

Biological Assessment of

Mid-County WWTP

Pinellas County

NPDES #FL0034789

Sampled June 21, 2004

March 2005

Biology Section

Bureau of Laboratories

Division of Resource Assessment and Management

Quality Manual No. 870346G

NELAC Certification No. E31780

Florida Department of Environmental Protection

Fifth Year Inspection Summary

Discharger: Mid-County Services WWTP

County: Pinellas

NPDES Number: FL0034789

Permit Expiration: April 23, 2005

Toxics Sampling Inspection **(XSI)**

Date Sampled: June 21, 2004

Results: Some metals were detected in the equipment blank and the field blanks at levels between the method detection limits (MDLs) and practical quantitation limits (PQLs). Calcium and iron were detected in the equipment blank at levels above the PQLs. Aluminum and nickel were detected in the effluent grab sample at levels between the MDLs and PQLs. Aluminum and chromium were detected in the effluent composite sample at levels between the MDLs and PQLs. Copper, iron, zinc, and nickel (composite only) were detected in effluent samples at levels above the PQLs. All metals detected complied with Class III Water Quality Criteria (62-302.530 F.A.C.). The organic pollutants bromodichloromethane and chloroform were detected in the effluent at levels that complied with Class III Water Quality Criteria (62-302 F.A.C.). Atrazine and dibromochloromethane were also detected at levels between the MDLs and PQLs.

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: June 21, 23, and 25, 2004 and August 23, 25, and 27, 2004

Results: The effluent 7-day chronic bioassay tests were aborted because insufficient sample volume was available due to shipping problems. The effluent was resampled in August 2004. For these tests, there was a laboratory control failure in the fish bioassay test therefore the test was invalid for the fish species. The water flea test was valid and reported with a No Observed Effect Concentration (NOEC) of 100%. Additional data is pending from sampling performed in December 2004.

Water Quality Inspection **(WQI)**

Date Sampled: June 21, 2004

Results: Fecal and total coliforms were not detected in the effluent, but were detected in the receiving waters at levels that complied with Class III Water Quality Criteria. The effluent total nitrogen concentration was 3.38 mg/L in the grab sample and 2.3 mg/L in the 24-hr composite sample. Effluent total phosphorus (1 mg/L), ortho-phosphate (1 mg/L), and nitrate+nitrite (2.4 mg/L,

Table 1) contributed to elevated levels at the Test Site. The AGP values of the upstream Control Site (10.3 mg dry weight/L) and the downstream Test Site (27.5 mg dry weight/L, Table 2) were above the "problem" threshold for fresh receiving waters (5 mg dry wt/L). This indicates nutrient enrichment in this portion of Curlew Creek, which is potentially further enhanced below the discharge from this facility.

Impact Bioassessment Inspection **(IBI)**

Date Sampled: June 21, 2004

Results: There were few differences in algal community composition between the Control and Test Sites. The Control Site had a few more taxa and a slightly higher Shannon-Weaver diversity score. Periphyton chlorophyll-*a* was not reported for the Control Site, because the slides were lost from the sampler in the field. At the Test Site, the periphyton chlorophyll-*a* was 19 mg/m2. Hester-Dendy samples showed little difference in the benthic macroinvertebrate community at the Test Site compared to the Control Site (Table 4, Appendix 9). Shannon-Weaver diversity was 3.06 at the Control Site and 3.04 at the Test Site. The Control Site SCI_2004 score of 24 and the Test Site SCI_2004 score of 23 placed them both in the "Poor" category.

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.

Introduction

The Mid-County Services Wastewater Treatment Plant is located in Pinellas County, Florida (Appendix 1). This facility is a Type I advanced wastewater treatment plant. The design flow of the wastewater system is 0.900 million gallons per day (MGD). The mean flow from January 2003 through December 2003 was 0.776 MGD (Facility Summary in Appendix 2) and the flow for June 2004 was 0.717 MGD. Activities at this plant include the treatment of domestic wastewater using two separate treatment trains. Initially, the flow is directed through a static screen, a flow equalization basin, and then through a splitter box, which separates the flow into 0.300 MGD and 0.600 MGD streams (see Facility Summary in Appendix 2). Each treatment train consists of an aeration basin and a clarifier. The two trains are combined into an effluent holding tank, which flows through three denitrification filters. The effluent is then directed to a chlorination/dechlorination chamber, and is finally discharged through a 12-inch pipe into the Class III fresh water of Curlew Creek.

Surface Water Quality Criteria and facility permit limits are listed in Table 1. According to the facility's monthly discharge monitoring reports, the plant has had 2 exceedances of the facility's monthly average total nitrogen permit limit of 3.75 mg/L. One exceedance occurred in January 2004 (4.82 mg/L) and the other was in March 2004 (4.82). The facility also exceeded the total nitrogen maximum limit (6 mg/L) in March 2004 (8.2 mg/L) and May 2004 (6.4 mg/L, Appendix 2). There was one exceedance of the facility's Carbonaceous Biochemical Oxygen Demand (CBOD) maximum limit (10 mg/L) in July 2003 (15 mg/L, Appendix 2).

Methods

The purpose of this investigation was to determine the potential effects of the facility's effluent on the biota of the receiving waters. Chemical and biological comparisons were made between a Control Site (located in Curlew Creek approximately 40 meters upstream of the discharge) and a Test Site (located in Curlew Creek a few meters downstream of the discharge) (Appendix 1). Effluent grab samples and 24-hour flow-proportioned composite samples were collected on June 21, 2004. The second and third sets of effluent samples for the chronic toxicity tests were collected on June 23 and June 25, 2004 per chronic toxicity methods; however, due to shipping problems the June 25th samples did not arrive within the prescribed holding time and the tests were aborted. Additional bioassay test samples were collected in August 2004. Results for these samples can be viewed in Appendix 4 (see the bioassay portion in the Discussion for more detail). Data reported are from the June 2004 sampling event unless otherwise noted.

There is a stormwater pipe that discharges into Curlew Creek approximately 30 meters downstream of the outfall. For the June sampling event, Test Site samplers were deployed below the facility's discharge pipe in the stream and above the stormwater pipe. The Test Site Stream Condition Index (SCI) sample was collected within the 30 meters before the stormwater pipe. The area received 9 inches of rain in June 2004, however the stormwater discharge should not have affected the Test Site samplers. Detailed methods and their relationship to Florida Administrative Code are given in Appendix 3.

All field and laboratory biological methods followed Biology Section Standard Operating Procedures (SOPs, see http://www.floridadep.org/labs/qa/2002sops.htm for details) and met DEP quality assurance/quality control standards (see http://www.floridadep.org/labs/qa/index.htm).

The following were involved in this investigation: Lori Pillsbury, Nahir Cornwell and Todd Falkner (FDEP Southwest District), and FDEP Central Laboratory in Tallahassee. The report was reviewed by District representatives and the Point Source Studies Review Committee (Wayne Magley, Shannan Gunnoe and Michael Tanski).

Results and Discussion

- Specific chemical results are reported in Table 1 and a complete list of chemical analytes can be reviewed in Appendix 4. The following metals were detected in the equipment blank sample at levels between their respective method detection limit (MDL) and practical quantitation limit (PQL): aluminum, chromium, magnesium, nickel, and zinc. Calcium and iron were detected in the equipment blank at levels above the PQLs. Lead was detected in the field blanks #1 and #2 at levels between the MDL and PQL. Aluminum and nickel were detected in the effluent grab sample at levels between the MDLs and PQLs. Aluminum and chromium were detected in the effluent composite sample at levels between the MDLs and PQLs. Copper, iron, zinc, and nickel (composite only), were detected in effluent samples at levels above the PQLs but complied with Class III Water Quality Criteria (62-302 F.A.C.).
- The organic pollutants bromodichloromethane and chloroform were detected in the effluent at levels that complied with Class III Water Quality Criteria (62-302 F.A.C.). Dibromochloromethane and atrazine were detected at levels between the MDLs and PQLs.

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

Mid-County WWTP	Class III Stds	Effluent Limits	Effluent Grab 6/21/2004	Effluent Composite 6/21/2004	Control Site 6/21/04	Test Site 6/21/04
Organic Constituents (µg/L)						
Atrazine	-	-	0.055 l	-	-	-
Bromodichloromethane	≤ 22	-	7.6	-	-	-
Chloroform	≤ 470.8	-	76	-	-	-
Dibromochloromethane	≤ 34	-	0.36 l	-	-	-
Metals (µg/L unless otherwise noted)						
Aluminum	-	-	8.6 l	9.9 l	-	-
Arsenic	≤ 50	-	5 U	5 U	-	-
Cadmium	≤ 2.0 b	-	0.15 U	0.15 U	-	-
Calcium (mg/L)	-	-	71.1	69	-	-
Chromium-III	≤ 154.2 b	-	2 U	6.1 l	-	-
Copper	≤ 17.1 b	-	5.5	6	-	-
Iron	≤ 1000	-	54	72	-	-
Lead	≤ 7.9 b	-	0.14 U	0.14 U	-	-
Magnesium (mg/L)	-	-	6.3	6.1	-	-
Nickel	≤ 95.1 b	-	6 l	12.6	-	-
Selenium	≤ 5.0	-	0.5 U	0.5 U	-	-
Silver	≤ 0.07	-	0.01 U	0.01 U	-	-
Zinc	≤ 218.7 b	-	42.7	38.7	-	-
Nutrients (mg/L)						
Ortho-phosphate	-	-	1	-	0.097	0.3
Total Phosphorus	-	2 s	1	1	0.088	0.33
Ammonia	-	-	0.046	0.042	0.042	0.038
Unionized Ammonia	≤ 0.02	-	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02
Nitrate+Nitrite	-	-	2.4	1.2	0.19	0.62
Total Kjeldahl Nitrogen	-	-	0.98	1.1	0.53	0.6
Organic Nitrogen	-	-	0.93 c	1.06 c	0.49 c	0.56 c
Total Nitrogen	-	6 s	3.38 c	2.3 c	0.72 c	1.22 c
General Physical and Chemical Parameters						
Habitat Assessment	-	-	-	-	70	76
Turbidity (NTU)	29 t	-	0.35	0.6	0.95	1.5
TSS	-	10 s	4 U	4 U	4 U	5 l
Organic Carbon	-	-	6.2	7	12	11 A
Color (PCU)	-	-	10	10	50	30
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0 s	6.8	-	6.3	6.7
pH (S.U.)	6.0-8.5	6.5-8.5	7.5	-	7.6	7.6
Conductivity (umhos/cm)	≤ 1275	-	959	-	463	577
Temperature (C)	-	-	30.5	-	27.5	28
CBOD (mg/L)	-	10 s	No Result O	-	-	-
Chlorophyll-a (ug/L)	-	-	0.85 U	-	0.85 U	0.85 U
Oil and Grease (mg/L)	≤ 5.0	-	0.69 U	-	-	-
Flow (MGD)	-	0.900 a	-	-	-	-
Hardness (mg/L)	-	-	203.5 c	197.4 c	-	-
Microbiology (# counts/100ml)						
Fecal Coliforms-Membrane	≤ 800	≤ 25	1 K	-	50 B K	195
Total Coliforms	≤ 2400	-	1 K	-	720	600
Toxicology Bioassays (7-day chronic screening toxicity test)						
Fish - NOEC	-	-	No Result*	-	-	-
Water flea - NOEC	-	-	No Result**	-	-	-

Table 1 cont'd.

a - Annual average
b - Value is calculated based on hardness
c - Value is calculated
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 acceptable range
K - Actual value is known to be less than value given
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
O - Analysis failed
U - Material analyzed for but not detected; value reported is the minimum detection limit
NOEC - A no observed effect concentration less than 100% effluent will constitute a violation of this permit

* Fish: This sample is reported with "No Result"due to a shipping problem. The third sample was received after expiration. The second sample was used more than two days (normal use). Although the test was invalidated due to extended use of the second sample, there was 100% survival in the 100% sample concentration and the 100% sample concentration was also the no observed effect concentration for growth. See nonconformance report 1298.

