacil	0.039	U	ug/L	0.039	0.16
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Phorate	0.0049	U	ug/L	0.0049	0.02
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Azinphos Methyl	0.020	U	ug/L	0.02	0.078
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Chlorpyrifos Ethyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Chlorpyrifos Methyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Metolachlor	0.059	U	ug/L	0.059	0.23
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Ametryn	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Mevinphos	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Naled	0.039	U	ug/L	0.039	0.16
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Sucralose	0.046	I	ug/L	0.01	0.05
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Butylate	0.020	U	ug/L	0.02	0.078

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Ethion	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Malathion	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Parathion Methyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Prometryn	0.020	U	ug/L	0.02	0.078
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Atrazine	0.011	I	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Alachlor	0.059	U	ug/L	0.059	0.23
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Diazinon	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Metalaxyl	0.039	U	ug/L	0.039	0.16
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Simazine	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Ethoprop	0.0049	U	ug/L	0.0049	0.02
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Metribuzin	0.020	U	ug/L	0.02	0.078
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Parathion Ethyl	0.020	U	ug/L	0.02	0.078
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Pesticides	Fonofos	0.0098	U	ug/L	0.0098	0.039
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Acenaphthene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Di-n-octyl phthalate	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Fluorene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,4-Dimethylphenol	9.9	U	ug/L	9.9	40
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2-Chlorophenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Acenaphthylene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzo(a)pyrene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	59
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	U	ug/L	40	160
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Nitrobenzene	2.0	U	ug/L	2	7.9
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,4-Dichlorophenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2-Nitrophenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0	U	ug/L	2	7.9
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzo(a)anthracene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Butyl benzyl phthalate	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Pyrene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	59
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Di-n-butyl phthalate	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Diethyl phthalate	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Dimethyl phthalate	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Hexachlorobutadiene	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Naphthalene	0.20	U	ug/L	0.2	0.79

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Pentachlorophenol	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,6-Dinitrotoluene	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0	U	ug/L	2	7.9
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Hexachlorobenzene	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Phenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,4-Dinitrotoluene	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2-Chloronaphthalene	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Anthracene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Fluoranthene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Hexachloroethane	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Isophorone	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0	U	ug/L	2	7.9
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	1,4-Dioxane	0.087	I	ug/L	0.02	0.1
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Benzidine	99	U	ug/L	99	400
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Chrysene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0	U	ug/L	2	7.9
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	Phenanthrene	0.20	U	ug/L	0.2	0.79
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0	U	ug/L	3	12
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.99	U	ug/L	0.99	4
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Field Parameter	Dissolved Oxygen	5.75		mg/L		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Field Parameter	pH	7.79				
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Field Parameter	Sample Depth	0.15		m		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Field Parameter	Specific Conductance	30,461		umhos/cm		
9/17/2013 11:30	Control Site	W-SURF-SLT	CONTROL (T11)	Field Parameter	Temperature	29.94		C		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Overflow	Macroinvert-Marine-Quan-NatSubstr-# Taxa	11		# Taxa		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Dissolved Oxygen	3.60		mg/L		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Sample Depth	0.15		m		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	pH	7.63				
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Temperature	33.30		C		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Specific Conductance	39,331		umhos/cm		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	pH	7.63				
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Sample Depth	0.15		m		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Specific Conductance	39,331		umhos/cm		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Temperature	33.30		C		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST	Field Parameter	Dissolved Oxygen	3.60		mg/L		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	AGP/LN	Algal Growth Potential	3.0	UA	mg DryWt/L	3	3
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.65	I	ug/L	0.4	1.2
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.0		ug/L	0.55	1.7
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.1	I	mg/L	0.2	2
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Fecal Coliforms-Membrane Filter	5		cfu/100 mL	1	

