

Biological Assessment of

Ascend Performance Materials LLC

Escambia County

NPDES # FL0002488

Sampled December 13, 2010

April 2011

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

Quality Manual No. 870346G

NELAC Certification No. E31780

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Facility Overview

The Ascend Performance Materials, LLC (formerly Solutia Inc.) is a chemical manufacturing facility. The facility draws from the Escambia River for use as once-through, non-contact cooling water. The effluent is discharged into an unnamed tributary that flows into the Escambia River and also directly into the Escambia River a Class III Fresh Water through two outfalls (see map Appendix A). One of the outfalls is North of the River Intake and one is South of the River Intake. The design flow of the wastewater system is 27.7 million gallons per day (MGD) combined plant discharge. The annual average flow for September 2009 to October 2010 was 16.625 MGD from the South outfall and 2.225 MGD from the North Outfall. Wastewater treatment includes sodium bisulfite dechlorination, oil skimming by means of permanent oil booms, sedimentation, equalization and neutralization. This facility continuously discharges. The flow measured during this survey was, 6.5 MGD from the South Outfall and 1.5 MGD from the North Outfall and additionally, the River Intake was 12.2 MGD (Ascend Performance 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, summary of permit limits, and discharge monitoring report (DMR) information.

Methods

The purpose of this investigation was to determine the discharge's effects on the biota of the receiving waters. Due to large fluctuations in the water level in the Escambia River, periphyton samples were not collected. Invertebrate samples were not submitted because the floating Hester Dendy sampling plates were found dry on the banks at retrieval. Field samplers noted that both North and South sites may be tidally influenced during a pre-sampling reconnaissance trip in which conductivity was measured. Steam Condition Index invertebrate sampling cannot be performed in streams or rivers which are tidally influenced. The plant discharges from two outfalls into the Escambia River. For the North Outfall, water samples were collected from a North Control Site (located in the Escambia River 40 meters upstream of the confluence of the unnamed tributary and the Escambia River) and a North Test Site (located in the Escambia River 50 meters downstream of the confluence of the unnamed tributary and the Escambia River). Samples were also collected from a South Control Site (located in the Escambia River 70 meters upstream of the South Outfall) and a South Test Site (located in the Escambia River 40 meters downstream of the South Outfall's point of discharge and beyond the downstream edge of the mixing zone). Effluent samples for all analyses were taken as grab samples from monitoring locations EFF-1 and EFF-2, after dechlorination. River intake samples were also collected as grab samples from monitoring location INT-1.

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/labs/bars/sas/sop/index.htm for details) and met DEP quality assurance/quality control standards (see http://www.dep.state.fl.us/labs/bars/sas/qa/index.htm). Explanations of specific methods and measurements can be found in Appendix C.

The following were involved in this investigation: Kim Allen, Rick Abad, Nathan Mulkey and Kacey Smith (FDEP Northwest District Office, Pensacola), and the FDEP Central Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Ed Smith and Nancy Ross).

Results

Organic Constituents (See Table 1 and Appendix E)

- No organic constituents were detected in the effluent.

- No organic constituents were detected in the field blank.

Metals (See Table 2 and Appendix E)

- South effluent iron (1120 µg/L) exceeded Class III Fresh Water Quality Criterion (62-302.530(38)).
- While the South effluent copper (17.5 µg/L) exceeded Class III Fresh Water Quality Criterion (62-302.530(23)), the facility was granted a variance (#01-0528) for copper which sets the permit limit to less than 20.0 µg/L. Under this variance, copper detected in the South effluent is in compliance.
- All metals for the North effluent, North Control Site, South Control Site, North Test Site and South Test Site grab samples were either undetected or detected at levels that complied with Class III Fresh Water Quality Criteria (62-302.530 F. A. C.)
- No metals were detected in the field blank.

Toxicity Whole Effluent Test (See Table 1 and Appendices F and G)

- Tests were performed December 14 through December 18, 2010.
- The effluent samples were not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during the acute screen bioassays and therefore, complied with effluent permit limits.

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

- Dissolved oxygen (mg/L), pH (Standard Units), and specific conductance (µmhos/cm) of the effluent complied with Class III Fresh Water Quality Criteria (62-302.530 F.A.C.) and effluent permit limits.
- While specific conductance complied with Class III Freshwater quality Criteria, it should be noted that the conductivity measured in the South effluent and at the South instream sites was much higher than the conductivity in the North effluent and at North instream sites.
- Chlorophyll *a* was detected in all effluents, Control Sites and Test Sites at low levels between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit (PQL).
- Total Residual Chlorine of the South effluent (0.04 mg/L) as measured in the FDEP laboratory exceeded Class III Fresh Water Quality Criterion (62-302-.530(18) F.A.C.) and effluent permit limits. This measurement is Q-qualified because the sample was held beyond normal holding time.
- Total suspended solids (mg/L) were detected in both effluents, Control Sites and Test Sites between the MDL and PQL.
- Biological Oxygen Demand (BOD; mg/L) of the North and South effluents, Control Sites, Test Sites and River Intake were detected between the MDL and PQL which complied with permit limits.
- Oils and Greases (mg/L) exceeded Class III Fresh Water Quality Criteria (62-302.530(49a)) in the North effluent (12 mg/L), South effluent(12 mg/L), North Control Site (13 mg/L), South Control Site (12 mg/L), North Test Site (12 mg/L) , and South Test Site (12mg/L).
- Chloride (mg/L) was detected in both effluents, Control Sites and Test Sites. The North effluent chloride does not appear to be significantly contributing to the chloride of the North Test Site when compared with the North Control Site. The South effluent chloride was similar to the North effluent level. The South Control Site Chloride and the South Test Site chloride are elevated above the levels of either effluent.
- Sulfate (mg/L) was detected in both effluents, Control Sites and Test Sites. The North effluent sulfate does not appear to be significantly contributing to the North Test Site sulfate (12 mg/L) when compared to the North Control Site. The South effluent sulfate is 10 times the South Control Site values and is elevating the downstream South Test Site; the sulfate level at the South Test Site (66 mg/L) is double the amount detected in the South Control Site.

Microbiology (See Table 1 and Appendix E)

- Fecal coliform analyses were performed by the University of West Florida, Pensacola, Florida.

- Fecal coliforms were detected in both effluents, Control Sites and Test Sites at levels which complied with Class III Fresh Water Quality Criterion (62-302.530(6) F.A.C.).

Nutrients (See Table 1 and Appendix E)

- North and South effluent nutrient levels complied with permit limits and the Class III Fresh Water Quality Criteria.
- Total phosphorus of the North effluent was an order of magnitude higher than at the North Control Site and the North Test Site. Ortho-phosphate of the North effluent was also higher than levels detected at the North Control Site and at the North Test Site. The North effluent did not appear to elevate the total phosphorus or ortho-phosphate at the North Test Site.
- All other nutrients for the North and South effluents and both Control Sites and Test Sites were detected at similar levels.
- Total ammonia (0.019 mg/L I) was detected in the field blank.

Algal Growth Potential (See Table 3 and Appendix E)

- Raschke and Shultz (1987) determined that AGP values above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The AGP value of the North effluent sample using the freshwater species, *Pseudokirchneriella subcapitata,* was approximately 5 times greater than the "problem" threshold value. The analytical chemistry suggests that the effluent is nitrogen-limited. The North Control Site and North Test Site AGP values were 2 times and 3 times higher than the problem threshold, respectively, and both sites were phosphorus limited. The elevated North Test Site AGP indicates that the North effluent is contributing to nutrient enrichment of the North Test Site.
- The AGP value in the South effluent was also approximately 5 times higher than the "problem" threshold value and is nitrogen-phosphorus co-limited. Both the South Control Site and South Test Site AGP values were approximately 2 times the problem threshold and showed phosphorus limitation. The South Control Site and South Test Site AGP values are similar. The South effluent does not appear to be contributing nutrient enrichment to the South Test Site.

Bioassessment

- No periphyton samples were collected due to fluctuating water levels at the instream sites. The floating Hester Dendy sampling plates were found dry on the banks at retrieval and therefore, invertebrate samples were not submitted.

Conclusion

South effluent iron exceeded Class III Fresh Water Quality Criterion (62-302.530(38)) but iron was not elevated in the downstream South Test Site sample. South effluent copper complied with the copper variance (#01-0528) but the elevated copper level may be affecting the downstream South Test Site as indicated by the detection of copper at a level that complied with the Class III Fresh Water Quality Criterion (62-302.530(23)) but was higher than the undetected level at the South Control Site. South effluent total residual chlorine measured in the FDEP laboratory exceeded Class III Fresh Water Quality Criterion (62-302-.530(18) F.A.C.) and effluent permit limits. This measurement is Q-qualified because the sample was held beyond normal holding time. Oils and Greases (mg/L) exceeded Class III Fresh Water Quality Criteria (62-302.530(49a)) in both effluents, Control Sites and Test Sites. Based on the chemical analysis of the nutrients, neither effluent appears to be affecting the downstream Test Sites, but the AGP results indicate that nutrient enrichment from the North effluent is occurring at the North Test Site.

Literature Cited

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.

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

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

Table 1. Effluent limits, Class III Freshwater Criteria and chemical, microbiological and toxicological data.

Ascend Performance Materials LLC	Class III Criteria	North Effluent Limits	North Effluent	North Control Site	North Test Site	South Effluent Limits	South Effluent	South Control Site	South Test Site	River Intake Permit Limits	River Intake
Organic Constituents (µg/L)											
None Detected	-	-	None Detected			-	None Detected			-	-
Nutrients (mg/L)											
Ortho-phosphate	-	-	0.068	0.011	0.01	-	0.02	0.009 I	0.01	-	0.01
Total Phosphorus	-	Report p	0.16	0.029	0.03	Report p	0.05	0.028	0.031 A	Report p	0.04
Total Ammonia	-	-	0.092	0.082	0.1	-	0.11	0.093	0.086	-	-
Un-ionized Ammonia	≤ 0.02 s	-	≤ 0.02 c	-	-	-	≤ 0.02 c	-	-	-	-
Nitrate and Nitrite	-	-	0.34	0.36	0.35	-	0.47	0.36	0.36	-	0.35
Total Kjeldahl Nitrogen	-	-	0.29	0.31	0.29	-	0.34 J	0.35	0.32	-	0.29
Organic Nitrogen	-	-	0.198 c	0.228 c	0.19 c	-	0.23 c	0.257 c	0.234 c	-	-
Total Nitrogen	-	Report p	0.63 c	0.67 c	0.64 c	Report p	0.81 c	0.71 c	0.68 c	Report p	0.64
General Physical and Chemical Parameters											
Dissolved Oxygen (mg/L)	≥ 5.0	-	10.4	14.5	14.5	-	8.4	12.8	13.5	-	-
pH (SU)	6.0 - 8.5	-	7.4	6.8	6.8	6.0 - 8.5	7.5	6.9	6.9	-	-
Conductivity (µmhos/cm)	≤ 1,275	-	385	99	102	-	680	708	779	-	-
Temperature (°C)	-	≤ 37.2	13.5	8.9	9.0	≤ 37.2	21.8	9.2	10.4	-	-
Sample Depth (m)	-	-	0.1	0.2	0.2	-	0.1	0.2	0.2	-	-
Alkalinity (mg CaCO3/L)	≥ 20	-	26	28	26	-	29	30	28	-	-
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	≤ 0.03 UQ	-	-	≤ 0.01	0.04† Q	-	-	-	-
Chlorophyll *a* (µg/L) - Corrected	-	-	0.7 I	0.72 I	0.73 I	-	0.77 I	0.58 I	0.66 I	-	-
Phaeophytin (µg/L)	-	-	0.4 U	0.4 U	0.4 U	-	0.4 U	0.4 U	0.4 U	-	-
Total Suspended Solids (mg/L)	-	-	8 I	8 I	10 I	-	4 I	10 I	9 I	-	-
Turbidity (NTU)	< 29 t	-	7.8 A	7.8	6.8	-	5.8	7.9	6.9	-	-
BOD, 5 day (mg/L), N - uninhibited	-	-	1.3 I	0.84 I	0.58 I	Report p	0.79 I	0.72 I	0.6 I	Report p	0.34 I
Oils and Greases (mg/L)	≤ 5.0	-	12	13	12	≤ 5.0	12	12	12	-	-
Chloride (mg/L)	-	-	72	9.1	11	-	70	160	200	-	-
Fluoride (mg/L)	≤ 10.0	-	0.04 I	0.039 I	0.04 I	-	0.051 I	0.047 I	0.049 I	-	-
Sulfate (mg/L)	-	-	25	11	12	-	320	33	66	-	-
Flow (MGD)	-	Report	1.5	-	-	Report	6.5	-	-	Report	12.2
Hardness (mg $CaCO_3$)	-	Report p	48.07 c	28.76 c	29.34 c	Report p	52.44 c	81.13 c	91.69 c	-	-
Toxicity (96 hour acute screen, percent mortality in 100% effluent)											
Bioassay - Water flea *(Ceriodaphnia dubia)*	≤ 50	-	0	-	-	-	0	-	-	-	-
Bioassay - Fish *(Cyprinella leedsi)*	≤ 50	-	0	-	-	-	0	-	-	-	-
Microbiology (Number of colony forming											
Fecal Coliforms ¥	≤ 400s #	-	132	22 B	22 B	-	44	18 B	36 B	-	-

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
c - Value is calculated
p - 24 hour composite
s - Single sample
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptance range
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
¥ - Fecal coliform analysis performed by University of West Florida, Pensacola
- If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)
†-measurement taken in the FDEP laboratory from the bioassay sample

Table 2. Effluent limits, Class III Freshwater Criteria and metals data. Class III Criteria based on hardness are presented individually for each site based on hardness at that site.