** Water Flea: This sample is reported with "No Result" . Due to a shipping problem, the third sample was received after expiration. The second sample was used more than two days. By test day five, 60% mortality had occurred in the 100% sample concentration. See nonconformance report 1298.

- Effluent conductivity, pH, and dissolved oxygen complied with Class III Water Quality Criteria (62-302 F.A.C.) and facility permit limits.
- Dissolved oxygen, pH, and conductivity at the Control and Test Sites complied with Class III Water Quality Criteria (Table 1, 62-302. 530 F.A.C.).
- The effluent bioassay results were reported as "No Result", because the third set of samples used for test treatment renewals was not received on time. Some toxicity was observed in the water flea test prior to the test being ended. Although the test had to be aborted, by test day five 60% mortality had occurred in the water flea, *Ceriodaphnia dubia*, test at 100% effluent concentration. There was 100% survival of the fish, *Cyprinella leedsi,* in the 100% effluent concentration test (See Appendix 6 for bioassay bench sheets). District personnel re-sampled the effluent in August 2004 in an attempt to capture the missing data; however, there was a laboratory control failure in the fish bioassay test and the test was invalid. The water flea test was valid and reported with a No Observed Effect Concentration (NOEC) of 100%. These results and associated chemistry can be viewed in Appendix 4. Results are pending from a December 2004 sampling event.
- Fecal and total coliforms were not detected in the effluent, but were detected in the receiving waters at levels that complied with Class III Water Quality Criteria and facility permit limits (See Table 1 for results and Appendix 6 for laboratory worksheets).
- The effluent total nitrogen concentration was 3.38 mg/L in the grab sample and 2.3 mg/L in the composite sample (Table 1). Effluent total phosphorus (1 mg/L), orthophosphate (1 mg/L), and nitrate+ nitrite (2.4 mg/L, Table 1) contributed to elevated levels at the Test Site. Levels of these nutrients at the Test Site were within the $70^{th} - 90^{th}$ percentile when compared with levels typical of Florida streams, while levels at the Control Site ranked in the 60^{th} percentile or below (Appendix 5).
- Algal growth potential (AGP) is a measure of nutrients available for algal growth (Miller *et al*. 1978). Raschke and Shultz (1987) found that AGP above 5.0 mg dry wt/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The AGP values of the upstream Control Site (10.3 mg dry wt/L) and the downstream Test Site (27.5 mg dry wt/L, Table 2) were above this threshold. This indicates nutrient enrichment in this portion of Curlew Creek which is potentially further

Table 2. Measured and predicted algal growth potential (AGP) of Pseudokirchneriella subcapitata for total soluble nitrogen (TSIN) and total nitrogen (TN) limitation

Location	AGP (measured, mg dry wt/L)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	No Result	92.95 ± 18.59	128.44 ± 25.688	2.45	3.38
Control Site	10.3	8.82 ± 1.764	27.36 ± 5.472	2.39	8.18
Test Site	27.5	25 ± 5	46.36 ± 9.272	2.19	3.7

enhanced by the discharge. There was no evidence of growth inhibition in the AGP data (Table 2). There was "No Result" reported for the effluent AGP sample, due to poor lab duplicate test precision for this sample. Based on the inorganic ratios and nutrient values of the effluent, the predicted effluent AGP value would be 92.95 ± 18.59 mg dry weight/L (Table 2).

- Chlorophyll-*a* was not detected in the effluent or water samples collected at the Control and Test Sites (Table 1). We note that nutrients in the water column may or may not fuel algal production immediately, depending upon the sum of environmental conditions that limit algal growth at the site (e.g. pH, shading, turbidity). Thus it is not necessarily contradictory for ambient nutrient levels to be high and for no chlorophyll to be detected in water samples.
- There were few differences in algal community composition between the Control and Test Sites (Table 3, Appendix 8). Periphyton chlorophyll-*a* was not reported for the Control Site, because the slides were lost from the sampler in the field. However, 19 mg/m2 of chlorophyll-*a* was measured from material scraped off slides recovered from the Test Site (Table 3). This amount of chlorophyll-*a* ranks in the 80th percentile when compared to values typical of Florida streams (Appendix 5). The dominant taxon at both sites was *Cocconeis placentula*, a scraper-resistant diatom. The Control Site had a few more taxa and a slightly higher Shannon-Weaver diversity score. There were higher percent-ages of blue-green algae (7.5 % compared to 2.3%) and green algae (6.8% compared to 3.9%) at the Control Site compared to the Test Site.
- Habitat assessment scores were 70 at the Control Site and 76 at the Test Site (Table 1, data sheets in Appendix 7) placing both sites in the "Marginal" range (Appendix 3). The Test Site received a few more points for bank stability and riparian buffer zone vegetation quality. The banks at the Control Site were severely incised and the riparian buffer zone consisted primarily of exotic vegetation.
- Quantitative measures of benthic macroinvertebrate assemblages from Hester-Dendy samplers showed little difference at the Test Site compared to the Control Site (Table 4, Appendix 9). Shannon-Weaver diversity was 3.06 at the Control Site and 3.04 at the Test Site. The Test Site had fewer total taxa and received fewer Florida Index points. Both sites were dominated by the chironomid, *Stenochironomus* sp.
- Qualitative measures of benthic macroinvertebrate assemblages from

Table 3. Periphyton composition

Mid-County WWTP	Control Site	Test Site
Number of Taxa	36	30
Shannon-Weaver Diversity	3.82	3.14
Chlorophyll a (mg/m²)	-	19
Phaeophytin (mg/m²)	-	0
Algal Density (number/cm²)	608,860	422,056
Percent Dominant Taxon	31.2	34.8
Dominant Taxon (name)	*Cocconeis placentula*	*Cocconeis placentula*
Number of Algal Units Identified	308	305
Percentage Composition		
Blue-green algae	7.5	2.3
Diatoms	85.7	93.8
Green algae	6.8	3.9
Other	0	0

Table 4. Macroinvertebrate Hester-Dendy Samples - Quantitative

Mid-County WWTP	Control Site	Test Site
Summary Statisics		
Shannon-Weaver Diversity	3.06	3.04
Number of Taxa	23	19
Florida Index	12	7
Number of EPT Taxa	1	1
Percent Dominant Taxon	26	37.2
Dominant Taxon (name)	*Stenochironomus sp.*	*Stenochironomus sp.*
Dominant Taxon (group)	Diptera	Diptera
Total Number of Individuals	420	786
Community Composition: Percent of total		
Amphipoda	0.5	1.5
Coleoptera	3.6	6.5
Diptera	62.3	67.9
Gastropoda	6.7	17
Odonata	2.3	2.5
Oligochaeta	0.7	0
Trichoptera	23.5	4.4
Other	0.4	0.2
Functional Feeding Groups: Percent of total		
Burrowing Deposit Feeders	0.7	0
Predators	8.9	7.8
Surface Deposit Feeders	30.2	35.5
Suspension Feeders	24.5	13.8
Scrapers	8.4	20.3
Shredders	27	22.6
Unknown	0.2	0

dipnet samples are summarized in Tables 5 and 6 and in Appendix 10. The dominant taxon at both sites was *Pyrgophorus platyrachis*, a periphyton-scraping snail. It is also on the very tolerant species list for the SCI. The Control Site SCI 2004 score of 24 and the Test Site SCI 2004 score of 23 placed them both in the "Poor" category. If these data are reflective of usual conditions, another failing SCI could place the receiving waterbody on the TMDL list (303d) according to the Impaired Waters Rule (62-303).

Summary

Both DMR and FDEP data from this inspection indicate high amounts of nitrogen being introduced into Curlew Creek by this facility (Appendix 2 and Table 1). There were three exceedances of total nitrogen permit limits in January 2004, March 2004, and May 2004. The grab sample collected in June 2004 approached the monthly average limit as well. Both AGP and periphyton chlorophyll-*a* data indicate nutrient enrichment in Curlew Creek, some of which may be attributable to the facility's effluent. Bioassay tests performed in June revealed some possible toxicity in the water flea test, however this could not be confirmed because shipping problems led to the test being aborted. No toxicity was observed in the water flea test in August 2004, and further results are pending from a December 2004 sampling event. Quantitative macroinvertebrate samples indicated that the Shannon-Weaver diversity was similar between sites upstream and downstream of the facility's discharge. However, qualitative macroinvertebrate samples from both sites scored in the "Poor" category for the Stream Condition Index. Both sites were dominated by a periphyton-scraping, pollution-tolerant snail. Additional monitoring may be necessary to better determine the facility's contribution to the nutrient enrichment in Curlew Creek.