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Iron	170	I	ug/L	90	360
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Copper	1.5	U	ug/L	1.5	3
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Arsenic	2.0	I	ug/L	0.75	3
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Zinc	15	U	ug/L	15	60
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Magnesium	952		mg/L	2	8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Cadmium	0.15	U	ug/L	0.15	0.6
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Selenium	0.60	U	ug/L	0.6	2.4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Mercury	1.25		ng/L	0.1	0.4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Potassium	277		mg/L	15	60
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Sodium	7,580		mg/L	25	100
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Aluminum	165		ug/L	15	60
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Calcium	301		mg/L	0.22	0.9
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Chromium	0.90	U	ug/L	0.9	3.6
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Lead	0.60	U	ug/L	0.6	2.4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Nickel	0.75	U	ug/L	0.75	3
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Metals	Silver	0.075	U	ug/L	0.075	0.3
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Sulfate	1,900		mg SO4/L	40	100
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Total-P	0.032		mg P/L	0.004	0.01
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Color (true)	29		PCU	2.5	6
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Organic Carbon	5.3		mg C/L	1	2
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Ammonia-N	0.017		mg N/L	0.002	0.005
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Alkalinity	93		mg CaCO3/L	0.65	2.5
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	NO2NO3-N	0.070		mg N/L	0.004	0.01
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	O-Phosphate-P	0.007	I	mg P/L	0.004	0.01
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Turbidity	2.4		NTU	0.1	0.1
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Fluoride	0.94		mg F/L	0.18	0.5
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Kjeldahl Nitrogen	0.23	I	mg N/L	0.16	0.4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	Chloride	13,400		mg Cl/L	40	100
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Nutrients	TSS	14		mg/L	3	10
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Radium 226-Counting Error	0.2		pCi/L		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Radium 228	0.8	U	pCi/L	0.8	
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Radium 226	0.6		pCi/L	0.2	
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Radium 228-Counting Error	0.5		pCi/L		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Overflow	Oil and Grease	0.85	I	mg/L	0.75	2.7
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Ametryn	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Atrazine	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Chlorpyrifos Ethyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Ethoprop	0.0049	U	ug/L	0.0049	0.02
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Parathion Ethyl	0.020	U	ug/L	0.02	0.078
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Ethion	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Naled	0.039	U	ug/L	0.039	0.16
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Diazinon	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Phorate	0.0049	U	ug/L	0.0049	0.02
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Simazine	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Alachlor	0.059	U	ug/L	0.059	0.24

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Azinphos Methyl	0.020	U	ug/L	0.02	0.078
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Bromacil	0.039	U	ug/L	0.039	0.16
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Fonofos	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Mevinphos	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Norflurazon	0.029	U	ug/L	0.029	0.12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Chlorpyrifos Methyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Metalaxyl	0.039	U	ug/L	0.039	0.16
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Metribuzin	0.020	U	ug/L	0.02	0.078
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Parathion Methyl	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Butylate	0.020	U	ug/L	0.02	0.078
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Fenamiphos	0.029	U	ug/L	0.029	0.12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Hexazinone	0.029	U	ug/L	0.029	0.12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Malathion	0.0098	U	ug/L	0.0098	0.039
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Sucralose	0.059		ug/L	0.01	0.05
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Metolachlor	0.059	U	ug/L	0.059	0.24
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Pesticides	Prometryn	0.020	U	ug/L	0.02	0.078
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Phenanthrene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Fluoranthene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Isophorone	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,6-Dinitrotoluene	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Dimethyl phthalate	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.0	U	ug/L	2	8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	60
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzo(k)fluoranthene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Chrysene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Di-n-octyl phthalate	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Phenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	1,4-Dioxane	0.15		ug/L	0.02	0.1
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,4-Dichlorophenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Butyl benzyl phthalate	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Nitrobenzene	2.0	U	ug/L	2	8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2-Nitrophenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzo(b)fluoranthene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Fluorene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Hexachlorobutadiene	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Hexachloroethane	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	N-Nitrosodimethylamine	2.0	U	ug/L	2	8