Ascend Performance Materials LLC	North Effluent Class III Criteria	North Effluent Limits	North Effluent	North Control Site Class III Criteria	North Control Site	North Test Site Class III Criteria	North Test Site	South Effluent Class III Criteria	South Effluent Limits	South Effluent	South Control Site Class III Criteria	South Control Site	South Test Site Class III Criteria	South Test Site	River Intake Permit Reporting Reqs.	River Intake
Metals (µg/L unless otherwise noted)																
Aluminum	-	-	310	-	240	-	290	-	-	320	-	340	-	280	-	-
Arsenic	≤ 50	-	0.48 I	≤ 50	0.53 I	≤ 50	0.48 I	≤ 50	-	0.48 I	≤ 50	0.56 I	≤ 50	0.49 I	-	-
Cadmium	≤ 0.16 b	-	0.03 U	≤ 0.1 b	0.03 U	≤ 0.11 b	0.03 U	≤ 0.17 b	-	0.03 U	≤ 0.23 b	0.03 U	≤ 0.25 b	0.03 U	-	-
Calcium (mg/L)	-	-	10.1	-	9.24	-	9.31	-	-	11.6	-	12.7	-	13.3	-	-
Chromium-III	≤ 47.30 b	-	0.96 I	≤ 31.1 b	0.67 I	≤ 31.57 b	0.89 I	≤ 50.79 b	-	1.3	≤ 72.61 b	0.83 I	≤ 80.27 b	0.76 I	-	-
Copper	≤ 4.99 b	≤ 20.0* p	3.1	≤ 3.2 b	0.5 U	≤ 3.27 b	0.5 U	≤ 5.37 b	≤ 20.0* p	17.5	≤ 7.80 b	0.5 U	≤ 8.66 b	2.05	Report p	13.6
Iron	≤ 1,000	-	850	≤ 1,000	820	≤ 1,000	860	≤ 1,000	-	1120	≤ 1,000	900	≤ 1,000	890	-	-
Lead	≤ 1.25 b	-	0.41 I	≤ 0.7 b	0.27 I	≤ 0.67 b	0.36 I	≤ 1.40 b	-	0.37 I	≤ 2.44 b	0.33 I	≤ 2.85 b	0.32 I	-	-
Magnesium (mg/L)	-	-	5.55	-	1.38	-	1.48	-	-	5.7	-	12	-	14.2	-	-
Nickel	≤ 28.07 b	≤ 28.07 b	0.73 I	≤ 18.2 b	0.64 I	≤ 18.49 b	0.63 I	≤ 30.21 b	≤ 30.21 b	1.74	≤ 43.70 b	0.71 I	≤ 48.47 b	0.78 I	Report p	0.93 I
Selenium	≤ 5.0	-	0.2 U	≤ 5.0	0.2 U	≤ 5.0	0.2 U	≤ 5.0	-	0.2 U	≤ 5.0	0.2 U	≤ 5.0	0.2 U	-	-
Silver	≤ 0.07	-	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	≤ 0.07	-	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U	-	-
Zinc	≤ 64.42 b	≤ 64.42 b	7.4 I	≤ 41.7 b	5 U	≤ 42.40 b	5 U	≤ 69.34 b	≤ 69.34 b	5 U	≤ 100.36 b	5 U	≤ 111.32 b	5 U	Report p	9.5 I

See Table 1 for calculated hardness.

Value exceeds the Class III Water Quality Criteria or permit limits

b - Value is calculated based on hardness

p - 24 hour composite

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

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

*-per Variance #01-0528

Table 3. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN), orthophosphate (OP), total nitrogen (TN) and total phosphorus (TP) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of nitrogen to phosphorus.

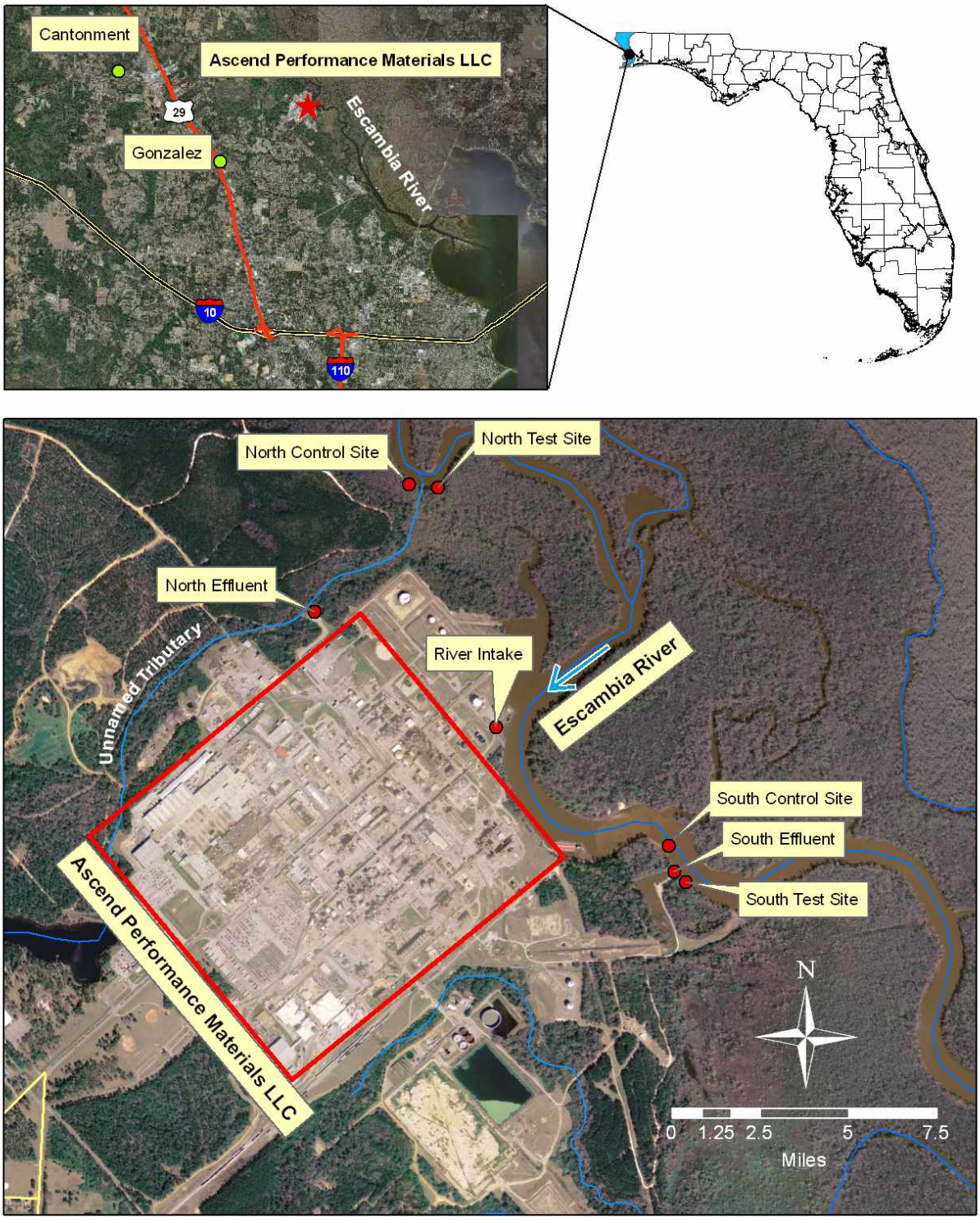
Ascend Performance Materials LLC						
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Predicted AGP (TN) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
North Control Site	10.1		4.7 ± 0.9		12.5 ± 2.5	40.2	23.1
North Test Site	16.0		5.2 ± 1.0		13.8 ± 2.8	37.2	20.0
North Effluent	25.0	16.4 ± 3.3		23.9 ± 4.8		6.4	3.9
South Control Site	9.7		3.9 ± 0.8		12.0 ± 2.4	50.3	25.4
South Test Site	11.0 A		4.3 ± 0.9		13.3 ± 2.7	44.6	21.9
South Effluent	28.5	22.0 ± 4.4	8.6 ± 1.7	30.8 ± 6.2	21.5 ± 4.3	29.0	16.2

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

Appendix A
Map of Facility

Ascend Performance Materials LLC

Fifth Year Bioassessment Sampling Locations



Appendix B

Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Kim Allen	Contact Number: (850) 595-0553
Facility Name (as it appears on permit): Ascend Performance Materials LLC	**Former Names:** Solutia, Monsanto
NPDES Permit Number: FL0002488	**Permit Expiration Date:** 7/1/06 (permit has been administratively continued)
Physical Address: 3000 Old Chemstrand Road, Pensacola FL	
District: NWD	**County:** Escambia
Function of Facility: Chemical manufacturer	
Facility Type: IW	**Permitted Capacity (MGD):** 27.7 MGD
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): D001: 16.625 mgd; D002: 2.225 (9/1/09-10/31/10)	
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):

D-001: EFF-1 pond discharge flow measured at Palmer-Bolis Flume
D-002: EFF-2 Parshall Flume Discharge
River intake: INT-1: River intake in Power House
I-007 (internal outfall) EFF-7: Domestic wastewater plan Effluent

Description of Permitted Outfall(s):

Outfall D-001 (South): 25.0 MGD directly discharges to the Escambia River

Outfall D-002 (North) 2.7 MGD discharges to an un-named tributary to Escambia River

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

Wastewater treatment includes sodium bisulfite dechlorination, oil skimming, sedimentation, equalization and neutralization.

D-001discharge includes non-contact cooling water, fire protection water losses, treated and untreated production well ground water, steam and air conditioning condensate, ion exchange regeneration wastewater, river water, hydrostatic test water, stormwater within dikes and stormwater runoff from areas associated with industrial activity.

D-002 discharge includes non-contact cooling water, fire protection water losses, treated and untreated production well ground water, steam and air conditioning condensate, river water, hydrostatic test water, stormwater within dikes and stormwater runoff from areas associated with industrial activity.

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)**

See below.

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D001 - South Outfall	Discharge Limitations			Monitoring Requirements		
Parameters (units)	**Monthly Avg.**	**Daily Max.**	**Other -specify**	**Frequency**	**Sample Type**	**Sample Point**
Flow, (MGD)	NA	NA	Report	Continuous	Recorder	EFF-1
pH, (standard units)	(See Part	I.A.9.)	NA	Continuous	Recorder	EFF-1
Temperature, (°F)	NA	99.0	NA	3/week	Instantaneous	EFF-1
Total Nitrogen, as N, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-1
Total Phosphorus, as P, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-1
BOD_5, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-1
Total Residual Chlorine, mg/l see Item I.A.15	NA	0.01 mg/l	NA	7/week	Grab	EFF-1
Oil & Grease, mg/l	NA	5.0 mg/l	NA	1/week	Grab	EFF-1
Hardness, mg/l of $CaCO_3$	NA	NA	Report (mg/l)	1/month	24 hour composite	EFF-1
Total Recoverable Copper, (µg/l) per Variance #01-0528	NA	20.0	NA	1/month	24 hour composite	EFF-1
Total Recoverable Nickel, (µg/l)	NA	$e^{(0.846[\ln H]+1.1645)}$	NA	1/month	24 hour composite	EFF-1
Total Recoverable Zinc, (µg/l)	NA	$e^{(0.8473[\ln H]+0.7614)}$	NA	1/month	24 hour composite	EFF-1
Whole Effluent Toxicity	(See Item	I.F)				EFF-1

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D002 - North Outfall	Discharge Limitations			Monitoring Requirements		
Parameters (units)	Monthly Avg.	Daily Max.	Other -specify	Frequency	Sample Type	Sample Point
Flow, (MGD)	NA	NA	Report	Continuous	Recorder	EFF-2
pH, (standard units)	(See Part	I.A.9.)	NA	Continuous	Recorder	EFF-2
Temperature, (°F)	NA	99.0	NA	3/week	Instantaneous	EFF-2
Total Nitrogen, as N, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-2
Total Phosphorus, as P, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-2
BOD_5, (lbs/day)	Report see I.A.12	Report see I.A.12	Report (mg/l)	3/week	24 hour composite	EFF-2
Total Residual Chlorine, mg/l see Item I.A.15	NA	0.01 mg/l	NA	7/week	Grab	EFF-2
Hardness, mg/l of $CaCO_3$	NA	NA	Report (mg/l)	1/month	24 hour composite	EFF-2
Total Recoverable Copper, (µg/l) per Variance #01-0528	NA	20.0	NA	1/month	24 hour composite	EFF-2
Total Recoverable Nickel, (µg/l)	NA	$e^{(0.846[lnH]+1.1645)}$	NA	1/month	24 hour composite	EFF-2
Total Recoverable Zinc, (µg/l)	NA	$e^{(0.8473[lnH]+0.7614)}$	NA	1/month	24 hour composite	EFF-2
Whole Effluent Toxicity see Item VI.A.	(See Item	I.F)				EFF-2

I.A.9. The pH shall be continuously monitored and recorded once per minute to produce a pH value defined as the rolling 60-minute arithmetic average of the 1 min due data at Outfalls D001 and D002 sample points EFF-1 and EFF-2. The 60-min rolling average pH values shall not deviate outside the range of 6-8.5 su except per variance OGC No. 01-0528, pH values may range down to a minimum effluent limitation of 4.9 su during or

as a result of rainfall events.