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Table 5. Macroinvertebrate Dipnet Samples - Qualitative

Mid-County WWTP	Control Site	Test Site
Stream Condition Index (value)	24	23
Stream Condition Index (word)	Poor	Poor
Stream Condition Index Metrics		
Number of Total Taxa	20	28
Number of Ephemeroptera Taxa	0	0
Number of Trichoptera Taxa	1	2
Number of Clinger Taxa	2	2
Number of Long-lived Taxa	1.0	0.0
Number of Sensitive Taxa	0.0	0.0
Percent of Dominant Taxon	27.2	30.5
Percent Suspension Feeders and Filterers	13.59	5.71
Percent of Tanytarsini individuals	1.94	1.9
Percent of Very Tolerant individuals	45.63	48.57
Total Number of Individuals	103	105
Community Composition: Percent of total		
Dominant Taxon (name)	*Pyrgophorus platyrachis*	*Pyrgophorus platyrachis*
Dominant Taxon (group)	Gastropoda	Gastropoda
Amphipoda	16.5	7.6
Pelecypoda	7.8	0.0
Diptera	14.6	14.3
Gastropoda	32.0	40.0
Oligochaeta	5.8	8.6
Functional Feeding Groups: Percent of total		
Burrowing Deposit Feeders	5.8	8.6
Predators	9.7	8.1
Surface Deposit Feeders	20.4	17.6
Suspension Feeders and Filterers	13.6	5.7
Scrapers	37.4	49.1
Shredders	13.1	7.1
Unknown	0.0	1.0

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Table 6a. Stream Condition Index Metrics

Mid-County WWTP - Control Site			
Metric:	Value	Raw Metric Score	Fixed Score 0-10
Total Number of Taxa	20	1.6	2
Number of Ephemeroptera Taxa	0	0.0	0
Number of Trichoptera Taxa	1	1.4	1
Number of Clinger Taxa	2	2.5	3
Number of Long-lived Taxa	1	2.5	3
Number of SensitiveTaxa	0	0.0	0
Percent Contribution of Dominant Taxon	27.18	6.1	6
Percent Suspension Feeders and Filterers	13.59	3.2	3
Percent of Tanytarsini individuals	1.94	3.3	3
Percent of Very Tolerant individuals	45.63	0.6	1
Total Score			**24**
Interpretation of Scores		Good	73-100
		Fair	46-72
		Poor	**19-45**
		Very Poor	0-18

Table 6b. Stream Condition Index Metrics

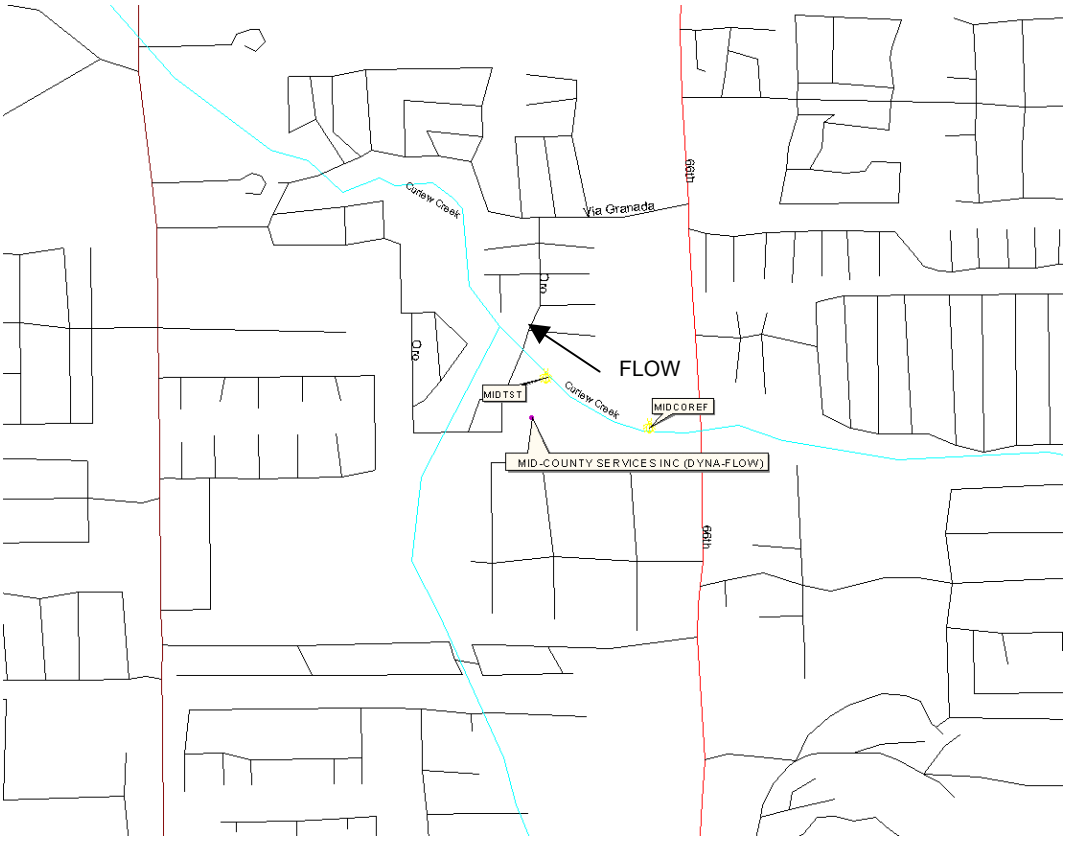
Mid-County WWTP - Test Site			
Metric:	Value	Raw Metric Score	Fixed Score 0-10
Total Number of Taxa	28	4.8	5
Number of Ephemeroptera Taxa	0	0.0	0
Number of Trichoptera Taxa	2	2.9	3
Number of Clinger Taxa	2	2.5	3
Number of Long-lived Taxa	0	0.0	0
Number of SensitiveTaxa	0	0.0	0
Percent Contribution of Dominant Taxon	30.48	5.3	5
Percent Suspension Feeders and Filterers	5.71	1.2	1
Percent of Tanytarsini individuals	1.9	3.2	3
Percent of Very Tolerant individuals	48.57	0.5	0
Total Score			**23**
Interpretation of Scores		Good	73-100
		Fair	46-72
		Poor	**19-45**
		Very Poor	0-18

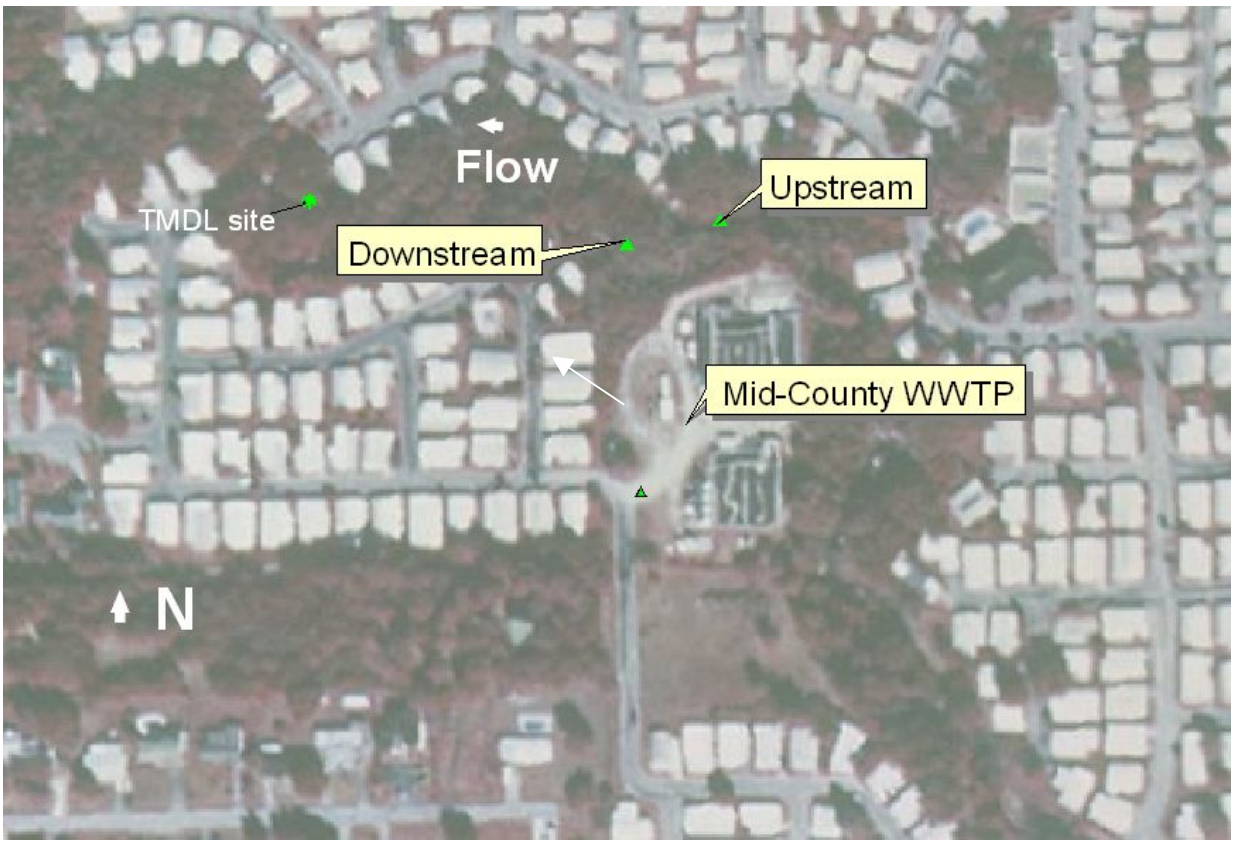
Appendices

- Appendix 1. Map of facility
- Appendix 2. Facility summary
- Appendix 3. Explanation of measurements
- Appendix 4. Chemical analyses of effluent and receiving water.
- Appendix 5. Typical values for selected parameters in Florida waters
- Appendix 6. Additional physical, chemical, toxicological and microbiological results
- Appendix 7. Habitat Assessment field sheets
- Appendix 8a. Periphyton: Taxa list and density (number of individuals per cm^2)
- Appendix 8b. Periphyton: Taxa list and number of individuals counted
- Appendix 9a. Hester-Dendy multi-plate samplers: Taxa list and macroinvertebrate density (average number of individuals per m^2)
- Appendix 9b. Hester-Dendy multi-plate samplers: Taxa list and total number of macroinvertebrates counted
- Appendix 10a. Dipnet samples: Taxa list and number of macroinvertebrates counted (collapsed)
- Appendix 10b. Dipnet samples: Taxa list and number of macroinvertebrates counted

Appendix 1

Map of Facility and Study Area





Appendix 2

Facility Summary and DMR Data

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENT PROECTION
FACILITY

Facility name: Mid-County WWTP
2299 Spanish Vista Dr.
Palm Harbor, FL 34668

Date of Summary: May 13, 2004

Location (detailed ARC view map attached): County: Pinellas District: SWD
Latitude N 28°02'20" Longitude W 082°45'20"

NPDES Permit: FL0034789 State GMS # and
State expiration date: April 23, 2005

Facility Type: Domestic

Description of treatment process: A Type I, advanced wastewater treatment plant consisting of two separate treatment trains. The flow is first directed through one static screen followed by one flow equalization basin and then through a splitter box which separates the flow into a 0.300 MGD and 0.600 MGD stream. These treatment trains consist of one aeration basin and one clarifier. The flow from the two is then combined into one effluent holding tank which flows to three denitrification filters. The flow is next directed to one chlorination/dechlorination chamber. This facility is operated to provide advanced wastewater treatment (AWT) and high level disinfection.

Receiving waters: Curlew Creek Classification of water: Class III Fresh Waters

Design Flow: 0.900 MGD Mean Flow (12 month average): 0.776 MGD (year ending 01/2004)

Discharge is: continuous
Therefore, the best time to sample the outfall is: during regular business hours

If facility has a mixing zone proved details (size and parameters): No mixing zone.