Date Sampled	UDL	Matrix	Field Sample ID	SCH Group	Component	Value	Qualifier	Units	MDL	PQL
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Acenaphthene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Acenaphthylene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	400
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Di-n-butyl phthalate	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Naphthalene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	60
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2-Chlorophenol	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	U	ug/L	40	160
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzo(a)anthracene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Benzo(a)pyrene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	2.0	U	ug/L	2	8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Hexachlorobenzene	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.0	U	ug/L	2	8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Pyrene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2,4-Dinitrotoluene	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	2-Chloronaphthalene	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Diethyl phthalate	1.0	U	ug/L	1	4
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Pentachlorophenol	3.0	U	ug/L	3	12
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Priority Organic Pollutants	Anthracene	0.20	U	ug/L	0.2	0.8
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Field Parameter	Specific Conductance	39,331		umhos/cm		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Field Parameter	Sample Depth	0.15		m		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Field Parameter	Temperature	33.30		C		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Field Parameter	Dissolved Oxygen	3.60		mg/L		
9/17/2013 12:30	Test Site	W-SURF-SLT	TEST (T10)	Field Parameter	pH	7.63				

Appendix G

Toxicological results

FDEP Biology Laboratory - Chronic Bioassay Bench Sheet

Pimphales promelas or Menidia beryllina

Facility: Gulf Power Lansing Smith
Address: Bay County Rd. 2300 Southport, FL, 32409
County: Bay
NPDES Permit #: FL 0002627 AP
Contact/District: NWD/ Nathan Mulkey

Test Species (circle one)
P. promelas SOP#: TA07_09 EPA-821-R-02-013 Method 1000.0
(M. beryllina) SOP#: TA07_14 EPA-821-R-02-014 Method 1006.0

Start Date: 9.17.13 Time: 1400
End Date: 9.21.13 Time: 1300

Diluent/ Batch:
MHW /_____ Test Days Used: _____
MHW /_____ Test Days Used: _____
ASW / 9.17.13 Test Days Used: 0-3
ASW /_____ Test Days Used: _____

Organism age : 10 days
Feeding Prior to Test and Daily
Artemia Lot # : 23013
Chamber size : 1000 ml
Test volume : 500 ml

Organism Batch #:	9.17.13
Artemia Batch #	Day 3 184.13
Day 0 181.13	Day 4
Day 1 182.13	Day 5
Day 2 183.13	Day 6

LIMS entry: 9-25-13 mF Entry verification:

Sample Received	Lab Sample #	LIMS Job #	LIMS Sample #	Collection Date/Time	Received Date/Time
Test Day 0	1	TLH-2013-09-17-11	1535402	9-16-13/1400	9-17-13/ 1027
Test Day 2	2	TLH-2013-09-19-81	1536619	9-18-13/1201	9-19-13/10381 AP
Test Day 4	3	TLH-2013-09-26-01	1537848	9-20-13/ 1100	9-21-13/0905

Water Quality Parameters	Batch # 9.17.13 MHW (ASW) (circle one)	MHW ASW (circle one)	NA Sample 1	NA Sample 2	NA Sample 3	Other:	Measured By:	Verified by:
Field Total Residual Cl_2 (mg/L):	NA	NA						
Lab Total Residual Cl_2 (mg/L):	<0.03		<0.03	<0.03	~~<0.03~~ <0.03	CR	MF/HW/CR	AP
Alkalinity (mg/L as $CaCO_3$):	180		109	103	~~185~~ 183	CR	HW/CR/MF	AP
Hardness (mg/L as $CaCO_3$):								
Total Ammonia (mg/L as N):	<0.051		<0.051	<0.051	~~<0.051~~ <0.051	CR	MF	CR
Conductivity: µmhos mmhos	38.9		38.7	39.1			AP/CR	CR/AP
Salinity (ppth):	24.2		24.2	34.8	25.4		AP/CR/HW	CR/AP