I.A.12. Net discharge loadings for BOD5, total nitrogen (as N) and total phosphorous (P) shall be determined by gathering analytical test data on the same day for each parameter at (1) river intake, (2) discharge final effluent points D001 and D002. The arithmetic difference of the data for the intake and the final discharge at D001 shall be added to the data for D002. The resulting value shall be reported for each parameter as the net discharge. Such discharge monitored inI.A.1,2 and 4 shall be limited as specified below:

Net Total Nitrogen, as N, (lbs/day)	135 monthly average	1350 daily max
Net Total Phosphorus, as P, (lbs/day)	41.5 monthly average	121.5 daily max
Net BOD5 (lbs/day)	585 monthly average	2700 daily max

I.F. Whole Effluent Toxicity Testing Program

The permittee shall initiate the series of tests described below beginning in within 60 days of the issuance of the permit to evaluate whole effluent toxicity of the discharge from outfall D001 and D002. All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027F, or the most current edition. For freshwater test species, the control water and dilution water used will be moderately hard water as described in EPA/600/4-90/027F, Table 6, or the most current edition. For saltwater test species, the control water and the effluent used will be adjusted to an appropriate salinity using artificial sea salts as described in EPA/600/4-91/003, Section 7. When the salinity of the effluent is between 1 and 6 parts per thousand (ppt), the following salinity adjustment shall be used in the test of 100% effluent. For the **Mysidopsis bahia** bioassays, the effluent and control (0% effluent) shall be adjusted to a salinity of 6 ppt for the 100% effluent test using artificial sea salts. No salinity adjustment shall be done for the **Menidia beryllina** bioassay test of the 100% effluent. When the salinity of the effluent is greater than 5 ppt, no salinity adjustment shall be made and the test shall be run at the effluent salinity. A standard reference toxicant (SRT) quality assurance (QA) acute toxicity test shall be conducted concurrently or no greater than 30 days before the date of the "routine" test, with each species used in the toxicity tests. The results of all toxicity tests shall be submitted with the discharge monitoring report (DMR). Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use.

I.F.1.

a) The permittee shall conduct 96-hour acute static renewal toxicity tests using freshwater test species of the daphnid, **Ceriodaphnia dubia**, and the bannerfin shiner, **Cyprinella leedsi** when the effluent salinity is less than 1.0 part per thousand (ppt) and using saltwater test species of mysid shrimp, **Mysidopsis bahia**, and the inland silverside, **Menidia beryllina,** when the effluent salinity is greater than 1.0 ppt. All tests will be conducted on four separate grab samples collected at evenly-spaced (6-hr) intervals over a 24-hour period and used in four separate tests in order to catch any peaks of toxicity and to account for daily variations in effluent quality.

b) If control mortality exceeds 10% for either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 10% for either species. If, in any separate grab sample test, 100% mortality occurs prior to the end of the test, and control mortality is less than 10% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates a violation of acute toxicity, as defined in F.3.b. below.

I.F.2.

a) The toxicity tests specified above shall be conducted once every six months for the South outfall (D001) until 6 valid semi-annual tests are completed. The toxicity tests specified above shall be conducted once every month for the North outfall (D002) until 6 valid tests are completed. These tests are referred to as "routine" tests. Upon the completion of six valid tests which demonstrate that no greater than 20% mortality of either test species in any grab sample test has been identified, the permittee may petition the Department for a reduction in monitoring frequency.

b) Results from "routine" tests shall be reported according to EPA/600/4-90/027F, Section 12, Report Preparation (or the most current edition), and shall be submitted to:

Florida Department of Environmental Protection
Northwest District
160 Governmental Center
Pensacola, FL 32501-5794

I.F.3.

a) All "routine" test shall be conducted using a control (0% effluent) and test concentration of 100% final effluent.

b) Mortalities of greater than 50% in a 100% effluent in any "routine" sample or an LC50 of less than 100% effluent in any additional definitive test will constitute a violation of these permit conditions, and Rule 62-302.200(1), Rule 62-302.500(1)(d) and Rule 62-4.244(3)(a), F. A. C.

I.F.4.

a) If acute toxicity is greater than 20% mortality of either test species in any grab sample test is found in a "routine" test, the permittee shall conduct three additional tests on each species indicating greater than 20% mortality . The first additional test will include grab samples taken as described in 1.a. and run as four separate definitive analyses. The second and third additional definitive tests will be run on a single grab sample collected on the day and time when the greatest toxicity was identified in the first additional definitive test. Results for each additional test will include the determination of LC50 values with 95% confidence limits.

b) The first additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 50%, 25%, 12.5% and 6.25% effluent and a control (0% effluent). The dilution series may be modified in the second and third test to more accurately identify the toxicity, such that at least two dilutions above and two dilutions below the target toxicity and a control (0% effluent) are run.

c) For each additional test, the sample collection requirements and the test acceptability criteria specified in Section 1 above must be met for the test to be considered valid. The first test shall begin within two weeks of the end of the "routine" tests, and shall be conducted weekly thereafter until three additional, valid tests are completed. The additional tests will be used to determine if the toxicity found in the "routine" test is still present.

d) Results from additional tests, required due to greater than 20% mortality of either test species in the "routine" tests, shall be submitted in a single report prepared according to EPA/600/4-90/027F, Section 12, or the most current edition and submitted within 45 days of completion of the additional, valid tests. If the additional test(s) demonstrate greater than 20% mortality of either test species , the permittee will meet with the Department within 30 days of the report submittal to identify corrective actions necessary to remedy the greater than 20% mortality of either test species .

I.A.4. During the period beginning on the issuance date and lasting through the expiration date of the permit, the permittee is authorized to monitor and report the values of the following Escambia River Intake parameters in order to calculate net values for BOD5, total nitrogen (as N), total phosphorous (as P), and to monitor total recoverable copper, zinc, and nickel, and flow.

River Intake	Reporting Requirements		Monitoring Requirements		
Parameters (units)	**Monthly Avg.**	**Daily Max.**	**Frequency**	**Sample Type**	**Sample Point**
Flow, (MGD)	Report	Report	Continuous	Recorder	INT-1
Total Nitrogen, as N, mg/l and lbs/day * see Item I.A.12.	Report	Report	3/week	24 hour composite	INT-1
Total Phosphorus, as P, mg/l and lbs/day * see Item I.A.12.	Report	Report	3/week	24 hour composite	INT-1
BOD_5, mg/l and lbs/day * see Item I.A.12.	Report	Report	3/week	24 hour composite	INT-1
Total Recoverable Copper, (µg/l)	Report	Report	1/month	24 hour composite	INT-1
Total Recoverable Nickel, (µg/l)	Report	Report	1/month	24 hour composite	INT-1
Total Recoverable Zinc, (µg/l)	Report	Report	1/month	24 hour composite	INT-1

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
Escambia River and un-named tributary of Escambia River	Class III fresh

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

96-hr acute static renewal bioassays collected at evenly-spaced (6 hr) intervals over a 24-hr period and used in 4 separate tests. When effluent salinity is <1.0 ppt, *Cyprinella leedsi* and *Ceriodaphnia dubia* shall be used. When effluent salinity is >1.0 ppt, *Mysidopsis bahia* and *Menidia beryllina* shall be used.

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

The requirements of AO024NW issued 7/2/01 have been satisfied.

Facility Mixing Zone Details (if applicable):

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

Date	Parameter and Units	Limit	Result
11/09	pH (su)	8.5 su (max)	9.1 su
1/10	pH (su)	8.5 su (max)	8.6

Describe previous FYI and WQBEL study:

The previous FYI report is dated 9/96.

Describe previous or current Enforcement Actions (including WLs):

Describe any violations or problems noted in previous inspection:

The 1/26/10 inspection found that Ascend was running the analysis for TSS and Hardness and reporting the values to the Department when they weren't NELAC certified for those parameters.

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: 12/13/2010	Sampler(s): Nathan Mulkey, Kacey Smith, Kim Allen
Temperature (Deg C): North: 13.46 South: 21.80	pH (SU): North: 7.38 South: 7.48
Dissolved Oxygen (mg/L): North: 10.37 South: 8.37	Conductivity (umhos/cm): North: 385 South: 680
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): 1.8	
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:

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.floridadep.org/labs/sop/index.htm and/or http://www.floridadep.org/labs/qa/index.htm .

(2) Chemical Analyses of the Effluent

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

(3) Toxicity Bioassays

Greater than 50% mortality in an acute toxicity test may constitute an exceedence of 62-302.500(1)a and/or a violation of facility permit limits. An inhibition concentration greater than 25% in a chronic test may constitute exceedences of 62-302.530(20), 62-302.530(61) and/or a 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 violation of facility permit limits.

(5) Algal Growth Potential (AGP)

The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a “problem” threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute exceedences of 62-302.530(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(b) F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of $\pm$ 20%. When the ratio of nitrogen to phosphorus (N: P) is less than 10:1, nitrogen limitation of algal production is likely. When the N: P ratio is 20:1 or greater, phosphorus limitation is likely (USEPA 2000). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may constitute an exceedence of 62-302.530(61) F.A.C.

Appendix D

Chain of Custody

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2010-12-13-28
FYI for Solutia Inc.

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

Requester: Cari Butler
Collected By: Rick Abel, Nathan Miller
Sampling Agency: FDEP

Field Report Prepared By: N. Miller
Send Final Report To: Toni Edwards

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☒ Grab	Date 12/13/10 Time 1240 (Central)	Date Time Central	A
	Field ID: TOX South	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 (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☒ Grab	Date 12/13/10 Time 1150 (Central)	Date Time Central	A
	Field ID: TOX North	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 (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☒ Grab	Date 12/13/10 Time 1150 (Central)	Date Time Central	E
	Field ID: River Intake	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 (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☒ Grab	Date 12/13/10 Time 1100 (Central)	Date Time Central	A
	Field ID: D002 North	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 10.37	Storet Station Number	
	Matrix (include type e.g. Salt, Fresh, etc)	Temp (C) 13.46	pH 7.38	Sample Depth ☒ m .10 ☐ ft	☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm) 385	NPDES Number
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: Effluent 4 biossay Rec'd in Tox by JD. 10:09 12/14/10		

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* 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-2010-12-13-28
FYI for Solutia Inc.