List effluent limits (add or remove rows and columns):

Parameter	Units	AnnAvg	MoAvg	WklyAvg	Single Sample Max	Sample Type
CBOD5	mg/L	5.0	6.25	7.5	10.0	composite
TSS	mg/L	5.0	6.25	7.5	10.0	Composite
pH	p.s.u.	-	-	-	6.5 to 8.5	meter
Fecal Coliform Bacteria	See Note below (a)					grab
Total Residual Chlorine (For Dechlorination)	mg/L	-	-	-	0.01	grab
Nitrogen, Total as N	mg/L	3.0	3.75	4.5	6.0	Composite
Phosphorus, Total as P	mg/L	1.0	1.25	1.50	2.0	composite
Dissolved Oxygen	mg/L	-	-	-	5.0 (min)	grab

[a] Over a 30 day period, 75 percent of the fecal coliform values (the 75th percentile value) shall be below the detection limits. Any one sample shall not exceed 25 fecal coliform values per 100 mL of sample.

Description of permitted outfall(s):
Discharge is through a 12" metal pipe into Curlew Creek. The pipe is not submerged.

List permit violations (form DMR data or other sources) and plant upsets that occurred within past year:
There is no outstanding enforcement. The facility had one TN exceedance in January 2004 for the monthly average.

Describe previous impact bioassessments, WQBELs, and previous or current enforcement actions:
Two previous bioassessments were recently conducted at this facility (June 1998, August 1999). Both obtained similar results. The overall quality of the habitat of Curlew Creek is considered marginal. These inspections indicated that Mid-County may be influencing the downstream portion of the creek, especially with respect to phosphate.

Ambient Monitoring Data: The facility collects ambient monitoring data at a sites 100 feet upstream and 100 feet downstream of the outfall. From the data between 1999 – 2003, the facility appears to be having a influence on downstream nutrient levels. However, upstream and downstream coliforms measurements are very high and the outfall samples show undetected. This ditch collects stormwater run-off from the surrounding area and mobile home parks. There are several stormwater outfall pipes into the ditch.

Additional information:
Since the ditch has several stormwater inputs, the downstream site is closer to the outfall to try to evaluate the discharges effects instead of stormwater inputs. Upstream site is approximately 40 m upstream, downstream site is approximately 30 m downstream (upstream of a main stormwater input). There may be difficulty in placing Hester-Dendys upstream due to low water levels. We may have to go farther upstream, but then we are not accounting for stormwater drainage.

Staff contributing to this review:

Watershed Management: Lori Pillsbury

Inspector: Michele Duggan

Grey line denotes that biologist should know data

Black line denotes that inspector or engineer should know data

FACILITY/LOCATION MAP



FYI-5 Test and Control Site Comparability Discussion

shows the physical and chemical comparability between the test and control sites collected by DEP Southwest District Watershed Management on May 5, 2004.

Parameter	Control Site	Test Site
Depth (m)	0.3	0.5
Dissolved oxygen (mg/L)	7.85	7.96
Specific conductance (uS/cm)	433	560
Temperature (?C)	22.35	22.7
pH (SU)	7.55	7.53
Latitude/longitude	N 28°02'18.7 , W 082°44'31.7	N 28°02'18.4", W 082°44'33.1"
Least wide riparian side	6 m	6 m
Artificially channelized	Yes	Yes
Artificially impounded	No	No
High water mark	2 m	2 m
Canopy cover %	11-45%	46-80%
Sediment odor	Absent	Present
Sediment oils	Absent	Absent
Sediment deposition	Moderate	Moderate
System type	1st order	1st order
Water odors	None	None
Water surface oils	Present	Present
Clarity	Clear	Turbid
Color	Tannic	Tannic
Periphyton	Absent	Absent
Fish	Absent	Absent
Aquatic macrophytes	Present	Present
Iron/sulfur bacteria	Absent	Absent

Facility ID	Facility Name	District	Facility Type	Major (M)	Outfall Type	Monitoring Date	Outfall Indicator	Parameter Code	Parameter Description	Monitoring Location Code	Concentration (1)	Concentration Limit (1)	Concentration Statistical Base (1)
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2003	001-1	P 80082	BOD, CARBONACEOUS 05 DAY, 20C	1	4.92	6.25	MO AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2003	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	75	0	75TH %
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	1/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	4.2	3.75	MO AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	4.82	3.75	MO AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP3B	NOEL STATRE 7DAY CHR CERIODAPHNIA	P		100	MINIMUM
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP6C	NOEL STATRE 7DAY CHR PIMEPHALES	P		100	MINIMUM
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	4/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	100	0	75TH %
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	2.74	3.75	MO AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	100	0	75TH %
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	6/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	100	0	75TH %
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	100	0	75TH %
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	100	0	75TH %

Facility ID	Facility Name	District	Facility Type	Major (M)	Outfall Type	Monitoring Date	Outfall Indicator	Parameter Code	Parameter Description	Monitoring Location Code	Concentration (2)	Concentration Limit (2)	Concentration Statistical Base (2)
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2003	001-1	P 80082	BOD, CARBONACEOUS 05 DAY, 20C	1	0	7.5	WKLY AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2003	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	1/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	0	4.5	WKLY AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	0	4.5	WKLY AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP3B	NOEL STATRE 7DAY CHR CERIODAPHNIA	P		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP6C	NOEL STATRE 7DAY CHR PIMEPHALES	P		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	4/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	0	4.5	WKLY AVG
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	6/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1		DELMON	

Facility ID	Facility Name	District	Facility Type	Major (M)	Outfall Type	Monitoring Date	Outfall Indicator	Parameter Code	Parameter Description	Monitoring Location Code	Concentration (3)	Concentration Limit (3)	Concentration Statistical Base (3)	Concentration Units
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2003	001-1	P 80082	BOD, CARBONACEOUS 05 DAY, 20C	1	15	10	MAXIMUM	MG/L
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2003	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	200	25	MAXIMUM	#/ 100ML
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	1/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	6	6	MAXIMUM	MG/L
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	8.2	6	MAXIMUM	MG/L
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP3B	NOEL STATRE 7DAY CHR CERIODAPHNIA	P		DELMON		PER- CENT
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	3/31/2004	001-T	P TBP6C	NOEL STATRE 7DAY CHR PIMEPHALES	P		DELMON		PER- CENT
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	4/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	0	25	MAXIMUM	#/ 100ML
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 00600	NITROGEN, TOTAL (AS N)	1	6.4	6	MAXIMUM	MG/L
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	5/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	0	25	MAXIMUM	#/ 100ML
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	6/30/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	0	25	MAXIMUM	#/ 100ML
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	7/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	1	25	MAXIMUM	#/ 100ML
FL0034789	MID-COUNTY SERVICES, INC.	TA	I	M	EFFLUENT	8/31/2004	001-1	P 31615	FECAL COLIFORM, MPN,EC MED, 44 5C	1	0	25	MAXIMUM	#/ 100ML

Appendix 3

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. A list of the analytes tested for, results, data qualifiers, the minimum detection limit and the practical quantitation limit are given in Appendix 4. The results from these analyses were compared with Water Quality Criteria (62-302 F.A.C.) and facility permit limits (Table 1, Appendix 2). Exceedances of Water Quality Criteria may be violations of specific provisions of Chapter 62-302 (F.A.C.) and/ or facility permit limits.

(3) Toxicity Bioassays

Seven-day chronic toxicity bioassays were performed on the effluent sample using the water flea, *Ceriodaphnia dubia,* and the fish, *Cyprinella leedsi* following FDEP SOPs TA07_05 and TA07_09. Failure of toxicity testing may constitute a violation of 62-302.520(21), 62-302.530(62) and/or facility permit limits.

(4) Bacteriological Testing

The effluent and water from control and test sites were analyzed for the presence and concentration of total and fecal coliform bacteria following FDEP SOPs MB1_0 and MB1_1. High levels of fecal or total coliform bacteria may constitute violation of 62-302.530(6), 62-302.530(7) and/or facility permit limits.

(5) Habitat Assessment

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

(6) Algal Growth Potential (AGP)

The effluent and water from control and test sites are autoclaved, filtered (0.45μm), inoculated with the unicellular green alga, *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum,* USEPA 2002*),* and incubated for 14 days (FDEP SOP TA08_05). 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 one line of evidence for violation of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

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

(7) Algal Phytoplankton and Periphyton Assemblages

Methods: Periphyton were sampled at both control and test sites by incubating glass microscope slides in a standard periphytometer for 28 days (QA Rule SOP FS7210). Phytoplankton were sampled using a 1 L grab sample (QA Rule SOP FS7100). Periphyton were subsampled and identified to the lowest practical level, usually species (FDEP SOPs AB03, AB03_1 and AB05).

Chlorophyll *a* Content: Chlorophyll *a* content is measured in both phytoplankton and periphyton samples to estimate algal biomass (FDEP SOP BB05). High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may be a violation of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

Algal Density: Algal density is estimated as number of natural units/ml for phytoplankton samples and number of natural units/cm^2 for periphyton samples. Although algal density of a single site is highly variable and depends on a number of factors, comparison of algal density at a control site to algal density at a related test site gives a partial comparison of algal biomass at the two sites (Stevenson and Smol 2003).

Taxa richness: Taxa richness is the number of distinct algal taxa present in a sample. Extreme nutrient enrichment tends to reduce the number of different types of algae present in a sample because a few tolerant taxa tend to reproduce rapidly and constitute the majority of the cells present. However, moderate nutrient enrichment of nutrient poor waters may sometimes be correlated with increased algal taxa richness (Stevenson and Bahls 1999) as the algal community begins to respond to the increased input of nutrients.

Community Composition: Shifts in relative proportions of major groups of algae downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Stevenson and Bahls 1999) and may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present with more equitable abundance among taxa (Magurran 1988). Low diversity scores related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

(8) Benthic Macroinvertebrate Assemblages

Methods: Benthic macroinvertebrates were collected using two methods. Quantitative samples were collected from Hester-Dendy multi-plate samplers incubated for 28 days (QA Rule SOP FS7430). Qualitative collections are made using 20 dipnet sweeps (QA Rule SOP FS7420). Benthic macroinvertebrates were sorted and identified to the lowest practical taxonomic level, usually species (FDEP SOP IZ06).

Taxa richness: Taxa richness is the number of distinct macroinvertebrate taxa present in a sample. Stress, habitat destruction and pollution tend to reduce the number of different types of organisms present (Karr and Chu 1998). Decreases in taxa richness related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Percent Contribution of Dominant Taxon: Percent contribution of the dominant taxon is calculated by dividing the number of individuals in the most abundant taxa by the total number of individuals counted. Percent contribution of the dominant taxon tends to increase with increasing perturbation (Plafkin *et al*., 1989). Increases in the percent contribution of the dominant taxon related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present in equitable abundance among taxa (Magurran 1988). A difference of 25% in Shannon-Weaver diversity between results from Hester-Dendy multiplate samplers incubated for 28 days at test and control sites constitutes a violation of 62-302.530(11) F.A.C..