Reported as "No Result"

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min. 23.9 max. 26.9
Test min. 24.0 max. 25.5
Room B246 min. 24.1 max. 25.2

Sample Validation:
Instructions: Check yes or no. Fill in temperatures.
Temperature: Shipped ≤ 6°C ☑ Yes ☐ No
If Hand Delivered:Cooling ☐ Yes ☐ No (received ____°C collected___°C)
Holding Time: ≤ 36 Hours ☑ Yes ☐ No
(Composite-end of collection; grab-when collected;
4 in 24 - time last sample collected)

Statistics	
Growth NOEC:	
Growth LOEC:	
Growth IC_{20}:	
Growth IC_{25}:	
Ctrl % CV:	
Dunnetts PMSD:	
Survival NOEC:	
Survival LOEC:	

Investigators' signatures

	Initials:
Bruce Aforde	BA
Adrienne Farrington	AP
Cassidy Resident	CR
Hans Waller	HW

REVIEWER Liz Miller

Comments:
Sample 3 not used because test taken down 9.21.13 (Excess Control Mortality @72hrs) MF
NCR 4622 created.
Reported as "No Result" and "0" qualified MF 9-25-13

revised 07/23/13 AP

Chronic Bioassay Survival Benchsheet

Facility: Gulf Power

LIMS Sample Number: 1535402
(for Lab Sample # 1)

Department of Environmental Protection
Biology Laboratory Chronic Screening Bioassay
***P. promelas* SOP TA07_09 *M. beryllina* SOP TA07_14**

Organism: *P. promelas* (*M.beryllina*) (circle one)

		TEST DAY							
Concentration	Replicate	0	1	2	3	4	5	6	7
Control	A	10	9 1D	9	9	9			
	B	10	8 2D	8	8	8			
	C	10	8 2D	8	6 2D	6			
	D	10	9 1D	8 1D	8	8			
Sample 6.25 %	A	10	8 2D	8	8	8			
	B	10	7 3D	6 1D	6	6			
	C	10	4 4D	4	4	4			
	D	10	9 1D	8 1D	8	8			
Sample 12.5 %	A	10	8 2D	8	8	8			
	B	10	6 4D	6	6	6			
	C	10	8 2D	8	8	8			
	D	10	8 2D	7 1D	7	7			
Sample 25 %	A	10	9 1D	8 1D	8	8			
	B	10	7 3D	7	7	7			
	C	10	7 3D	7	7	7			
	D	10	8 2D	8	8	8			
Sample 50 %	A	10	10	9 1D	9	9			
	B	10	9 1D	7 2D	6 1D	6			
	C	10	9 1D	9	9	9			
	D	10	10	10	10	10			
Sample 100 %	A	10	10	10	10	10			
	B	10	10	10	10	10			
	C	10	10	10	10	10			
	D	10	10	10	10	10			
Sample %	A	10							
	B	10							
	C	10							
	D	10							
Loaded by: AP	Checked by:		BA	BA	CR	MF			
Verified by: CR									

Comments:

Chronic Bioassay Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_14 parameter pg 1 AP

Sample Source: Gulf Power
LIMS Sample #: 1535402 (for Lab sample #1)