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

Requester: Cari Butler
Collected By: Nathan Malloy / Rick Black
Sampling Agency: FDEP
Field Report Prepared By: N. Malloy
Send Final Report To: Toni Edwards

Lab ID *	Location	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☑ Grab Date 12/13/10 Time 1230 (Central)	Date Time	A
	Field ID: D001 South	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 8.37	Storet Station Number
	Matrix (include type e.g. Salt, Fresh, etc): (Salt)	Temp (C): 21.8	pH: 7.48	Sample Depth ☑ m .10 ☐ ft
		Salinity (PPTh) ☑ Sp Conductance (umho/cm): 480	NPDES Number	
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: Effluent	

Lab ID *	Location	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Escambia River	☐ Comp ☑ Grab Date 12/13/10 Time 1030 (Central)	Date Time	B+C
	Field ID: Control North	Tot Res Chlorine (mg/L)	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	

Lab ID *	Location	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Escambia River	☐ Comp ☑ Grab Date 12/13/10 Time 1105 (Central)	Date Time	B+C
	Field ID: Test North	Tot Res Chlorine (mg/L)	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	

Lab ID *	Location	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Escambia River	☐ Comp ☑ Grab Date 12/13/10 Time 1130 (Central)	Date Time	B+C
	Field ID: Control South	Tot Res Chlorine (mg/L)	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	

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* 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

Request Number: ~~RQ-2010-12-06-38~~ 2010-12-13-28

~~BEA Project Urban~~

FY15

Event ID *

Requester: ~~Cheryl Bunch~~

Field Report Prepared By:

Customer: NW-DIST

Collected By:

Send Final Report To: ~~Cheryl Bunch~~

Project ID: ~~DISCRTNARY~~

PMAS: ~~1306~~ 1143

Sampling Agency:

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Escambia River	☐ Comp ☑ Grab	Date 2/3/10 Time 1205 (Central)	Date Time Central	B+C
	Field ID: Test South	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 (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Ascend	☐ Comp ☐ Grab	Date 2/3/10 Time 1250 (Central)	Date Time Central	D
	Field ID: 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: @ South outfall		

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time Central	Date Time Central	
	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 (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time Central	Date Time Central	
	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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* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Appendix E

Physical/Chemical field sheets

DEP-SOP-001/01: Form FD 9000-3

PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

ELFS

SAMPLE ID : NA ORG ID :

COUNTY : Escambia STORET # :

DATE : 12/13/2010 TIME : Perdido & Escambia R. 1030

LATITUDE (0 M) N 30 36.338 LONGITUDE W 87 15.027

LATITUDE (100M) N LONGITUDE W

SITE NAME Ascend North Outfall above SAMPLE COMPLETE ?

FIELD ID/NAME : RECEIVING BODY OF WATER : Perdido Bay Escambia Ba

RIPARIAN ZONE / STREAM FEATURES

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

Forest/Natural | silviculture | Field/Pasture | Agricultural | Residential | Commercial | Industry | Other (Specify)

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

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

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : Right Bank :

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

Artificially Impounded ☐ Yes ☐ No

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

m wide

m/s m/s m/s

m deep m deep m deep

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

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

SEDIMENT / SUBSTRATE

Sediment Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse

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

Sediment Deposition ☐ Sludge Sand Smothering : None Slight Moderate Severe Silt Smothering : None Slight Moderate Severe ☐ Other (Specify) :

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☐ BioRecon ☐ LCI ☐ LVI

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

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.15	8.94	6.80	14.53	99	0.05	
Mid-Depth :	3.9	8.94	6.87	15.08	99	0.5	☐ VOB
Bottom :	7.8	8.94	6.95	16.1	99	0.05	

Water Surface Oils : ☐ None ☐ Sheen ☐ Globs ☐ Slick

Water Odors : ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Other (Specify) :

Water Sample Taken ? ☐ Yes ☐ No

Algae Sample Taken ? ☐ Yes ☐ No

SYSTEM TYPE ☐ Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) :

Clarity ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Opaque

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

WEATHER CONDITIONS / NOTES :

very cold/windy sunny

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

Water samples preserved ? ☐ Yes ☐ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

ABUNDANCE

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

SAMPLING TEAM : Rick Abel, Mike King SIGNATURE : DATE : 12/13/10

Revision Date: September 5, 2008

DEP-SOP-001/01: Form FD 9000-3

ELFS

PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

SAMPLE ID : NA ORG ID :

COUNTY : Escambia STORET # :

DATE : 12/13/2010 TIME : 1100

LATITUDE	LONGITUDE
(0 M) N 30 36.334	W 87 14.976
(100M) N	W

SITE NAME Perdido R. Escambia R. Ascend North Outfall below SAMPLE COMPLETE ?

FIELD ID/NAME : RECEIVING BODY OF WATER : ~~Perdido Bay~~ Escambia Bay

RIPARIAN ZONE / STREAM FEATURES

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

Forest/Natural | silviculture | Field/Pasture | Agricultural | Residential | Commercial | Industry | Other (Specify)

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

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

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : Right Bank :

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

Artificially Impounded ☐ Yes ☐ No

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

m wide

m/s m/s m/s

m deep m deep m deep

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

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

SEDIMENT / SUBSTRATE

Sediment Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse

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

Sediment Deposition ☐ Sludge Sand Smothering : None Slight Moderate Severe Silt Smothering : None Slight Moderate Severe ☐ Other (Specify) :

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☐ BioRecon ☐ LCI ☐ LVI

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

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.15	9.01	6.75	14.50/105	102	0.05	
Mid-Depth :	2.0	9.00	6.79	14.09/97.2	102	0.05	☐ VOB
Bottom :	3.7	9.00	6.83	14.16/1243	102	0.05	

Water Surface Oils : ☐ None ☐ Sheen ☐ Globs ☐ Slick

Water Odors : ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Other (Specify) :

Water Sample Taken ? ☐ Yes ☐ No

Algae Sample Taken ? ☐ Yes ☐ No

SYSTEM TYPE ☐ Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) :

Clarity ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Opaque

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

WEATHER CONDITIONS / NOTES :

very cold / windy

Sunny

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

Water samples preserved ? ☑ Yes ☑ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

ABUNDANCE

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

SAMPLING TEAM : Rick Alred, Mike King SIGNATURE : DATE : 12/13/10

Revision Date: September 5, 2008

DEP-SOP-001/01: Form FD 9000-3

ELFS

PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

SAMPLE ID : NA ORG ID :

COUNTY : Escambia STORET # :

DATE : 12/13/2010 TIME : 1130

SITE NAME Ascend South Outfall above Perdido R. Escambia R.

LATITUDE	LONGITUDE
(0 M) N 30, 35.803	W 87 14.556
(100M) N	W

SAMPLE COMPLETE ? _____

FIELD ID/NAME : _____ RECEIVING BODY OF WATER : Perdido Bay Escambia

RIPARIAN ZONE / STREAM FEATURES

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

Forest/Natural | silviculture | Field/Pasture | Agricultural | Residential | Commercial | Industry | Other (Specify)

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

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

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : _____ Right Bank : _____

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

Artificially Impounded ☐ Yes ☐ No

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

_____ m wide

_____ m/s _____ m/s _____ m/s

_____ m deep _____ m deep _____ m deep

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

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

SEDIMENT / SUBSTRATE

Sediment Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse

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

Sediment Deposition ☐ Sludge Sand Smothering : None Slight Moderate Severe Silt Smothering : None Slight Moderate Severe ☐ Other (Specify) :

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☐ BioRecon ☐ LCI ☐ LVI

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

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.15	9.20	6.94	7.83/111.8	708	0.35	
Mid-Depth :	1.75	9.15	6.91	7.53/107.7	902	0.45	☐ VOB
Bottom :	2.3	9.48	6.89	7.55/107.2	1072	0.53	

Water Surface Oils : ☐ None ☐ Sheen ☐ Globs ☐ Slick

Water Odors : ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Other (Specify) :

Water Sample Taken ? ☐ Yes ☐ No

Algae Sample Taken ? ☐ Yes ☐ No

SYSTEM TYPE ☐ Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) :

Clarity ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Opaque

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

WEATHER CONDITIONS / NOTES :

very calm winds / sunny

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

Water samples preserved ? ☒ Yes ☒ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

ABUNDANCE

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

SAMPLING TEAM : Rick Hood / Mike King

SIGNATURE : _____

DATE : 12/13/10

Revision Date: September 5, 2008

DEP-SOP-001/01: Form FD 9000-3

PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET

ELFS

SAMPLE ID : _____ ORG ID : _____

COUNTY : Escambia STORET # : _____

DATE : 12/13/2010 TIME : 1200

SITE NAME Perdido R. Escambia R. Ascend South Outfall below

LATITUDE (0 M) N	30 35.748	LONGITUDE W	87 14.525
LATITUDE (100M) N		LONGITUDE W	

SAMPLE COMPLETE ? _____

FIELD ID/NAME : _____ RECEIVING BODY OF WATER : Perdido Bay Escambia

RIPARIAN ZONE / STREAM FEATURES

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

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

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

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

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : _____ Right Bank : _____

High Water Mark: _____ + _____ = _____

(m) (above present water level) (present depth) (above bed)

Artificially Impounded ☐ Yes ☐ No

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

_____ m wide

_____ m/s _____ m/s _____ m/s

_____ m deep _____ m deep _____ m deep

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

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

SEDIMENT / SUBSTRATE

Sediment Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse

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

Sediment Deposition ☐ Sludge Sand Smothering : None Slight Moderate Severe Silt Smothering : None Slight Moderate Severe ☐ Other (Specify) :

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☐ BioRecon ☐ LCI ☐ LVI

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

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.15	10.40	6.87	13.54/121.0	779	0.39	
Mid-Depth :	1.4	10.12	6.88	13.98/120.7	820	0.40	☐ VOB
Bottom :	2.7	10.68	6.57	14.62/130.9	1197	0.60	

Water Surface Oils : ☐ None ☐ Sheen ☐ Globs ☐ Slick

Water Odors : ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Other (Specify) :

Water Sample Taken ? ☐ Yes ☐ No

Algae Sample Taken ? ☐ Yes ☐ No

SYSTEM TYPE ☐ Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) :

Clarity ☐ Clear ☐ Slightly Turbid ☐ Turbid ☐ Opaque

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

WEATHER CONDITIONS / NOTES :

Very cold/windy

sunny

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

Water samples preserved ? ☒ Yes ☒ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

ABUNDANCE

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

SAMPLING TEAM : Rick Abell, Mike King

SIGNATURE : _____

DATE : 12/13/10

Revision Date: September 5, 2008

Appendix F
Chemical analysis of effluent and receiving water

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:50	Blank	BLANK	Metals	Calcium	0.075	U	mg/L	0.075	0.3
12/13/2010 13:50	Blank	BLANK	Metals	Aluminum	60	U	ug/L	60	240
12/13/2010 13:50	Blank	BLANK	Metals	Nickel	0.25	U	ug/L	0.25	1
12/13/2010 13:50	Blank	BLANK	Metals	Sodium	0.5	U	mg/L	0.5	2
12/13/2010 13:50	Blank	BLANK	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 13:50	Blank	BLANK	Metals	Chromium	0.3	U	ug/L	0.3	1.2
12/13/2010 13:50	Blank	BLANK	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 13:50	Blank	BLANK	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
12/13/2010 13:50	Blank	BLANK	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 13:50	Blank	BLANK	Metals	Copper	0.5	U	ug/L	0.5	1
12/13/2010 13:50	Blank	BLANK	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 13:50	Blank	BLANK	Metals	Arsenic	0.25	U	ug/L	0.25	1
12/13/2010 13:50	Blank	BLANK	Metals	Iron	30	U	ug/L	30	120
12/13/2010 13:50	Blank	BLANK	Metals	Lead	0.2	U	ug/L	0.2	0.8
12/13/2010 13:50	Blank	BLANK	Nutrients	Ammonia-N	0.019	I	mg N/L	0.01	0.02
12/13/2010 13:50	Blank	BLANK	Nutrients	Color (true)	5	U	PCU	5	5
12/13/2010 13:50	Blank	BLANK	Nutrients	Organic Carbon	1	U	mg C/L	1	5
12/13/2010 13:50	Blank	BLANK	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
12/13/2010 13:50	Blank	BLANK	Nutrients	Total-P	0.004	U	mg P/L	0.004	0.01
12/13/2010 13:50	Blank	BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
12/13/2010 13:50	Blank	BLANK	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
12/13/2010 13:50	Blank	BLANK	Nutrients	Turbidity	0.1	U	NTU	0.1	0.1
12/13/2010 13:50	Blank	BLANK	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
12/13/2010 13:50	Blank	BLANK	Nutrients	Sulfate	0.2	U	mg SO4/L	0.2	0.5
12/13/2010 13:50	Blank	BLANK	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
12/13/2010 13:50	Blank	BLANK	Nutrients	Chloride	0.2	U	mg Cl/L	0.2	0.5
12/13/2010 13:50	Blank	BLANK	Overflow	Oil and Grease	1.4	U	mg/L	1.4	5
12/13/2010 13:50	Blank	BLANK	Pesticides	Atrazine	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Bromacil	0.21	UJ	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Mevinphos	0.21	U	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Simazine	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Aldrin	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Pesticides	DDD-p,p'	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	DDT-p,p'	0.032	U	ug/L	0.032	0.13
12/13/2010 13:50	Blank	BLANK	Pesticides	Methoxychlor	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Diazinon	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Fonofos	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Metolachlor	0.53	U	ug/L	0.53	2.1
12/13/2010 13:50	Blank	BLANK	Pesticides	Parathion Methyl	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Endosulfan I	0.021	U	ug/L	0.021	0.084