Community Composition: Shifts in proportions of major groups of organisms downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Karr and Chu 1998). Shifts in community composition related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Functional Feeding Groups: Environmental degradation may differentially affect groups of invertebrates based on how the group feeds (e.g. predators, deposit feeders, etc.). In Florida, pollution may be responsible for reducing the numbers of filter feeders (FDEP 1994) and shredders (EA Engineering 1994). Changes in the proportions of functional feeding groups related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

The Stream Condition Index (SCI): The SCI is a composite macroinvertebrate metric developed for Florida. This Index was revised in 2004 using data from qualitative dipnet samples. The SCI now assigns points to ten parameters; depending on how closely each parameter approaches an expected value (QA Rule SOP LT 7200). Points are assigned depending on

which bioregion (Panhandle, Northeast, or Peninsula) the sampling location exists in and summed to yield a final SCI score (range 0-100). Included in the calculation of SCI are taxa richness, number of Ephemeroptera taxa, number of Trichoptera taxa, percent contribution of the dominant taxon, number of sensitive taxa, number of clinger taxa, number of long-lived taxa, percent contribution of Tanytarsini, percent contribution of very tolerant, and the percent contribution of suspension and filter feeders. Scores are broken into four ordinal groups: Good, Fair, Poor, and Very Poor. A decrease in ordinal SCI score from the Control to the Test site may be evidence of degradation related to a facility's effluent. An SCI score of "Poor" or "Very Poor" related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

(9) Statistical Comparisons

Statistical comparisons of the proportions of taxa, major groups or feeding groups were made using 95% confidence intervals on proportions. A 95% confidence interval is the range of values above and below a given proportion that has a 95% chance of containing the true proportion (Sokal and Rohlf 1995). If the 95% confidence intervals for two proportions do not overlap, then the proportion of X in sample 1 is significantly different from the proportion of X in sample 2 at $p<0.05$. A "$p<0.05$" level of significance means that there is less than a 5% chance that the true proportions in the two samples are the same. All comparisons that are labeled as significant in the text have a probability <0.05 that the proportions are the same.

Appendix 4

Chemical analysis of effluent and receiving water

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/20/2004 6:40	EQUIPMENT BLANK	Bio-BOD	Biochemical Oxygen Demand-5 Day	No Result	mg/L			
6/20/2004 6:40	EQUIPMENT BLANK	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inh	No Result	mg/L			
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Aluminum	8	ug/L	I	5	20
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Arsenic	5	ug/L	U	5	20
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Calcium	0.75	mg/L		0.05	0.2
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Chromium	3.7	ug/L	I	2	8
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Copper	1	ug/L	U	1	4
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Iron	33	ug/L		5	20
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Lead	0.14	ug/L	U	0.14	0.56
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Magnesium	0.059	mg/L	I	0.02	0.08
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Nickel	3.5	ug/L	I	2	8
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/20/2004 6:40	EQUIPMENT BLANK	Metals-Water	Zinc	2.6	ug/L	I	2	8
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	Color	5	PCU	UQ	5	5
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	NO2NO3-N	0.013	mg N/L		0.004	0.01
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	TSS	4	mg/L	U	4	16
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
6/20/2004 6:40	EQUIPMENT BLANK	Nutrients-Liquid	Turbidity	0.05	NTU	UQ	0.05	0.05
6/21/2004	30428 REP#1	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	13	# Taxa			
6/21/2004	30428 REP#2	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	13	# Taxa			
6/21/2004	30428 REP#3	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	16	# Taxa			
6/21/2004	30429 REP#1	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	16	# Taxa			
6/21/2004	30429 REP#2	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	15	# Taxa			
6/21/2004	30429 REP#3	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	15	# Taxa			
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Aluminum	5	ug/L	U	5	20
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Arsenic	5	ug/L	U	5	20
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Chromium	2	ug/L	U	2	8
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Copper	1	ug/L	U	1	4
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Iron	5	ug/L	U	5	20
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Lead	0.23	ug/L	I	0.14	0.56
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Nickel	2	ug/L	U	2	8
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Selenium	0.5	ug/L	U	0.5	2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/21/2004 7:53	FIELD BLANK #1	Metals-Water	Zinc	2	ug/L	U	2	8
6/21/2004 7:53	TRIP BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
6/21/2004 7:53	TRIP BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
6/21/2004 7:53	TRIP BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
6/21/2004 7:53	TRIP BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Aluminum	5	ug/L	U	5	20
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Arsenic	5	ug/L	U	5	20
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Chromium	2	ug/L	U	2	8
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Copper	1	ug/L	U	1	4
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Iron	5	ug/L	U	5	20
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Lead	0.26	ug/L	I	0.14	0.56
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Nickel	2	ug/L	U	2	8
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/21/2004 7:57	FIELD BLANK #2	Metals-Water	Zinc	2	ug/L	U	2	8
6/21/2004 9:20	FIELD BLANK	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
6/21/2004 9:20	FIELD BLANK	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
6/21/2004 9:20	FIELD BLANK	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
6/21/2004 9:20	FIELD BLANK	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:20	FIELD BLANK	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzidine	96	ug/L	U	96	380
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
6/21/2004 9:20	FIELD BLANK	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
6/21/2004 9:20	FIELD BLANK	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
6/21/2004 9:20	FIELD BLANK	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
6/21/2004 9:20	FIELD BLANK	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
6/21/2004 9:20	FIELD BLANK	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
6/21/2004 9:20	FIELD BLANK	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
6/21/2004 9:20	FIELD BLANK	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
6/21/2004 9:20	FIELD BLANK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
6/21/2004 9:20	FIELD BLANK	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
6/21/2004 9:20	FIELD BLANK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
6/21/2004 9:20	FIELD BLANK	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:20	FIELD BLANK	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
6/21/2004 9:20	FIELD BLANK	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
6/21/2004 9:20	FIELD BLANK	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.77
6/21/2004 9:20	FIELD BLANK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.77
6/21/2004 9:20	FIELD BLANK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Diazinon	0.048	ug/L	UJ	0.048077	0.192
6/21/2004 9:20	FIELD BLANK	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.77
6/21/2004 9:20	FIELD BLANK	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Malathion	0.14	ug/L	U	0.14	0.58
6/21/2004 9:20	FIELD BLANK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
6/21/2004 9:20	FIELD BLANK	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
6/21/2004 9:20	FIELD BLANK	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Mevinphos	0.19	ug/L	UJ	0.19231	0.769
6/21/2004 9:20	FIELD BLANK	GC-Water	Naled	0.77	ug/L	UJ	0.76923	3.08
6/21/2004 9:20	FIELD BLANK	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.58
6/21/2004 9:20	FIELD BLANK	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.38
6/21/2004 9:20	FIELD BLANK	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.58
6/21/2004 9:20	FIELD BLANK	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
6/21/2004 9:20	FIELD BLANK	Metals-Water	Aluminum	5	ug/L	U	5	20
6/21/2004 9:20	FIELD BLANK	Metals-Water	Arsenic	5	ug/L	U	5	20
6/21/2004 9:20	FIELD BLANK	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/21/2004 9:20	FIELD BLANK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
6/21/2004 9:20	FIELD BLANK	Metals-Water	Chromium	2	ug/L	U	2	8
6/21/2004 9:20	FIELD BLANK	Metals-Water	Copper	1	ug/L	U	1	4
6/21/2004 9:20	FIELD BLANK	Metals-Water	Iron	5	ug/L	U	5	20
6/21/2004 9:20	FIELD BLANK	Metals-Water	Lead	0.14	ug/L	U	0.14	0.56
6/21/2004 9:20	FIELD BLANK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
6/21/2004 9:20	FIELD BLANK	Metals-Water	Nickel	2	ug/L	U	2	8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:20	FIELD BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/21/2004 9:20	FIELD BLANK	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/21/2004 9:20	FIELD BLANK	Metals-Water	Zinc	2	ug/L	U	2	8
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	Color	5	PCU	U	5	5
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	TSS	4	mg/L	U	4	16
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
6/21/2004 9:20	FIELD BLANK	Nutrients-Liquid	Turbidity	0.05	NTU	U	0.05	0.05
6/21/2004 9:20	FIELD BLANK	Overflow	Oil and Grease	0.69	mg/L	U		
6/21/2004 9:20	FIELD BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
6/21/2004 9:20	FIELD BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
6/21/2004 9:20	FIELD BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
6/21/2004 9:20	FIELD BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
6/21/2004 9:30	D001-COMPOSITE	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inh	No Result	mg/L			
6/21/2004 9:30	D001-COMPOSITE	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-C.dubia, NOE	No Result	NOEC			
6/21/2004 9:30	D001-COMPOSITE	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-Fish, NOEC	No Result	NOEC			
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Aluminum	9.9	ug/L	I	5	20
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Arsenic	5	ug/L	U	5	20
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Calcium	69	mg/L		0.05	0.2
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Chromium	6.1	ug/L	I	2	8
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Copper	6	ug/L		1	4
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Iron	72	ug/L		5	20
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Lead	0.14	ug/L	U	0.14	0.56
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Magnesium	6.1	mg/L		0.02	0.08
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Nickel	12.6	ug/L		2	8
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/21/2004 9:30	D001-COMPOSITE	Metals-Water	Zinc	38.7	ug/L		2	8
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	Ammonia-N	0.042	mg N/L		0.01	0.02
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	Color	10	PCU		5	5
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	NO2NO3-N	1.2	mg N/L		0.008	0.02
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	N_KJEL_TOT	1.1	mg N/L		0.06	0.2
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	Organic Carbon	7	mg C/L		1	5
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	TSS	4	mg/L	U	4	16
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	Total-P	1	mg P/L		0.02	0.06
6/21/2004 9:30	D001-COMPOSITE	Nutrients-Liquid	Turbidity	0.6	NTU		0.05	0.05
6/21/2004 9:40	OUTFALL D001	BNA-Water	1,2,4-Trichlorobenzene	0.98	ug/L	U	0.98	3.9

6/21/2004 9:40	OUTFALL D001	BNA-Water	1,2-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	1,3-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	1,4-Dichlorobenzene	0.98	ug/L	U	0.98	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,4,6-Trichlorophenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dichlorophenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	200
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	59
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2,6-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2-Chloronaphthalene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2-Chlorophenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	2-Nitrophenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
6/21/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	4-Bromophenyl phenyl ether	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	4-Chloro-3-methylphenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	7.8
6/21/2004 9:40	OUTFALL D001	BNA-Water	4-Nitrophenol	15	ug/L	U	15	59
6/21/2004 9:40	OUTFALL D001	BNA-Water	Acenaphthene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Acenaphthylene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Anthracene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzidine	98	ug/L	U	98	390
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzo(a)anthracene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzo(a)pyrene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzo(b)fluoranthene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzo(g,h,i)perylene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Benzo(k)fluoranthene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroethoxy)methane	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroethyl)ether	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	59
6/21/2004 9:40	OUTFALL D001	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	20
6/21/2004 9:40	OUTFALL D001	BNA-Water	Chrysene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	20
6/21/2004 9:40	OUTFALL D001	BNA-Water	Di-n-octyl phthalate	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Dibenzo(a,h)anthracene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Diethyl phthalate	0.98	ug/L	U	0.98	3.9