Start Date: 9.17.13 End Date: ~~9.20~~ 9.21.13
Start Time: 1400 End Time: 1200

conc = concentration rep = replicate circle umhos or mmhos

Test Day			Before Renewal						After Renewal					
	Conc.	Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos/mmhos	Salinity ppth	Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos/mmhos	Salinity ppth
Day 0 sample:	Control	A	8.1	24.4	6.9	38.9	24.2						
1	6.25%	A	8.1	24.5	7.0	39.7	24.6						
1	12.5%	A	8.1	24.5	6.9	39.4	24.4						
1	25%	A	8.1	24.6	7.0	39.5	24.6						
1	50%	A	8.0	24.6	6.9	39.1	24.3						
1	100%	A	8.0	25.5	7.1	38.7	24.2						
1		A											
Measured by:			AP	AP	AP	AP	AP						
Recorded by:			AP	AP	AP	AP	AP						
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 1 sample:	Control	B	8.2	24.1	7.3	39.7	25.4	B	8.1	24.0	7.0	38.6	25.0
1	6.25%	B	8.2	24.1	7.2	39.9	25.7	B	8.1	24.0	7.1	39.1	25.4
1	12.5%	B	8.2	24.3	7.0	39.9	25.7	B	8.1	24.0	7.0	39.0	25.3
1	25%	B	8.2	24.9	7.1	39.9	25.6	B	8.1	24.0	6.9	39.1	25.3
1	50%	B	8.1	24.6	7.1	39.3	25.2	B	8.0	24.0	6.9	38.4	24.8
1	100%	B	8.0	24.1	6.9	38.9	24.9	B	7.9	24.0	7.5	38.2	24.5
1		B						B					
Measured by:			CR	BA	CR	CR	CR		CR	BA	CR	CR	CR
Recorded by:			CR	CR	CR	CR	CR		CR	CR	CR	CR	CR
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 2 sample:	Control	C	8.1	24.1	6.6	39.9	25.8	C	8.1	24.1	6.8	39.4	24.8
2	6.25%	C	8.0	24.0	6.6	40.3	26.2	C	8.0	24.0	6.8	39.9	25.5
2	12.5%	C	8.0	24.0	6.3	40.1	26.0	C	8.0	24.1	6.7	39.7	25.3
2	25%	C	8.0	24.0	6.4	39.9	25.9	C	8.0	24.0	6.8	39.5	25.2
2	50%	C	7.9	24.0	6.4	39.9	25.8	C	8.0	24.0	6.8	39.1	24.9
2	100%	C	7.8	24.0	6.5	39.1	25.2	C	7.8	24.5	7.0	39.1	24.8
2		C						C					
Measured by:			CR	CR	CR	CR	CR		CR	BA	CR	CR	CR
Recorded by:			CR	CR	CR	CR	CR		CR	CR	CR	CR	CR
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 3 sample:	Control	D	8.0	24.9	6.5	39.6	25.3	D	8.0	24.0	6.7	39.9	25.4
2	6.25%	D	7.9	24.4	6.1	39.7	25.5	D	8.0	24.0	6.7	40.0	25.6
2	12.5%	D	7.9	24.4	6.1	39.4	25.2	D	8.0	24.0	6.7	39.7	25.4
2	25%	D	7.9	24.4	6.2	39.8	25.5	D	8.0	24.1	6.9	39.4	25.2
2	50%	D	7.9	24.7	6.2 AP	38.9	24.8	D	7.9	24.1	6.8	39.2	25.0
2	100%	D	7.8	24.5	5.9	38.9	24.8	D	7.7	24.4	6.4 CR	39.4	25.2
2		D						D					
Measured by:			AP	AP	AP	AP	AP		CR	BA	CR	CR	CR
Recorded by:			AP	CR	AP	AP	AP		CR	CR	CR	CR	CR

Comments:

For salinity <1 ppth insert <1. For salinity > 1 ppth, conductivity measurement is not required if salinity probe is functional.

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Chronic Bioassay Weighing Benchsheet

Facility: Gulf Power

LIMS Sample Number: 1535402
(for Lab Sample # 1)

***P. promelas* and *M. beryllina* Bench Sheet**
SOP TA06_21

Concentration	Replicate	Pan #	mean wt = fish wt divided by 10 convert g to mg: move decimal 3 places to right: Pan wt. g	Pan + Fish g	Fish wt. g	Original # Fish	Mean wt. mg
Control	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
sample %	A					10	
	B					10	
	C					10	
	D					10	
	Weighed by initials:				revised 7/16/08 mf		

Comments: Page not used AP

Balance: Ohaus 250D Ser# 1125481084
S-Weights: BIO-S-Weights-01

Note: Pan number (#) refers to actual Pan number.