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:50	Blank	BLANK	Pesticides	Endosulfan II	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Heptachlor Epoxide	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Alachlor	0.64	UJ	ug/L	0.64	2.6
12/13/2010 13:50	Blank	BLANK	Pesticides	Chlorpyrifos Ethyl	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Endrin	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Endrin Aldehyde	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Chlorpyrifos Methyl	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Parathion Ethyl	0.16	U	ug/L	0.16	0.64
12/13/2010 13:50	Blank	BLANK	Pesticides	Prometryn	0.16	U	ug/L	0.16	0.64
12/13/2010 13:50	Blank	BLANK	Pesticides	Dieldrin	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Endosulfan Sulfate	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Fenamiphos	0.21	U	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Malathion	0.16	U	ug/L	0.16	0.64
12/13/2010 13:50	Blank	BLANK	Pesticides	Metalaxyl	0.27	U	ug/L	0.27	1.1
12/13/2010 13:50	Blank	BLANK	Pesticides	Norflurazon	0.16	U	ug/L	0.16	0.64
12/13/2010 13:50	Blank	BLANK	Pesticides	Beta-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Pesticides	Delta-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Pesticides	Toxaphene	0.8	U	ug/L	0.8	3.2
12/13/2010 13:50	Blank	BLANK	Pesticides	Metribuzin	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Naled	0.85	UJ	ug/L	0.85	3.4
12/13/2010 13:50	Blank	BLANK	Pesticides	Phorate	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Alpha-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Pesticides	DDE-p,p'	0.021	U	ug/L	0.021	0.084
12/13/2010 13:50	Blank	BLANK	Pesticides	Gamma-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Pesticides	Ametryn	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Ethion	0.053	U	ug/L	0.053	0.21
12/13/2010 13:50	Blank	BLANK	Pesticides	Ethoprop	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Azinphos Methyl	0.21	UJ	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Butylate	0.21	U	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Hexazinone	0.11	U	ug/L	0.11	0.44
12/13/2010 13:50	Blank	BLANK	Pesticides	Chlordane	0.21	U	ug/L	0.21	0.84
12/13/2010 13:50	Blank	BLANK	Pesticides	Heptachlor	0.011	U	ug/L	0.011	0.044
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Pyrene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Acenaphthylene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Fluorene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Hexachlorobenzene	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Hexachlorobutadiene	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Nitrobenzene	2.1	U	ug/L	2.1	8.5
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2-Chlorophenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzidine	110	U	ug/L	110	430

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Hexachloroethane	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Phenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	43	U	ug/L	43	170
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Chrysene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	11	U	ug/L	11	43
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Fluoranthene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Isophorone	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1	U	ug/L	2.1	8.5
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Pentachlorophenol	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Phenanthrene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	16	U	ug/L	16	64
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	5.3	U	ug/L	5.3	21
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Diethyl phthalate	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Dimethyl phthalate	11	U	ug/L	11	43
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1	U	ug/L	2.1	8.5
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Naphthalene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	64
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2-Chloronaphthalene	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2	U	ug/L	3.2	13
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Anthracene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	5.3	U	ug/L	5.3	21
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	16	U	ug/L	16	64
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	2-Nitrophenol	1.1	U	ug/L	1.1	4.3
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1	U	ug/L	2.1	8.5
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Acenaphthene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.21	U	ug/L	0.21	0.85
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.21	U	ug/L	0.21	0.85

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:50	Blank	BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1	U	ug/L	1.1	4.3
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	AGP/LN	Algal Growth Potential	10.1		mg DryWt/L	0.3	0.9
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.72	I	ug/L	0.55	1.7
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.84	I	mg/L	0.2	2
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Chromium	0.67	I	ug/L	0.3	1.2
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Calcium	9.24		mg/L	0.075	0.3
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Lead	0.27	I	ug/L	0.2	0.8
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Iron	820		ug/L	30	120
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Aluminum	240		ug/L	60	240
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Nickel	0.64	I	ug/L	0.25	1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Arsenic	0.53	I	ug/L	0.25	1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Sodium	10.6		mg/L	0.5	2
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Magnesium	1.38		mg/L	0.04	0.16
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Copper	0.5	U	ug/L	0.5	1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Ammonia-N	0.082		mg N/L	0.01	0.02
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Kjeldahl Nitrogen	0.31		mg N/L	0.08	0.2
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Fluoride	0.039	I	mg F/L	0.035	0.1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	TSS	8	I	mg/L	4	16
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	O-Phosphate-P	0.011		mg P/L	0.004	0.01
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Organic Carbon	3.4	I	mg C/L	1	5
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Sulfate	11		mg SO4/L	0.2	0.5
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Total-P	0.029		mg P/L	0.004	0.01
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Color (true)	20		PCU	5	5
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	NO2NO3-N	0.36		mg N/L	0.004	0.01
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Alkalinity	28		mg CaCO3/L	0.65	2.5
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Chloride	9.1		mg Cl/L	0.2	0.5
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Nutrients	Turbidity	7.8		NTU	0.1	0.1
12/13/2010 11:30	North Outfall Control Site	CONTROL NORTH	Overflow	Fecal Coliforms-Membrane Filter	22	B	cfu/100 mL	1	1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	AGP/LN	Algal Growth Potential	9.69		mg DryWt/L	0.3	0.9
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.72	I	mg/L	0.2	2
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.58	I	ug/L	0.55	1.7
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Lead	0.33	I	ug/L	0.2	0.8
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Sodium	99		mg/L	0.5	2
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Copper	0.5	U	ug/L	0.5	1

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Calcium	12.7		mg/L	0.075	0.3
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Magnesium	12		mg/L	0.04	0.16
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Arsenic	0.56	I	ug/L	0.25	1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Chromium	0.83	I	ug/L	0.3	1.2
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Nickel	0.71	I	ug/L	0.25	1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Iron	900		ug/L	30	120
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Metals	Aluminum	340		ug/L	60	240
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Turbidity	7.9		NTU	0.1	0.1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Chloride	160		mg Cl/L	1	2.5
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	TSS	10	I	mg/L	4	16
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Ammonia-N	0.093		mg N/L	0.01	0.02
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Kjeldahl Nitrogen	0.35		mg N/L	0.08	0.2
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Color (true)	15		PCU	5	5
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Organic Carbon	3.5	I	mg C/L	1	5
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	NO2NO3-N	0.36		mg N/L	0.004	0.01
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Total-P	0.028		mg P/L	0.004	0.01
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Fluoride	0.047	I	mg F/L	0.035	0.1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Alkalinity	30		mg CaCO3/L	0.65	2.5
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	Sulfate	33		mg SO4/L	1	2.5
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Nutrients	O-Phosphate-P	0.009	I	mg P/L	0.004	0.01
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Overflow	Fecal Coliforms-Membrane Filter	18	B	cfu/100 mL	1	1
12/13/2010 12:30	South Outfall Control Site	CONTROL SOUTH	Overflow	Oil and Grease	12		mg/L	1.4	5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.79	I	mg/L	0.2	2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.77	I	ug/L	0.55	1.7
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Field Parameter	Sample Depth	0.1		m		
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Field Parameter	pH	7.48				
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Field Parameter	Specific Conductance	680		umhos/cm		
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Field Parameter	Temperature	21.8		C		
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Field Parameter	Dissolved Oxygen	8.37		mg/L		
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Chromium	1.3		ug/L	0.3	1.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Arsenic	0.48	I	ug/L	0.25	1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Lead	0.37	I	ug/L	0.2	0.8
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Iron	1120		ug/L	30	120
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Nickel	1.74		ug/L	0.25	1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Calcium	11.6		mg/L	0.075	0.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Silver	0.025	U	ug/L	0.025	0.1

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Sodium	189		mg/L	0.5	2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Magnesium	5.7		mg/L	0.04	0.16
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Aluminum	320		ug/L	60	240
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Metals	Copper	17.5		ug/L	0.5	1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Color (true)	15		PCU	5	5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	NO2NO3-N	0.47		mg N/L	0.004	0.01
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	O-Phosphate-P	0.02		mg P/L	0.004	0.01
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Organic Carbon	3.3	I	mg C/L	1	5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Ammonia-N	0.11		mg N/L	0.01	0.02
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Chloride	70		mg Cl/L	1	2.5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Kjeldahl Nitrogen	0.34	J	mg N/L	0.08	0.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Sulfate	320		mg SO4/L	1	2.5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Total-P	0.05		mg P/L	0.005	0.05
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	TSS	4	I	mg/L	4	16
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Alkalinity	29		mg CaCO3/L	0.65	2.5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Fluoride	0.051	I	mg F/L	0.035	0.1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Nutrients	Turbidity	5.8		NTU	0.1	0.1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Overflow	Fecal Coliforms-Membrane Filter	44		cfu/100 mL	1	1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Overflow	Oil and Grease	12		mg/L	1.4	5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Alachlor	0.65	UJ	ug/L	0.65	2.6
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Ametryn	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Malathion	0.16	U	ug/L	0.16	0.64
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	DDD-p,p'	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Atrazine	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Bromacil	0.22	UJ	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Hexazinone	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Metolachlor	0.54	U	ug/L	0.54	2.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Metribuzin	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Parathion Methyl	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Dieldrin	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Endosulfan I	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Endrin	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Butylate	0.22	U	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Ethoprop	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Norflurazon	0.16	U	ug/L	0.16	0.64
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Parathion Ethyl	0.16	U	ug/L	0.16	0.64
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Endosulfan II	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Azinphos Methyl	0.22	UJ	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Fonofos	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Aldrin	0.011	U	ug/L	0.011	0.044
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Alpha-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Heptachlor	0.011	U	ug/L	0.011	0.044

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Simazine	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Heptachlor Epoxide	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Fenamiphos	0.22	U	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Mevinphos	0.22	U	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Gamma-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Methoxychlor	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Toxaphene	0.82	U	ug/L	0.82	3.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Chlorpyrifos Ethyl	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Ethion	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Metalaxyl	0.27	U	ug/L	0.27	1.1
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Phorate	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Beta-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	DDE-p,p'	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Chlorpyrifos Methyl	0.11	U	ug/L	0.11	0.44
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Diazinon	0.054	U	ug/L	0.054	0.22
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Naled	0.87	UJ	ug/L	0.87	3.5
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Prometryn	0.16	U	ug/L	0.16	0.64
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Chlordane	0.22	U	ug/L	0.22	0.88
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	DDT-p,p'	0.033	U	ug/L	0.033	0.13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Delta-BHC	0.011	U	ug/L	0.011	0.044
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Endosulfan Sulfate	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Pesticides	Endrin Aldehyde	0.022	U	ug/L	0.022	0.088
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,4,6-Trichlorophenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Pyrene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1	U	ug/L	2.1	8.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Acenaphthylene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzo(a)anthracene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Diethyl phthalate	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Phenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,4-Dinitrotoluene	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	3,3'-Dichlorobenzidine	42	U	ug/L	42	170
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Chrysene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Fluoranthene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Fluorene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Hexachlorobenzene	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1	U	ug/L	2.1	8.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Pentachlorophenol	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2-Chlorophenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Nitrobenzene	2.1	U	ug/L	2.1	8.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.1	U	ug/L	3.1	13

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Di-n-butyl phthalate	5.2	U	ug/L	5.2	21
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzo(k)fluoranthene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2-Nitrophenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	63
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Anthracene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzo(a)pyrene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Dimethyl phthalate	10	U	ug/L	10	42
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Hexachlorobutadiene	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1	U	ug/L	2.1	8.3
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Phenanthrene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,6-Dinitrotoluene	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Acenaphthene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	16	U	ug/L	16	63
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Butyl benzyl phthalate	5.2	U	ug/L	5.2	21
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Naphthalene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	42
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,4-Dinitrophenol	16	U	ug/L	16	63
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	420
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Hexachloroethane	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Isophorone	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.1	U	ug/L	3.1	13
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2,4-Dichlorophenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	2-Chloronaphthalene	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	4-Chloro-3-methylphenol	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Benzo(b)fluoranthene	0.21	U	ug/L	0.21	0.83
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1	U	ug/L	1	4.2
12/13/2010 13:30	South Outfall Effluent	D001 SOUTH	Priority Organic Pollutants	Di-n-octyl phthalate	1	U	ug/L	1	4.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	AGP/LN	Algal Growth Potential	25		mg DryWt/L	0.3	0.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.7	I	ug/L	0.55	1.7
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	1.3	I	mg/L	0.2	2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Field Parameter	Specific Conductance	385		umhos/cm		
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Field Parameter	Temperature	13.46		C		
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Field Parameter	Sample Depth	0.1		m		
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Field Parameter	Dissolved Oxygen	10.37		mg/L		
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Field Parameter	pH	7.38				