6/21/2004 9:40	OUTFALL D001	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	200
6/21/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
6/21/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
6/21/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:40	OUTFALL D001	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
6/21/2004 9:40	OUTFALL D001	BNA-Water	Fluoranthene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Fluorene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorobenzene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Indeno(1,2,3-cd)pyrene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Isophorone	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	7.8
6/21/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	7.8
6/21/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Naphthalene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Nitrobenzene	2	ug/L	U	2	7.8
6/21/2004 9:40	OUTFALL D001	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
6/21/2004 9:40	OUTFALL D001	BNA-Water	Phenanthrene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Phenol	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	Pyrene	0.98	ug/L	U	0.98	3.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.9
6/21/2004 9:40	OUTFALL D001	Bio-AGP/LimNut	Algal Growth Potential	No Result	mg DryWt/L			
6/21/2004 9:40	OUTFALL D001	Bio-BOD	Biochemical Oxygen Demand-5 Day	No Result	mg/L			
6/21/2004 9:40	OUTFALL D001	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inh	No Result	mg/L			
6/21/2004 9:40	OUTFALL D001	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 9:40	OUTFALL D001	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 9:40	OUTFALL D001	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
6/21/2004 9:40	OUTFALL D001	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	GC-Water	Atrazine	0.055	ug/L	I	0.048544	0.194
6/21/2004 9:40	OUTFALL D001	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.78
6/21/2004 9:40	OUTFALL D001	GC-Water	Butylate	0.19	ug/L	U	0.19	0.78
6/21/2004 9:40	OUTFALL D001	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.39

6/21/2004 9:40	OUTFALL D001	GC-Water	Diazinon	0.049	ug/L	UJ	0.048544	0.194
6/21/2004 9:40	OUTFALL D001	GC-Water	Ethion	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.39
6/21/2004 9:40	OUTFALL D001	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.78
6/21/2004 9:40	OUTFALL D001	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.39

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 9:40	OUTFALL D001	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.39
6/21/2004 9:40	OUTFALL D001	GC-Water	Malathion	0.15	ug/L	U	0.15	0.58
6/21/2004 9:40	OUTFALL D001	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.97
6/21/2004 9:40	OUTFALL D001	GC-Water	Metolachlor	0.49	ug/L	U	0.49	1.9
6/21/2004 9:40	OUTFALL D001	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.39
6/21/2004 9:40	OUTFALL D001	GC-Water	Mevinphos	0.19	ug/L	UJ	0.19417	0.777
6/21/2004 9:40	OUTFALL D001	GC-Water	Naled	0.78	ug/L	UJ	0.7767	3.11
6/21/2004 9:40	OUTFALL D001	GC-Water	Norflurazon	0.097	ug/L	U	0.097	0.39
6/21/2004 9:40	OUTFALL D001	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.58
6/21/2004 9:40	OUTFALL D001	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.39
6/21/2004 9:40	OUTFALL D001	GC-Water	Phorate	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.58
6/21/2004 9:40	OUTFALL D001	GC-Water	Simazine	0.049	ug/L	U	0.049	0.19
6/21/2004 9:40	OUTFALL D001	Metals-Water	Aluminum	8.6	ug/L	I	5	20
6/21/2004 9:40	OUTFALL D001	Metals-Water	Arsenic	5	ug/L	U	5	20
6/21/2004 9:40	OUTFALL D001	Metals-Water	Cadmium	0.15	ug/L	U	0.15	0.6
6/21/2004 9:40	OUTFALL D001	Metals-Water	Calcium	71.1	mg/L		0.05	0.2
6/21/2004 9:40	OUTFALL D001	Metals-Water	Chromium	2	ug/L	U	2	8
6/21/2004 9:40	OUTFALL D001	Metals-Water	Copper	5.5	ug/L		1	4
6/21/2004 9:40	OUTFALL D001	Metals-Water	Iron	54	ug/L		5	20
6/21/2004 9:40	OUTFALL D001	Metals-Water	Lead	0.14	ug/L	U	0.14	0.56
6/21/2004 9:40	OUTFALL D001	Metals-Water	Magnesium	6.3	mg/L		0.02	0.08
6/21/2004 9:40	OUTFALL D001	Metals-Water	Nickel	6	ug/L	I	2	8
6/21/2004 9:40	OUTFALL D001	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/21/2004 9:40	OUTFALL D001	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
6/21/2004 9:40	OUTFALL D001	Metals-Water	Zinc	42.7	ug/L		2	8
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	Ammonia-N	0.046	mg N/L		0.01	0.02
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	Color	10	PCU		5	5
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	NO2NO3-N	2.4	mg N/L		0.04	0.1
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	N_KJEL_TOT	0.98	mg N/L		0.06	0.2
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	O-Phosphate-P	1	mg P/L		0.08	0.2
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	Organic Carbon	6.2	mg C/L		1	5
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	TSS	4	mg/L	U	4	16
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	Total-P	1	mg P/L		0.04	0.12
6/21/2004 9:40	OUTFALL D001	Nutrients-Liquid	Turbidity	0.35	NTU		0.05	0.05
6/21/2004 9:40	OUTFALL D001	Overflow Oil and Grease		0.69	mg/L	U		
6/21/2004 9:40	OUTFALL D001	VOC-Water	Bromodichloromethane	7.6	ug/L		0.2	1

6/21/2004 9:40	OUTFALL D001	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
6/21/2004 9:40	OUTFALL D001	VOC-Water	Chloroform	76	ug/L		0.2	1
6/21/2004 9:40	OUTFALL D001	VOC-Water	Dibromochloromethane	0.36	ug/L	I	0.2	1
6/21/2004 10:15	TEST SITE	Bio-AGP/LimNut	Algal Growth Potential	27.5	mg DryWt/L		0.1	0.3
6/21/2004 10:15	TEST SITE	Bio-BOD	Biochemical Oxygen Demand-5 Day	No Result	mg/L			
6/21/2004 10:15	TEST SITE	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inh	No Result	mg/L			

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/21/2004 10:15	TEST SITE	Bio-Chl-a	Chlorophyll-A, Monochromatic, Periphyton	19	mg/m2		0.57	1.7
6/21/2004 10:15	TEST SITE	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 10:15	TEST SITE	Bio-Chl-a	Phaeophytin-A, Monochromatic, Periphyton	0	mg/m2		0.57	1.7
6/21/2004 10:15	TEST SITE	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 10:15	TEST SITE	Bio-Invertebrates	Macroinvert-FW-Qual-Dipnetx20-# Taxa	28	# Taxa			
6/21/2004 10:15	TEST SITE	Bio-Peri/Phyto	Periphyton-Quantitative-# Diatom Taxa	22	#Taxa			
6/21/2004 10:15	TEST SITE	Bio-Peri/Phyto	Periphyton-Quantitative-# Wet Taxa	8	#Taxa			
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	Ammonia-N	0.038	mg N/L		0.01	0.02
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	Color	30	PCU		5	5
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	NO2NO3-N	0.62	mg N/L		0.004	0.01
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	N_KJEL_TOT	0.6	mg N/L		0.06	0.2
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	O-Phosphate-P	0.3	mg P/L		0.028	0.07
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	Organic Carbon	11	mg C/L	A	1	5
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	TSS	5	mg/L	I	4	16
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	Total-P	0.33	mg P/L		0.02	0.06
6/21/2004 10:15	TEST SITE	Nutrients-Liquid	Turbidity	1.5	NTU		0.05	0.05
6/21/2004 10:35	CONTROL SITE	Bio-AGP/LimNut	Algal Growth Potential	10.3	mg DryWt/L		0.1	0.3
6/21/2004 10:35	CONTROL SITE	Bio-BOD	Biochemical Oxygen Demand-5 Day	No Result	mg/L			
6/21/2004 10:35	CONTROL SITE	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inh	No Result	mg/L			
6/21/2004 10:35	CONTROL SITE	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 10:35	CONTROL SITE	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
6/21/2004 10:35	CONTROL SITE	Bio-Invertebrates	Macroinvert-FW-Qual-Dipnetx20-# Taxa	21	# Taxa			
6/21/2004 10:35	CONTROL SITE	Bio-Peri/Phyto	Periphyton-Quantitative-# Diatom Taxa	23	#Taxa			
6/21/2004 10:35	CONTROL SITE	Bio-Peri/Phyto	Periphyton-Quantitative-# Wet Taxa	13	#Taxa			
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	Ammonia-N	0.042	mg N/L		0.01	0.02
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	Color	50	PCU		5	5
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	NO2NO3-N	0.19	mg N/L		0.004	0.01
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	N_KJEL_TOT	0.53	mg N/L		0.06	0.2
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	O-Phosphate-P	0.097	mg P/L		0.004	0.01
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	Organic Carbon	12	mg C/L		1	5
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	TSS	4	mg/L	U	4	16
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	Total-P	0.088	mg P/L		0.02	0.06
6/21/2004 10:35	CONTROL SITE	Nutrients-Liquid	Turbidity	0.95	NTU		0.05	0.05
6/23/2004 8:00	D001-GRAB	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U	1	4.2

6/23/2004 8:00	D001-GRAB	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2,4-Dichlorophenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2,4-Dimethylphenol	52	ug/L	U	52	210
6/23/2004 8:00	D001-GRAB	BNA-Water	2,4-Dinitrophenol	16	ug/L	U	16	62
6/23/2004 8:00	D001-GRAB	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U	1	4.2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/23/2004 8:00	D001-GRAB	BNA-Water	2-Chloronaphthalene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2-Chlorophenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	2-Methyl-4,6-dinitrophenol	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	2-Nitrophenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	3,3'-Dichlorobenzidine	42	ug/L	U	42	170
6/23/2004 8:00	D001-GRAB	BNA-Water	4,4'-DDD	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	4,4'-DDE	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	4,4'-DDT	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	4-Chlorophenyl phenyl ether	2.1	ug/L	U	2.1	8.3
6/23/2004 8:00	D001-GRAB	BNA-Water	4-Nitrophenol	16	ug/L	U	16	62
6/23/2004 8:00	D001-GRAB	BNA-Water	Acenaphthene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Acenaphthylene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Aldrin	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Anthracene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzidine	100	ug/L	U	100	420
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Bis(2-chloroisopropyl)ether	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Bis(2-ethylhexyl)phthalate	52	ug/L	I	16	62
6/23/2004 8:00	D001-GRAB	BNA-Water	Butyl benzyl phthalate	5.2	ug/L	U	5.2	21
6/23/2004 8:00	D001-GRAB	BNA-Water	Chrysene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Di-n-butyl phthalate	5.2	ug/L	U	5.2	21
6/23/2004 8:00	D001-GRAB	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Dieldrin	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Diethyl phthalate	1.2	ug/L	I	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Dimethyl phthalate	52	ug/L	U	52	210
6/23/2004 8:00	D001-GRAB	BNA-Water	Endosulfan I	4.2	ug/L	U	4.2	17