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Chronic Bioassay Weighing Benchsheet

Quality Control

Facility: Gulf Power

LIMS Sample Number: 1535407
(for Lab Sample # 1)

***P. promelas and M. beryllina* Bench sheet**
SOPs TA07_09, TA07_14 and TA06_21

Drying Oven ID:		Tare weighed by:	
Temperature °C:		Final weighed by:	
Hours:			

Tare Weighing Date:	Final Weighing Date:	Measured Value (g)	S-weight Value (g)
Tare Pan 1 after Pan 5 (g)	@	S-weights _____	@ _____
Tare Pan 1 after Pan 10 (g)	@	at tare	@
Tare Pan 1 after Pan 15 (g)	@	S-weights _____	@ _____
Tare Pan 1 after Pan 20 (g)	@	at final	@
Tare Pan 1 after Pan 25 (g)	@		
Tare Pan 1 after Pan 30 (g)	@	Balance: Ohaus 250D Ser# 1125481084	
Tare Pan 1 after Pan 35 (g)	@	S-Weights: BIO-S-Weights-01	
Tare Pan 1 after Pan 40 (g)	@		
Tare Pan 1 after Pan 45 (g)	@		
Tare Pan 1 after Pan 48 (g)	@		
Final Pan 1 after Pan 5 (g)	@		
Final Pan 1 after Pan 10 (g)	@		
Final Pan 1 after Pan 15 (g)	@		
Final Pan 1 after Pan 20 (g)	@		
Final Pan 1 after Pan 25 (g)	@		
Final Pan 1 after Pan 30 (g)	@		
Final Pan 1 after Pan 35 (g)	@		
Final Pan 1 after Pan 40 (g)	@		
Final Pan 1 after Pan 45 (g)	@		
Final Pan 1 after Pan 48 (g)	@		

Note: Pan numbers (5, 10, etc.) for Tare and Final refers to sequence of weighing as actual Pan #s may differ.

Comments: Page not used AP

revised 7/16/08 MF

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Test ID: Gulf Power M. beryllina Dates: 9.17.13 - 9.21.13

METER / DEVICE	ID	SOP	Parameter	Method	√ used
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
YSI DO Probe	5905	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	✓
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity Salinity	SM 2510 B SM 2520 B	✓
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	✓
Traceable Thermometer	#1-SN101686412 #2-SN221295527 #3-SN240116020 #4-SN80361795 #5-SN61990624	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	~~#4~~ ✓
Hach Pocket Colorimeter II #1	05110C042029	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	
Hach Pocket Colorimeter II #2	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	✓
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.

Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT--Chronic SRT)

Entered By: AP 9-23-13

V 1.3 2/15/13 MF

PAGE

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EPA End Sheet

The Bioassay of the Gulf Power Company - Lansing Smith Power Plant effluent sampled on September 15, 2013, NPDES #FL0002267

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

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N	2 5	3 F L 0 0 0 2 2 6 7	11 12	1 3 0 9 1 5		# B	# S	# 2

Remarks

#

The Priority Pollutants Analysis of the Gulf Power Company - Lansing Smith Power Plant effluent sampled on September 15, 2013, NPDES #FL0002267

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

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N	2 5	3 F L 0 0 0 2 2 6 7	11 12	1 3 0 9 1 5		# X	# S	# 2

Remarks

#

Biological Analyses of the Gulf Power Company - Lansing Smith Power Plant effluent sampled on September 15, 2013, NPDES #FL0002267

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

Transaction Code		NPDES NUMBER		YR/MO/DA		Insp Type	Inspector	Fac Type
1 N	2 5	3 F L 0 0 0 2 2 6 7	11 12	1 3 0 9 1 5		# S	# S	# 2

Remarks

#