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Copper	3.1		ug/L	0.5	1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Calcium	10.1		mg/L	0.075	0.3
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Lead	0.41	I	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Iron	850		ug/L	30	120
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Nickel	0.73	I	ug/L	0.25	1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Zinc	7.4	I	ug/L	5	20
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Sodium	45.8		mg/L	0.5	2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Chromium	0.96	I	ug/L	0.3	1.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Arsenic	0.48	I	ug/L	0.25	1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Aluminum	310		ug/L	60	240
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Metals	Magnesium	5.55		mg/L	0.04	0.16
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Fluoride	0.04	I	mg F/L	0.035	0.1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Chloride	72		mg Cl/L	0.2	0.5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Alkalinity	26		mg CaCO3/L	0.65	2.5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Organic Carbon	3.5	I	mg C/L	1	5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Ammonia-N	0.092		mg N/L	0.01	0.02
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Kjeldahl Nitrogen	0.29		mg N/L	0.08	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Sulfate	25		mg SO4/L	0.2	0.5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Color (true)	15		PCU	5	5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	TSS	8	I	mg/L	4	16
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Turbidity	7.8	A	NTU	0.1	0.1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	NO2NO3-N	0.34		mg N/L	0.004	0.01
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	O-Phosphate-P	0.068		mg P/L	0.004	0.01
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Nutrients	Total-P	0.16		mg P/L	0.005	0.05
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Overflow	Fecal Coliforms-Membrane Filter	132		cfu/100 mL	1	1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Overflow	Oil and Grease	12		mg/L	1.4	5
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Chlordane	0.2	U	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Methoxychlor	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Toxaphene	0.75	U	ug/L	0.75	3
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Azinphos Methyl	0.2	UJ	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Alpha-BHC	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Endosulfan II	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Endrin	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Beta-BHC	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	DDD-p,p'	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	DDT-p,p'	0.03	U	ug/L	0.03	0.12
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Bromacil	0.2	UJ	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Delta-BHC	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Alachlor	0.6	UJ	ug/L	0.6	2.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	DDE-p,p'	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Dieldrin	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Endosulfan Sulfate	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Gamma-BHC	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Heptachlor	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Naled	0.8	UJ	ug/L	0.8	3.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Heptachlor Epoxide	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Aldrin	0.01	U	ug/L	0.01	0.04
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Endosulfan I	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Pesticides	Endrin Aldehyde	0.02	U	ug/L	0.02	0.08
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,6-Dinitrotoluene	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	N-Nitrosodimethylamine	2.4	U	ug/L	2.4	9.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Dimethyl phthalate	12	U	ug/L	12	49
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzo(b)fluoranthene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzidine	120	U	ug/L	120	490
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2-Nitrophenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Pentachlorophenol	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Nitrobenzene	2.4	U	ug/L	2.4	9.8

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzo(k)fluoranthene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	18	U	ug/L	18	73
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.4	U	ug/L	2.4	9.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Phenanthrene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,4-Dichlorophenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,4-Dinitrophenol	18	U	ug/L	18	73
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	3,3'-Dichlorobenzidine	49	U	ug/L	49	200
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Acenaphthylene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Fluorene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Isophorone	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Phenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.4	U	ug/L	2.4	9.8
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzo(a)anthracene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Butyl benzyl phthalate	6.1	U	ug/L	6.1	24
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Di-n-butyl phthalate	6.1	U	ug/L	6.1	24
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Diethyl phthalate	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Fluoranthene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Hexachlorobutadiene	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Naphthalene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Pyrene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2-Chloronaphthalene	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Anthracene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Chrysene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,4-Dimethylphenol	12	U	ug/L	12	49
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Acenaphthene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Benzo(a)pyrene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Di-n-octyl phthalate	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.24	U	ug/L	0.24	0.98
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	4-Nitrophenol	18	U	ug/L	18	73
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Hexachlorobenzene	1.2	U	ug/L	1.2	4.9
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	Hexachloroethane	3.7	U	ug/L	3.7	15
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2,4-Dinitrotoluene	1.2	U	ug/L	1.2	4.9

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 12:00	North Outfall Effluent	D002 NORTH	Priority Organic Pollutants	2-Chlorophenol	1.2	U	ug/L	1.2	4.9
12/13/2010 12:50	River Intake	RIVER INTAKE	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.34	I	mg/L	0.2	2
12/13/2010 12:50	River Intake	RIVER INTAKE	Metals	Zinc	9.5	I	ug/L	5	20
12/13/2010 12:50	River Intake	RIVER INTAKE	Metals	Nickel	0.93	I	ug/L	0.25	1
12/13/2010 12:50	River Intake	RIVER INTAKE	Metals	Copper	13.6		ug/L	0.5	1
12/13/2010 12:50	River Intake	RIVER INTAKE	Nutrients	Total-P	0.035		mg P/L	0.004	0.01
12/13/2010 12:50	River Intake	RIVER INTAKE	Nutrients	Kjeldahl Nitrogen	0.29		mg N/L	0.08	0.2
12/13/2010 12:50	River Intake	RIVER INTAKE	Nutrients	O-Phosphate-P	0.01		mg P/L	0.004	0.01
12/13/2010 12:50	River Intake	RIVER INTAKE	Nutrients	NO2NO3-N	0.35		mg N/L	0.004	0.01
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	AGP/LN	Algal Growth Potential	16		mg DryWt/L	0.3	0.9
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.73	I	ug/L	0.55	1.7
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.58	I	mg/L	0.2	2
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Arsenic	0.48	I	ug/L	0.25	1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Copper	0.5	U	ug/L	0.5	1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Nickel	0.63	I	ug/L	0.25	1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Chromium	0.89	I	ug/L	0.3	1.2
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Sodium	11.5		mg/L	0.5	2
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Lead	0.36	I	ug/L	0.2	0.8
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Iron	860		ug/L	30	120
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Aluminum	290		ug/L	60	240
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Magnesium	1.48		mg/L	0.04	0.16
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Metals	Calcium	9.31		mg/L	0.075	0.3
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Kjeldahl Nitrogen	0.29		mg N/L	0.08	0.2
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Turbidity	6.8		NTU	0.1	0.1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Alkalinity	26		mg CaCO3/L	0.65	2.5
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	O-Phosphate-P	0.012		mg P/L	0.004	0.01
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Total-P	0.032		mg P/L	0.004	0.01
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Organic Carbon	3.4	I	mg C/L	1	5
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Sulfate	12		mg SO4/L	0.2	0.5
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Chloride	11		mg Cl/L	0.2	0.5
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Fluoride	0.039	I	mg F/L	0.035	0.1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Color (true)	15		PCU	5	5
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	NO2NO3-N	0.35		mg N/L	0.004	0.01
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	Ammonia-N	0.096		mg N/L	0.01	0.02
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Nutrients	TSS	10	I	mg/L	4	16
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Overflow	Fecal Coliforms-Membrane Filter	22	B	cfu/100 mL	1	1
12/13/2010 12:05	North Outfall Test Site	TEST NORTH	Overflow	Oil and Grease	12		mg/L	1.4	5

Date_Sampled	UDL	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units_Word_Result	MDL	PQL
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	AGP/LN	Algal Growth Potential	11	A	mg DryWt/L	0.3	0.9
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day	0.6	I	mg/L	0.2	2
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.66	I	ug/L	0.55	1.7
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Zinc	5	U	ug/L	5	20
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Arsenic	0.49	I	ug/L	0.25	1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Magnesium	14.2		mg/L	0.04	0.16
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Chromium	0.76	I	ug/L	0.3	1.2
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Silver	0.025	U	ug/L	0.025	0.1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Sodium	134		mg/L	0.5	2
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Calcium	13.3		mg/L	0.075	0.3
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Nickel	0.78	I	ug/L	0.25	1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Aluminum	280		ug/L	60	240
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Iron	890		ug/L	30	120
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Selenium	0.2	U	ug/L	0.2	0.8
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Lead	0.32	I	ug/L	0.2	0.8
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Metals	Copper	2.05		ug/L	0.5	1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Kjeldahl Nitrogen	0.32		mg N/L	0.08	0.2
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Ammonia-N	0.086		mg N/L	0.01	0.02
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Total-P	0.031	A	mg P/L	0.004	0.01
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	TSS	9	I	mg/L	4	16
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Chloride	200		mg Cl/L	1	2.5
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Turbidity	6.9		NTU	0.1	0.1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Sulfate	66		mg SO4/L	1	2.5
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Fluoride	0.049	I	mg F/L	0.035	0.1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Organic Carbon	3.5	I	mg C/L	1	5
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Alkalinity	28		mg CaCO3/L	0.65	2.5
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	NO2NO3-N	0.36		mg N/L	0.004	0.01
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	O-Phosphate-P	0.01		mg P/L	0.004	0.01
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Nutrients	Color (true)	15	A	PCU	5	5
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Overflow	Fecal Coliforms-Membrane Filter	36	B	cfu/100 mL	1	1
12/13/2010 13:05	South Outfall Test Site	TEST SOUTH	Overflow	Oil and Grease	12		mg/L	1.4	5
12/13/2010 12:15	North Outfall Effluent	TOX NORTH	Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	L	LC50		
12/13/2010 12:15	North Outfall Effluent	TOX NORTH	Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	L	LC50		
12/13/2010 13:40	South Outfall Effluent	TOX SOUTH	Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	L	LC50		
12/13/2010 13:40	South Outfall Effluent	TOX SOUTH	Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	L	LC50		

FDEP Biology Laboratory - Acute Bioassay Bench Sheets

Facility: Solutia North (Ascend)
Address: 3000 old Chemstrand Rd.
City: Pensacola County: Escambia
Contact/District: Kim Allen / Northwest
NPDES Permit #: FL 0002488
LIMS Job #: TLH 2010-12-14-42 2.1 MF
Lims Data Entry: 12-14-10
LIMS Sample #: 131557
Data Entry Verification: 12/21/10 JD

Sample Collection: Date: 12/13/10 Time: 1215
Hold Time Start: Date: 12/13/10 Time: 1215

Comments:

Initial sample handling:
Instructions: Check yes or no. If yes is checked, complete blanks

PH adjustment: ☐ yes ☑ no Initial pH: ____ NaOH ____ N HCl ____ N ____ Drops mL Final pH: ____
Aeration: ☑ yes ☐ no Initial DO: 8.1 mg/L Final DO: 7.7 mg/L Duration: 30 minutes Rate: ~100 bubbles/min
Salinity adjusted (Test 1): ☐ yes ☑ no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Salinity adjusted (Test 2): ☐ yes ☑ no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Dechlorination: ☐ yes ☑ no ____mL of 0.025N Sodium Thiosulfate per liter of sample Final TRC: ____

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)

Investigators' Signatures:	Initials:
Kara Cox	KC
Michael Faircloth	MF
Angela Rankin	ARR
Jana David	JD
Bree Abbott	BA

REVIEWER: Kay Williams

Diluent/Control Batch#:	12/6/10	12/8/10							
Water Quality Parameters	20% DMW	Well Water	Moderately Hard Water	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Other:	Original Sample	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A	N/A	N/A	NOT measured		MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03					<0.03	KC	KC
Alkalinity (mg/L as $CaCO_3$):	35	148					39	AK	JD
Hardness (mg/L as $CaCO_3$):	92	142					45	ADR	JD
Total Ammonia (mg/L as N):	<0.017	<0.017					0.125	MF	KC
Conductivity: ☒ µmhos ☐ mmhos	1851	276					311	KC/BA/JD	JD/KC
Salinity (ppth):	—	—					— KC		

V 1.8 1/13/10

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FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample # 131887 **SOP#: TA 07** 01 **Test #** 1 **of** 2

Test Species:
Batch #: 12/13/10 Age: <24hrs.
- [x] *Ceriodaphnia dubia*
- [ ] *Cyprinella leedsi*
- [ ] *Pimephales promelas*
- [ ] *Menidia beryllina*
- [ ] *Americamysis bahia*
- [ ] Other:_____

Test Validation
Control Survival ≥ 90%: [x] Yes [ ] No
Temperature Range ≤ 3° C: [x] Yes [ ] No

Diluent (Batch # 12-6-10)
[ ] ASW [x] 20% DMW
[ ] MHW [ ] Well

Test Type: [x] Acute [x] ~~Definitive~~ BA
[ ] Static [x] Static Renewal [ ] Flow-Through

Test Duration:
[ ] 48 hr
[x] 96 hr
[ ] ___hr

Test Started: Date 12.14.10 Time 12.25

Test Ended: Date 12-18-10 Time 1050

Chamber Size 30 ml
Test Volume: 20 ml

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
ctrl	A	A	5	4 10	4	4	4	4
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
100%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Checked or Verified by:			BA		BA	BA	BA	MF

Loaded/ Verified by: BA / MF

m = missing, d = dead, BR/AR Before/ After Renewal

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 0 LC50: >100
Calculated LC50 (Definitive) 95% CI_____ Method_____