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/23/2004 8:00	D001-GRAB	BNA-Water	Endosulfan II	4.2	ug/L	U	4.2	17
6/23/2004 8:00	D001-GRAB	BNA-Water	Endosulfan sulfate	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Endrin	1.6	ug/L	UJ	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Endrin aldehyde	4.2	ug/L	U	4.2	17
6/23/2004 8:00	D001-GRAB	BNA-Water	Fluoranthene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Fluorene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Heptachlor	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Heptachlor epoxide	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Hexachlorobutadiene	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Hexachlorocyclopentadiene	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Hexachloroethane	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Isophorone	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	N-Nitrosodi-n-propylamine	2.1	ug/L	U	2.1	8.3
6/23/2004 8:00	D001-GRAB	BNA-Water	N-Nitrosodimethylamine	2.1	ug/L	U	2.1	8.3
6/23/2004 8:00	D001-GRAB	BNA-Water	N-Nitrosodiphenylamine	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Naphthalene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Nitrobenzene	2.1	ug/L	U	2.1	8.3
6/23/2004 8:00	D001-GRAB	BNA-Water	Pentachlorophenol	3.1	ug/L	U	3.1	12
6/23/2004 8:00	D001-GRAB	BNA-Water	Phenanthrene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Phenol	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	Pyrene	1	ug/L	U	1	4.2
6/23/2004 8:00	D001-GRAB	BNA-Water	alpha-BHC	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	beta-BHC	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	delta-BHC	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	BNA-Water	gamma-BHC	1.6	ug/L	U	1.6	6.2
6/23/2004 8:00	D001-GRAB	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
6/23/2004 8:00	D001-GRAB	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
6/23/2004 8:00	D001-GRAB	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
6/23/2004 8:00	D001-GRAB	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Diazinon	0.05	ug/L	UJ	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
6/23/2004 8:00	D001-GRAB	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6

6/23/2004 8:00	D001-GRAB	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
6/23/2004 8:00	D001-GRAB	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
6/23/2004 8:00	D001-GRAB	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Mevinphos	0.2	ug/L	UJ	0.2	0.8
6/23/2004 8:00	D001-GRAB	GC-Water	Naled	0.8	ug/L	UJ	0.8	3.2
6/23/2004 8:00	D001-GRAB	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
6/23/2004 8:00	D001-GRAB	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/23/2004 8:00	D001-GRAB	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
6/23/2004 8:00	D001-GRAB	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
6/23/2004 8:00	D001-GRAB	Metals-Water	Aluminum	12	ug/L	I	5	20
6/23/2004 8:00	D001-GRAB	Metals-Water	Arsenic	5	ug/L	U	5	20
6/23/2004 8:00	D001-GRAB	Metals-Water	Cadmium	0.11	ug/L	I	0.076	0.3
6/23/2004 8:00	D001-GRAB	Metals-Water	Calcium	67.4	mg/L		0.05	0.2
6/23/2004 8:00	D001-GRAB	Metals-Water	Chromium	11.6	ug/L		2	8
6/23/2004 8:00	D001-GRAB	Metals-Water	Copper	5.5	ug/L		1	4
6/23/2004 8:00	D001-GRAB	Metals-Water	Iron	109	ug/L		5	20
6/23/2004 8:00	D001-GRAB	Metals-Water	Lead	0.1	ug/L	U	0.1	0.4
6/23/2004 8:00	D001-GRAB	Metals-Water	Magnesium	5.9	mg/L		0.02	0.08
6/23/2004 8:00	D001-GRAB	Metals-Water	Nickel	10.9	ug/L		2	8
6/23/2004 8:00	D001-GRAB	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/23/2004 8:00	D001-GRAB	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
6/23/2004 8:00	D001-GRAB	Metals-Water	Zinc	45.1	ug/L		2	8
6/23/2004 8:00	D001-GRAB	Nutrients-Liquid	Ammonia-N	0.034	mg N/L		0.01	0.02
6/25/2004 9:15	D001-GRAB	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
6/25/2004 9:15	D001-GRAB	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
6/25/2004 9:15	D001-GRAB	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
6/25/2004 9:15	D001-GRAB	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/25/2004 9:15	D001-GRAB	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
6/25/2004 9:15	D001-GRAB	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
6/25/2004 9:15	D001-GRAB	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzidine	97	ug/L	U	97	390
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
6/25/2004 9:15	D001-GRAB	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
6/25/2004 9:15	D001-GRAB	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
6/25/2004 9:15	D001-GRAB	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
6/25/2004 9:15	D001-GRAB	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
6/25/2004 9:15	D001-GRAB	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
6/25/2004 9:15	D001-GRAB	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
6/25/2004 9:15	D001-GRAB	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9

6/25/2004 9:15	D001-GRAB	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
6/25/2004 9:15	D001-GRAB	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
6/25/2004 9:15	D001-GRAB	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
6/25/2004 9:15	D001-GRAB	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
6/25/2004 9:15	D001-GRAB	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
6/25/2004 9:15	D001-GRAB	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/25/2004 9:15	D001-GRAB	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
6/25/2004 9:15	D001-GRAB	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
6/25/2004 9:15	D001-GRAB	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
6/25/2004 9:15	D001-GRAB	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
6/25/2004 9:15	D001-GRAB	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
6/25/2004 9:15	D001-GRAB	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
6/25/2004 9:15	D001-GRAB	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
6/25/2004 9:15	D001-GRAB	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
6/25/2004 9:15	D001-GRAB	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
6/25/2004 9:15	D001-GRAB	GC-Water	Naled	0.8	ug/L	UJ	0.8	3.2
6/25/2004 9:15	D001-GRAB	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
6/25/2004 9:15	D001-GRAB	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
6/25/2004 9:15	D001-GRAB	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
6/25/2004 9:15	D001-GRAB	Metals-Water	Aluminum	12	ug/L	I	5	20
6/25/2004 9:15	D001-GRAB	Metals-Water	Arsenic	5	ug/L	U	5	20
6/25/2004 9:15	D001-GRAB	Metals-Water	Cadmium	0.18	ug/L	U	0.18	0.72

6/25/2004 9:15	D001-GRAB	Metals-Water	Calcium	72.7	mg/L		0.05	0.2
6/25/2004 9:15	D001-GRAB	Metals-Water	Chromium	2	ug/L	U	2	8
6/25/2004 9:15	D001-GRAB	Metals-Water	Copper	3.9	ug/L	I	1	4
6/25/2004 9:15	D001-GRAB	Metals-Water	Iron	89	ug/L		5	20
6/25/2004 9:15	D001-GRAB	Metals-Water	Lead	0.1	ug/L	U	0.1	0.4
6/25/2004 9:15	D001-GRAB	Metals-Water	Magnesium	6.7	mg/L		0.02	0.08
6/25/2004 9:15	D001-GRAB	Metals-Water	Nickel	5	ug/L	I	2	8
6/25/2004 9:15	D001-GRAB	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
6/25/2004 9:15	D001-GRAB	Metals-Water	Silver	0.022	ug/L	U	0.022	0.088
6/25/2004 9:15	D001-GRAB	Metals-Water	Zinc	31.7	ug/L		2	8
6/25/2004 9:15	D001-GRAB	Nutrients-Liquid	Ammonia-N	0.041	mg N/L		0.01	0.02

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 8:00	OUTFALL D001 COMP	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	3.1	mg/L			
8/23/2004 8:00	TRIP BLANK	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.2	mg/L	U		
8/23/2004 8:00	OUTFALL D001 COMP	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-C.dubia, NOEC	100	NOEC	K		
8/23/2004 8:00	OUTFALL D001 COMP	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-Fish, NOEC	No Result	NOEC			
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Aluminum	22	ug/L	U	22	88
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Arsenic	6	ug/L	U	6	24
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Cadmium	0.052	ug/L	U	0.052	0.2
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Calcium	57.3	mg/L		0.05	0.2
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Chromium	2.7	ug/L	I	2	8
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Copper	6.7	ug/L		1	4
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Iron	234	ug/L		10	40
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Lead	0.13	ug/L	I	0.05	0.2
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Magnesium	5	mg/L		0.02	0.08
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Nickel	10.2	ug/L		2	8
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
8/23/2004 8:00	OUTFALL D001 COMP	Metals-Water	Zinc	25	ug/L		3	12
8/23/2004 8:00	TRIP BLANK	Metals-Water	Aluminum	22	ug/L	U	22	88
8/23/2004 8:00	TRIP BLANK	Metals-Water	Arsenic	6	ug/L	U	6	24
8/23/2004 8:00	TRIP BLANK	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
8/23/2004 8:00	TRIP BLANK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
8/23/2004 8:00	TRIP BLANK	Metals-Water	Chromium	2	ug/L	U	2	8
8/23/2004 8:00	TRIP BLANK	Metals-Water	Copper	1	ug/L	U	1	4
8/23/2004 8:00	TRIP BLANK	Metals-Water	Iron	10	ug/L	U	10	40
8/23/2004 8:00	TRIP BLANK	Metals-Water	Lead	0.054	ug/L	I	0.05	0.2
8/23/2004 8:00	TRIP BLANK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
8/23/2004 8:00	TRIP BLANK	Metals-Water	Nickel	2	ug/L	U	2	8
8/23/2004 8:00	TRIP BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/23/2004 8:00	TRIP BLANK	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
8/23/2004 8:00	TRIP BLANK	Metals-Water	Zinc	3	ug/L	U	3	12

8/23/2004 8:00	OUTFALL D001 COMP	Nutrients-Liquid	Ammonia-N	0.062	mg N/L		0.01	0.02
8/23/2004 8:00	OUTFALL D001 COMP	Nutrients-Liquid	Kjeldahl Nitrogen	7.6	mg N/L		0.6	2
8/23/2004 8:00	OUTFALL D001 COMP	Nutrients-Liquid	NO2NO3-N	1.6	mg N/L		0.02	0.05
8/23/2004 8:00	OUTFALL D001 COMP	Nutrients-Liquid	Organic Carbon	9.4	mg C/L		1	5
8/23/2004 8:00	OUTFALL D001 COMP	Nutrients-Liquid	Total-P	88	mg P/L		2	6
8/23/2004 8:00	TRIP BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
8/23/2004 8:00	TRIP BLANK	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
8/23/2004 8:00	TRIP BLANK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
8/23/2004 8:00	TRIP BLANK	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
8/23/2004 8:00	TRIP BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	UQ	0.02	0.06
8/23/2004 8:00	TRIP BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
8/23/2004 8:00	TRIP BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
8/23/2004 8:00	TRIP BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 8:00	TRIP BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
8/23/2004 9:15	FIELD BLANK	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
8/23/2004 9:15	FIELD BLANK	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
8/23/2004 9:15	FIELD BLANK	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzidine	97	ug/L	U	97	390
8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9