Food
- [x] YCT Batch# 5/19/10
- [x] P. subcapitata Batch# 10/24/10
- [ ] Artemia Lot#_____

Feeding and Artemia Batch #
- [x] 0 hr____ [x] Prior to Test
- [ ] 24 hr____
- [x] 48 hr____ [x] Prior to Renewal
- [ ] 72 hr____

Temperature Range (°C)
Incubator # 2
min. 26.2 max. 27.0 mean_____
Incubator #___
min._____max._____mean_____
Waterbath #___
min._____max._____mean_____
Room B246
min. 23.9 max. 26.0 mean_____

Light Intensity (ft. candles): 50-100

Photoperiod (hours): 16 light, 8 dark

Comments:

V. 2.5 1-13-10

Substitute highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration)

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FDEP Biology Laboratory - Bioassay Parameter Sheet

LIMS Sample # 1318887

Test # 1 of 2

Test Species:

- ☑ *Ceriodaphnia dubia*
- ☐ *Cyprinella leedsi*
- ☐ *Pimephales promelas*
- ☐ *Menidia beryllina*
- ☐ *Americamysis bahia*
- ☐ Other: _____

Test aerated: (if DO is < 4.0 mg/L)

☐ Yes ☒ No

Concentration	Replicate	Test Hour	pH (SU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity ☑ µmhos ☐ mmhos	Salinity* (ppth)
	M	0 hr	7.9	24.0	6.9	177	
		24 hr					
Ctrl	M	48 hr BR	8.2	24.0	8.7	196	
	M	48 hr AR	8.1	24.1	7.7	180	
		72 hr					
	M	96 hr	8.0	24.6	8.0	193	
	M	0 hr	7.8	26.0	7.2	305	
		24 hr					
100%	M	48 hr BR	8.0	24.0	8.8	319	
	M	48 hr AR	7.9	24.4	7.5	303	
		72 hr					
	M	96 hr	8.1	24.4	8.1	332	
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					

*Measure/ record salinity for marine tests

Comments:

Measured By:
0 hr: BA
24 hr:
48 hr BR: MM/KC
48 hr AR: MM/KC
72 hr:
96 hr: MF

V. 2.3 1-13-10

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample # 1318887 **SOP#: TA 07** 02 **Test #** 2 **of** 2

Test Species:
Batch #: 12,14,10 Age: 13/48
- ☐ *Ceriodaphnia dubia*
- ☒ *Cyprinella leedsi*
- ☐ *Pimephales promelas*
- ☐ *Menidia beryllina*
- ☐ *Americamysis bahia*
- ☐ Other:_____

Test Validation
Control Survival ≥ 90%: ☒ Yes ☐ No
Temperature Range ≤ 3° C: ☒ Yes ☐ No

Diluent (Batch # 12,13,10**)**
☐ ASW ☐ 20% DMW
☐ MHW ☒ Well

Test Type: ☒ Acute ☐ Definitive
☐ Static ☒ Static Renewal ☐ Flow-Through

Test Duration:
☐ 48 hr
☒ 96 hr
☐ ___hr

Test Started: Date 2/14/10 Time 1320

Test Ended: Date 2-18-10 Time 1135

Chamber Size 1000 ml
Test Volume: 400 ml

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
ctrl	A	D13	5	5	5	5	5	5
	B	D14	5	5	5	5	5	5
	C	D15	5	5	5	5	5	5
	D	D16	5	5	5	5	5	5
100%	A	D17	5	5	5	5	5	5
	B	D18	5	5	5	5	5	5
	C	D19	5	5	5	5	5	5
	D	D20	5	5	5	5	5	5
Checked or Verified by:			JD	JD	JD	JD	JD	MF

Food
- ☐ YCT Batch#_____
- ☐ P. subcapitata Batch#_____
- ☒ Artemia Lot# 23613

Feeding and Artemia Batch #
- ☒ 0 hr 16-10 ☒ Prior to Test
- ☐ 24 hr____
- ☒ 48 hr 16-10 ☒ Prior to Renewal
- ☐ 72 hr____

Temperature Range (°C)
Incubator # 2
min. 26.2 max. 27.0 mean_____

Incubator #___
min._____max._____mean_____

Waterbath #___
min._____max._____mean_____

Room B246
min. 23.9 max. 26.0 mean_____

Light intensity (ft. candles): 50-100

Photoperiod (hours): 16 light, 8 dark

Loaded/ Verified by: JD / MF
m = missing, d = dead, BR/AR Before/ After Renewal

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 0 LC50: >100
Calculated LC50 (Definitive) 95% CI_____ Method_____

Comments:

V. 2.5 1-13-10

Substitute highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration)

FDEP Biology Laboratory - Bioassay Parameter Sheet

LIMS Sample #1318887 Test # 2 of 2

Test Species:

☐ *Ceriodaphnia dubia* ☐ *Pimephales promelas* ☐ *Americamysis bahia*
☑ *Cyprinella leedsi* ☐ *Menidia beryllina* ☐ Other:_____

Test aerated: (if DO is < 4.0 mg/L)
☐ Yes ☒ No

Concentration	Replicate	Test Hour	pH (SU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity ☑ µmhos ☐ mmhos	Salinity* (ppth)
CTRL	A	0 hr	7.8	25.5	8.1	276	
	B	24 hr	8.2	24.8	8.4	284	
	C	48 hr BR	8.3	24.7	7.2	282	
	C	48 hr AR	8.0	25.3	7.7	275	
	D	72 hr	8.1	24.7	6.6	281	
	A	96 hr	8.1	25.0	7.0	286	
KC ~~6.25%~~ 100%	A	0 hr	7.9	25.9	7.7	311	
	B	24 hr	7.7	24.7	8.5	328	
	C	48 hr BR	7.8	25.1	7.6	317	
	C	48 hr AR	7.7	25.9	7.8	306	
	D	72 hr	7.7	25.1	6.8	309	
	A	96 hr	8.0	25.5	7.1	319	
KC ~~12.5%~~		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
_____		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
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		72 hr					
		96 hr					
_____		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
_____		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					

*Measure/ record salinity for marine tests

Comments:

Measured By:
0 hr: KC/ [illegible]
24 hr: [illegible]/KC
48 hr BR: [illegible]/KC
48 hr AR: [illegible]/KC
72 hr: KC/ [illegible]
96 hr: MF

Test ID: Solutia North #1318887 Dates: Dec 14-18, 2010

METER / DEVICE	ID	SOP	Parameter	Method	v 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	✓ #5
Hach Pocket Colorimeter II	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)

12/20/10 KC

V 1.1 9/21/10 MF/jd

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FDEP Biology Laboratory - Acute Bioassay Bench Sheets

Facility: Solutia South (Ascend)

Address: 3000 old Chemstrand Rd.

City: Pensacola County: Escambia

Contact/District: Kim Allen/ Northwest

NPDES Permit #: FL 0002488

LIMS Job #: TLH-2010-12-1442 LIMS Sample #: 13 18886

Lims Data Entry: 12-14-10 MF Data Entry Verification: 12.21.10 JD

Sample Collection: Date: 12/13/10 Time: 1340

Hold Time Start: Date: 12/13/10 Time: 1340

Comments:

Initial sample handling:

Instructions: Check yes or no. If yes is checked, complete blanks

PH adjustment: ☐ yes ☒ no Initial pH: ____ NaOH ____ N HCl ____ N ____ Drops mL Final pH: ____

Aeration: ☒ yes ☐ no Initial DO: 10.4 mg/L Final DO: 8.1 mg/L Duration: 30 minutes Rate: ~ 100 bubbles/min

Salinity adjusted (Test 1): ☐ yes ☒ no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine

Salinity adjusted (Test 2): ☐ yes ☒ no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine

Dechlorination: ☐ yes ☒ no ____mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: ____

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)

Investigators' Signatures:	Initials:
Kara Coy	KC
Marshall Fairchild	MF
Angela Parkin	AGP
James Daniels	JD
Brice Allen	BA

REVIEWER: [signature]

Diluent/Control Batch#:	12/6/10	12/13/10							
Water Quality Parameters	20% DMW	Well Water	Moderately Hard Water	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Other:	Original Sample	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A	N/A	N/A	not measured	MF	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03					0.04	KC before	KC
Alkalinity (mg/L as $CaCO_3$):	85	142					40	AGP	KC
Hardness (mg/L as $CaCO_3$):	92	142					52	AGP	KC
Total Ammonia (mg/L as N):	<0.017	<0.017					0.0940	MF	KC
Conductivity: ☒ µmhos ☐ mmhos	485 µS	278					1044	JD/KC/BA	JD
Salinity (ppth):	—	—					—	—	—

V 1.0 1/13/10

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample # 1318886 **SOP#: TA 07** 01 **Test #** 1 **of** 2

Test Species:
Batch #: 12/13/10 Age: <24hrs.
- [x] *Ceriodaphnia dubia*
- [ ] *Cyprinella leedsi*
- [ ] *Pimephales promelas*
- [ ] *Menidia beryllina*
- [ ] *Americamysis bahia*
- [ ] Other:______

Test Validation
Control Survival ≥ 90%: [x] Yes [ ] No
Temperature Range ≤ 3° C: [x] Yes [ ] No

Diluent (Batch # 12-6-10 **)**
[ ] ASW [x] 20% DMW [ ] MHW [ ] Well

Test Type: [x] Acute [ ] Definitive [ ] Static [x] Static Renewal [ ] Flow-Through

Test Duration: [ ] 48 hr [x] 96 hr [ ] __hr

Test Started: Date 12.14.10 Time 12:35

Test Ended: Date 12-18-10 Time 1100

Chamber Size 30 **ml**
Test Volume: 10 **ml**

Concentration	Replicate	Chamber #	0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
100%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Checked or Verified by:			BA	AAL	BA	BA	BA	MF

Loaded/ Verified by: BA / MF
m = missing, d = dead, BR/AR Before/ After Renewal

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: Ø LC50: >100%
Calculated LC50 (Definitive) 95% CI______ Method______

Food
- [x] YCT Batch# 05/19/10
- [x] P. subcapitata Batch# 6/24/10
- [ ] Artemia Lot#______

Feeding and Artemia Batch #
- [x] 0 hr___ [x] Prior to Test
- [ ] 24 hr___
- [x] 48 hr___ [x] Prior to Renewal
- [ ] 72 hr___

Temperature Range (°C)

Incubator # 2
min. 26.2 max. 27.0 mean______

Incubator #___
min.______max.______mean______

Waterbath #___
min.______max.______mean______

Room B246
min. 23.7 max. 26.0 mean______

Light Intensity (ft. candles): 50-100

Photoperiod (hours): 16 light, 8 dark

Comments:

V. 2.5 1-13-10

Substitute highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample # 13188B6 **SOP#: TA 07** 02 **Test #** 2 **of** 2

Test Species:
Batch #: 12.H.10 Age: 13day 5
- ☐ *Ceriodaphnia dubia*
- ☒ *Cyprinella leedsi*
- ☐ *Pimephales promelas*
- ☐ *Menidia beryllina*
- ☐ *Americamysis bahia*
- ☐ Other:_____

Test Validation
Control Survival ≥ 90%: ☒ Yes ☐ No
Temperature Range ≤ 3° C: ☒ Yes ☐ No

Diluent (Batch # 12,13,10 **)**
☐ ASW ☐ 20% DMW ☐ MHW ☒ Well

Test Type: ☒ Acute ☐ Definitive ☐ Static ☒ Static Renewal ☐ Flow-Through

Test Duration: ☐ 48 hr ☒ 96 hr ☐ ___hr

Test Started: Date 12.H.10 Time 1300

Test Ended: Date 12-18-10 Time 1145

Chamber Size 300 ml
Test Volume: 200 ml

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
ctrl	A	917	5	5	5	5	5	5
	B	918	5	5	5	5	5	5
	C	919	5	4[1]	4	4	4	4
	D	920	5	5	5	5	5	5
100%	A	921	5	5	5	5	5	5
	B	922	5	5	5	5	5	5
	C	923	5	5	5	5	5	5
	D	924	5	5	5	5	5	5
Checked or Verified by:			JD	JD	JD	JD	JD	MF

[1] Replaced with spare

Food
- ☐ YCT Batch#_____
- ☐ P. subcapitata Batch#_____
- ☒ Artemia Lot# 23613

Feeding and Artemia Batch #
- ☒ 0 hr 12/1-10 ☐ Prior to Test
- ☐ 24 hr____
- ☒ 48 hr 12/2-10 ☒ Prior to Renewal
- ☐ 72 hr____

Temperature Range (°C)
Incubator # 2
min. 26.2 max. 27.0 mean_____

Incubator #___
min._____max._____mean_____

Waterbath #___
min._____max._____mean_____

Room B246
min. 23.9 max. 36.0 mean_____

Light Intensity (ft. candles): 50-100

Photoperiod (hours): 16 light, 8 dark

Loaded/ Verified by: JD / MF
m = missing, d = dead, BR/AR Before/ After Renewal

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 20 LC50: >100%
Calculated LC50 (Definitive) 95% CI_____ Method_____

Comments:

V. 2.5 1-13-10

Substitute highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration)

FDEP Biology Laboratory - Bioassay Parameter Sheet

LIMS Sample #3188860 Test # 1 of 2

Test Species:

☑ *Ceriodaphnia dubia* ☐ *Pimephales promelas* ☐ *Americamysis bahia*
☐ *Cyprinella leedsi* ☐ *Menidia beryllina* ☐ Other:_____

Test aerated:
(if DO is < 4.0 mg/L)
☐ Yes ☒ No

Concentration	Replicate	Test Hour	pH (SU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity ☑ µmhos ☐ mmhos	Salinity* (ppth)
	M	0 hr	7.9	24.4	6.8	177	
		24 hr					
Ctrl	M	48 hr BR	8.1	24.2	8.8	193	
	M	48 hr AR	8.1	24.3	7.7	179	
		72 hr					
	A	96 hr	8.1	24.8	8.0	196	
	M	0 hr	7.7	25.8	7.4	1023	
		24 hr					
100%	M	48 hr BR	8.0	24.3	8.9	1064	
	M	48 hr AR	7.8	24.0	7.6	1032	
		72 hr					
	A	96 hr	8.0	24.8	8.2	1092	
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					

*Measure/ record salinity for marine tests

Comments:

Measured By:
0 hr: BA
24 hr:
48 hr BR: Reed/KC
48 hr AR: REB/KC
72 hr:
96 hr: MF

LIMS Sample # 1318886

FDEP Biology Laboratory - Bioassay Parameter Sheet

Test # 2 of 2

Test Species:

- ☐ *Ceriodaphnia dubia*
- ☑ *Cyprinella leedsi*
- ☐ *Pimephales promelas*
- ☐ *Menidia beryllina*
- ☐ *Americamysis bahia*
- ☐ Other: _____

Test aerated: (if DO is < 4.0 mg/L)

☐ Yes ☒ No

Concentration	Replicate	Test Hour	pH (SU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity ☑ µmhos ☐ mmhos	Salinity* (ppth)
Ctrl.	A	0 hr	7.8	25.6	8.0	278	
	B	24 hr	8.2	25.3	8.4	287	
	C	48 hr BR	8.2	24.9	7.3	285	
	C	48 hr AR	7.7	25.5	7.6	276	
	D	72 hr	8.0	24.6	5.9	279	
	A	96 hr	8.2	25.6	7.0	282	
100%	A	0 hr	7.7	25.9	8.1	1044	
	B	24 hr	7.7	25.1	8.5	1050	
	C	48 hr BR	7.7	25.1	6.7	1052	
	C	48 hr AR	7.5	25.9	8.0	1029	
	D	72 hr	7.6	24.7	6.6	1023	
	A	96 hr	7.8	25.2	7.1	1059	
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					
		0 hr					
		24 hr					
		48 hr BR					
		48 hr AR					
		72 hr					
		96 hr					

*Measure/ record salinity for marine tests

Comments:

Measured By:
0 hr: KC/JD
24 hr: [illegible]/EC
48 hr BR: [illegible]/KC
48 hr AR: [illegible]/[illegible]
72 hr: KC/JD
96 hr: MF

Test ID: Solutia South #1318886 Dates: December 14-18, 2010

METER / DEVICE	ID	SOP	Parameter	Method	v 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	✓ #5
Hach Pocket Colorimeter II	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)

12/20/10 KC

V 1.1 9/21/10 MF/jd

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MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Shipping Date: 12/13/10

Ship to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood/Lot Number	Temp. (°C)	pH (S.U.)	Salinity (‰)
Mysidopsis bahia						
Menidia beryllina						
						Hardness mg/L
Cyprinella leedsi	150	12 days	CL 101201	25	7.8	80
Pimephales promelas	150	8 days	FM 101205	25	7.8	80
Ceriodaphnia dubia						
Daphnia magna						
YCT						
P. subcapitata						

Packed by: PM

Shipped Via: Fed Ex

Notes: _____

Thank you for your order.

4569 Samuel Street · Sarasota, FL 34233 · Tel: 941-925-3594 · Fax: 941-922-3874 · Web: www.biologylab.com

Appendix H

Standard Reference Toxicant Data

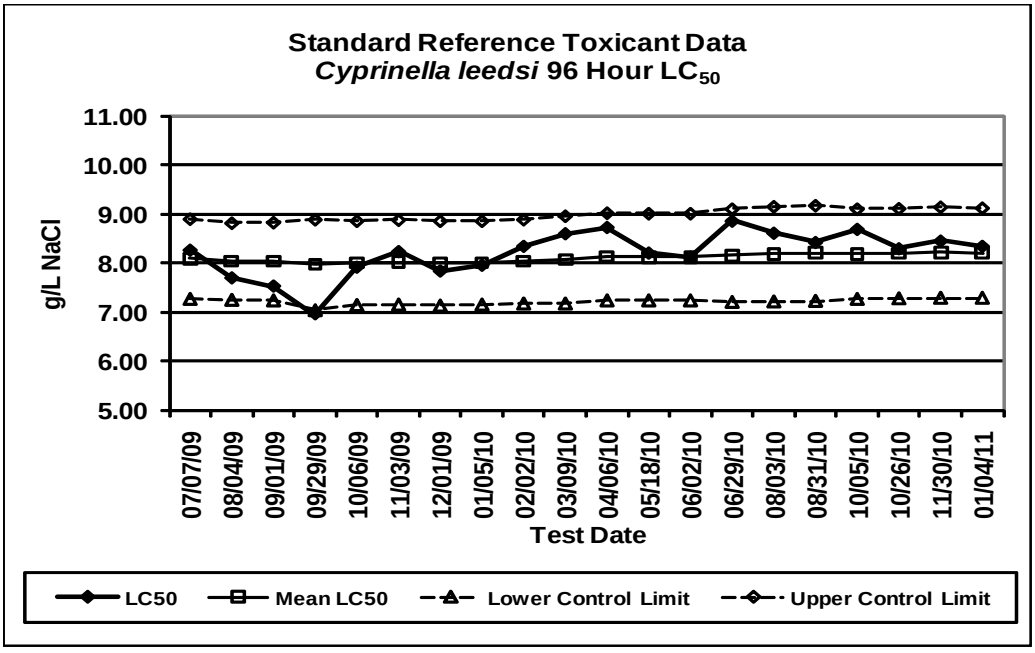
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Cyprinella leedsi (bannerfin shiner) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
07/07/09	8.27	8.09	0.41	7.27	8.91
08/04/09	7.70	8.04	0.40	7.25	8.83
09/01/09	7.53	8.04	0.40	7.24	8.84
09/29/09	6.96	7.98	0.46	7.05	8.90
10/06/09	7.92	8.01	0.43	7.15	8.87
11/03/09	8.24	8.02	0.43	7.16	8.89
12/01/09	7.84	8.01	0.43	7.14	8.87
01/05/10	7.96	8.01	0.43	7.16	8.87
02/02/10	8.35	8.04	0.43	7.18	8.90
03/09/10	8.61	8.07	0.45	7.18	8.97
04/06/10	8.74	8.14	0.45	7.24	9.03
05/18/10	8.21	8.13	0.45	7.24	9.02
06/02/10	8.13	8.13	0.45	7.24	9.02
06/29/10	8.87	8.16	0.47	7.21	9.11
08/03/10	8.62	8.19	0.48	7.22	9.16
08/31/10	8.43	8.21	0.49	7.23	9.18
10/05/10	8.70	8.19	0.46	7.27	9.11
10/26/10	8.30	8.20	0.46	7.28	9.12
11/30/10	8.46	8.22	0.46	7.29	9.15
01/04/11	8.35	8.21	0.46	7.29	9.13

Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 5.60
EPA reference 75th quartile CV = 19%



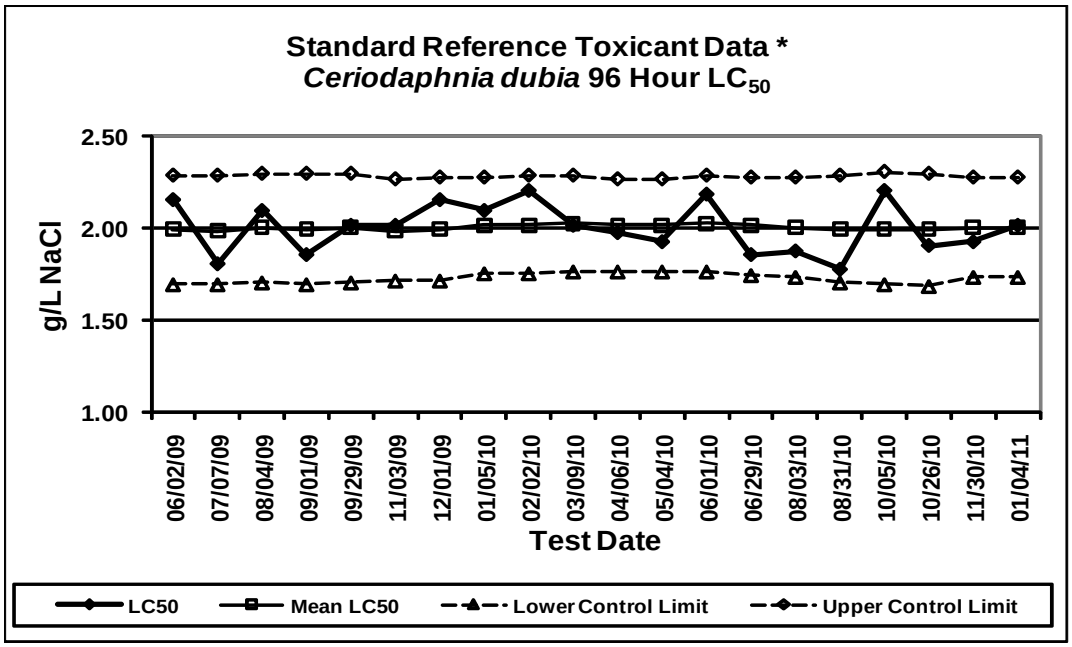
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Ceriodaphnia dubia (water flea) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
06/02/09	2.15	1.99	0.15	1.69	2.28
07/07/09	1.80	1.98	0.15	1.69	2.28
08/04/09	2.09	2.00	0.15	1.70	2.29
09/01/09	1.85	1.99	0.15	1.69	2.29
09/29/09	2.01	2.00	0.15	1.70	2.29
11/03/09	2.01	1.98	0.14	1.71	2.26
12/01/09	2.15	1.99	0.14	1.71	2.27
01/05/10	2.09	2.01	0.13	1.75	2.27
02/02/10	2.20	2.01	0.13	1.75	2.28
03/09/10	2.01	2.02	0.13	1.76	2.28
04/06/10	1.97	2.01	0.12	1.76	2.26
05/04/10	1.92	2.01	0.12	1.76	2.26
06/01/10	2.18	2.02	0.13	1.76	2.28
06/29/10	1.85	2.01	0.13	1.74	2.27
08/03/10	1.87	2.00	0.14	1.73	2.27
08/31/10	1.77	1.99	0.14	1.70	2.28
10/05/10	2.20	1.99	0.15	1.69	2.30
10/26/10	1.90	1.99	0.15	1.68	2.29
11/30/10	1.92	2.00	0.14	1.73	2.27
01/04/11	2.01	2.00	0.14	1.73	2.27

Lower Control Limit = mean - 2 * Std Dev
Upper Control Limit = mean + 2 * Std Dev

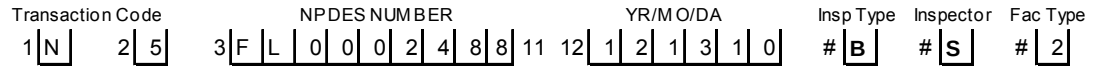
CV = 6.82
EPA reference 75th quartile CV = 29%

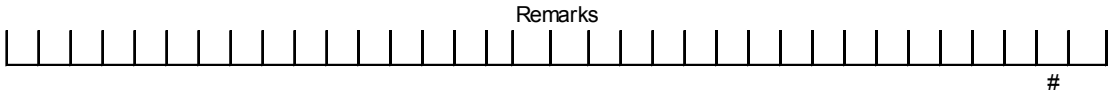


EPA Endsheet

The Bioassay of the Ascend Performance Materials LLC effluent sampled on December 13, NPDES #FL0002488

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





The Priority Pollutants Analysis for Bioassay of the Ascend Performance Materials LLC effluent sampled on December 13, 2010 NPDES #FL0002488

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