8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
8/23/2004 9:15	FIELD BLANK	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
8/23/2004 9:15	FIELD BLANK	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
8/23/2004 9:15	FIELD BLANK	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 9:15	FIELD BLANK	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
8/23/2004 9:15	FIELD BLANK	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
8/23/2004 9:15	FIELD BLANK	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
8/23/2004 9:15	FIELD BLANK	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
8/23/2004 9:15	FIELD BLANK	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/23/2004 9:15	FIELD BLANK	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
8/23/2004 9:15	FIELD BLANK	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8

8/23/2004 9:15	FIELD BLANK	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
8/23/2004 9:15	FIELD BLANK	GC-Water	Alachlor	0.58	ug/L	UJ	0.58	2.3
8/23/2004 9:15	FIELD BLANK	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
8/23/2004 9:15	FIELD BLANK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
8/23/2004 9:15	FIELD BLANK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
8/23/2004 9:15	FIELD BLANK	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.38

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 9:15	FIELD BLANK	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
8/23/2004 9:15	FIELD BLANK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
8/23/2004 9:15	FIELD BLANK	GC-Water	Metolachlor	0.48	ug/L	UJ	0.48	1.9
8/23/2004 9:15	FIELD BLANK	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
8/23/2004 9:15	FIELD BLANK	GC-Water	Naled	0.77	ug/L	UJ	0.77	3.1
8/23/2004 9:15	FIELD BLANK	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
8/23/2004 9:15	FIELD BLANK	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.38
8/23/2004 9:15	FIELD BLANK	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	GC-Water	Prometryn	0.14	ug/L	UJ	0.14	0.56
8/23/2004 9:15	FIELD BLANK	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
8/23/2004 9:15	FIELD BLANK	Metals-Water	Aluminum	22	ug/L	U	22	88
8/23/2004 9:15	FIELD BLANK	Metals-Water	Arsenic	6	ug/L	U	6	24
8/23/2004 9:15	FIELD BLANK	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
8/23/2004 9:15	FIELD BLANK	Metals-Water	Calcium	0.23	mg/L		0.05	0.2
8/23/2004 9:15	FIELD BLANK	Metals-Water	Chromium	2	ug/L	U	2	8
8/23/2004 9:15	FIELD BLANK	Metals-Water	Copper	1	ug/L	U	1	4
8/23/2004 9:15	FIELD BLANK	Metals-Water	Iron	10	ug/L	U	10	40
8/23/2004 9:15	FIELD BLANK	Metals-Water	Lead	0.05	ug/L	U	0.05	0.2
8/23/2004 9:15	FIELD BLANK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
8/23/2004 9:15	FIELD BLANK	Metals-Water	Nickel	2	ug/L	U	2	8
8/23/2004 9:15	FIELD BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/23/2004 9:15	FIELD BLANK	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
8/23/2004 9:15	FIELD BLANK	Metals-Water	Zinc	21	ug/L		3	12
8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02

8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
8/23/2004 9:15	FIELD BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	UQ	0.02	0.06
8/23/2004 9:15	FIELD BLANK	Overflow	Oil and Grease	0.69	mg/l	U		
8/23/2004 9:15	FIELD BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
8/23/2004 9:15	FIELD BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
8/23/2004 9:15	FIELD BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
8/23/2004 9:15	FIELD BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
8/23/2004 9:30	OUTFALL D001	Bio-AGP/LimNut	Algal Growth Potential	3.48	mg DryWt/L	J	0.1	0.3
8/23/2004 9:30	OUTFALL D001	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.9	mg/L	I		
8/23/2004 9:30	OUTFALL D001	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
8/23/2004 9:30	OUTFALL D001	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
8/23/2004 9:30	OUTFALL D001	BNA-Water	1,2,4-Trichlorobenzene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	1,2-Dichlorobenzene	0.98	ug/L	U	0.98	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 9:30	OUTFALL D001	BNA-Water	1,3-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	1,4-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,4,6-Trichlorophenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,4-Dichlorophenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	200
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	59
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,4-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2,6-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2-Chloronaphthalene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2-Chlorophenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	2-Nitrophenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
8/23/2004 9:30	OUTFALL D001	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	4-Bromophenyl phenyl ether	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	4-Chloro-3-methylphenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	7.8
8/23/2004 9:30	OUTFALL D001	BNA-Water	4-Nitrophenol	15	ug/L	U	15	59
8/23/2004 9:30	OUTFALL D001	BNA-Water	Acenaphthene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Acenaphthylene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Anthracene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzidine	98	ug/L	U	98	390
8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzo(a)anthracene	0.98	ug/L	U	0.98	3.9

8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzo(a)pyrene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzo(b)fluoranthene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzo(g,h,i)perylene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Benzo(k)fluoranthene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Bis(2-chloroethoxy)methane	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Bis(2-chloroethyl)ether	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	59
8/23/2004 9:30	OUTFALL D001	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	20
8/23/2004 9:30	OUTFALL D001	BNA-Water	Chrysene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	20
8/23/2004 9:30	OUTFALL D001	BNA-Water	Di-n-octyl phthalate	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Dibenzo(a,h)anthracene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Diethyl phthalate	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	200
8/23/2004 9:30	OUTFALL D001	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 9:30	OUTFALL D001	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
8/23/2004 9:30	OUTFALL D001	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
8/23/2004 9:30	OUTFALL D001	BNA-Water	Fluoranthene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Fluorene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Hexachlorobenzene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Indeno(1,2,3-cd)pyrene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Isophorone	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	7.8
8/23/2004 9:30	OUTFALL D001	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	7.8
8/23/2004 9:30	OUTFALL D001	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Naphthalene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Nitrobenzene	2	ug/L	U	2	7.8
8/23/2004 9:30	OUTFALL D001	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/23/2004 9:30	OUTFALL D001	BNA-Water	Phenanthrene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Phenol	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	Pyrene	0.98	ug/L	U	0.98	3.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.9

8/23/2004 9:30	OUTFALL D001	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.9
8/23/2004 9:30	OUTFALL D001	GC-Water	Alachlor	0.58	ug/L	UJ	0.58	2.3
8/23/2004 9:30	OUTFALL D001	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Atrazine	0.089	ug/L	I	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
8/23/2004 9:30	OUTFALL D001	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
8/23/2004 9:30	OUTFALL D001	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Diazinon	0.049	ug/L	UJ	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
8/23/2004 9:30	OUTFALL D001	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
8/23/2004 9:30	OUTFALL D001	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/23/2004 9:30	OUTFALL D001	GC-Water	Metolachlor	0.49	ug/L	UJ	0.49	2
8/23/2004 9:30	OUTFALL D001	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
8/23/2004 9:30	OUTFALL D001	GC-Water	Naled	0.78	ug/L	UJ	0.78	3.1
8/23/2004 9:30	OUTFALL D001	GC-Water	Norflurazon	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
8/23/2004 9:30	OUTFALL D001	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.39
8/23/2004 9:30	OUTFALL D001	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	GC-Water	Prometryn	0.15	ug/L	UJ	0.15	0.6
8/23/2004 9:30	OUTFALL D001	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
8/23/2004 9:30	OUTFALL D001	Metals-Water	Aluminum	22	ug/L	U	22	88
8/23/2004 9:30	OUTFALL D001	Metals-Water	Arsenic	6	ug/L	U	6	24
8/23/2004 9:30	OUTFALL D001	Metals-Water	Cadmium	0.052	ug/L	U	0.052	0.2
8/23/2004 9:30	OUTFALL D001	Metals-Water	Calcium	63.8	mg/L		0.05	0.2
8/23/2004 9:30	OUTFALL D001	Metals-Water	Chromium	2	ug/L	U	2	8
8/23/2004 9:30	OUTFALL D001	Metals-Water	Copper	4.5	ug/L		1	4
8/23/2004 9:30	OUTFALL D001	Metals-Water	Iron	125	ug/L		10	40
8/23/2004 9:30	OUTFALL D001	Metals-Water	Lead	0.11	ug/L	I	0.05	0.2
8/23/2004 9:30	OUTFALL D001	Metals-Water	Magnesium	5.3	mg/L		0.02	0.08
8/23/2004 9:30	OUTFALL D001	Metals-Water	Nickel	5.3	ug/L	I	2	8
8/23/2004 9:30	OUTFALL D001	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/23/2004 9:30	OUTFALL D001	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
8/23/2004 9:30	OUTFALL D001	Metals-Water	Zinc	48	ug/L		3	12
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Ammonia-N	0.04	mg N/L		0.01	0.02

8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Color	10	PCU		5	5
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Kjeldahl Nitrogen	0.82	mg N/L		0.06	0.2
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	NO2NO3-N	0.34	mg N/L		0.004	0.01
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	O-Phosphate-P	0.94	mg P/L		0.04	0.1
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Organic Carbon	8.6	mg C/L		1	5
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	TSS	4	mg/L	U	4	16
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Total-P	0.94	mg P/L		0.04	0.12
8/23/2004 9:30	OUTFALL D001	Nutrients-Liquid	Turbidity	0.65	NTU		0.05	0.05
8/23/2004 9:30	OUTFALL D001	Overflow	Oil and Grease	0.69	mg/l	U		
8/23/2004 9:30	OUTFALL D001	VOC-Water	Bromodichloromethane	5.7	ug/L		0.2	1
8/23/2004 9:30	OUTFALL D001	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
8/23/2004 9:30	OUTFALL D001	VOC-Water	Chloroform	96	ug/L		0.2	1
8/23/2004 9:30	OUTFALL D001	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzidine	97	ug/L	U	97	390
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9

8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8

8/25/2004 9:20	OUTFALL DOO1 EFF	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.4
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Atrazine	0.09	ug/L	I	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Chlorpyrifos Methyl	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Diazinon	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Ethoprop	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Fonofos	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Hexazinone	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Metribuzin	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Naled	0.78	ug/L	UJ	0.78	3.1

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Norflurazon	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Parathion Methyl	0.098	ug/L	U	0.098	0.39
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
8/25/2004 9:20	OUTFALL DOO1 EFF	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
8/25/2004 9:20	OUTFALL D001	Metals-Water	Aluminum	22	ug/L	U	22	88
8/25/2004 9:20	OUTFALL D001	Metals-Water	Arsenic	6	ug/L	U	6	24
8/25/2004 9:20	OUTFALL D001	Metals-Water	Cadmium	0.061	ug/L	I	0.025	0.098
8/25/2004 9:20	OUTFALL D001	Metals-Water	Calcium	66.1	mg/L		0.05	0.2
8/25/2004 9:20	OUTFALL D001	Metals-Water	Chromium	2	ug/L	U	2	8
8/25/2004 9:20	OUTFALL D001	Metals-Water	Copper	6.4	ug/L		1	4
8/25/2004 9:20	OUTFALL D001	Metals-Water	Iron	55	ug/L		10	40
8/25/2004 9:20	OUTFALL D001	Metals-Water	Lead	0.058	ug/L	I	0.05	0.2
8/25/2004 9:20	OUTFALL D001	Metals-Water	Magnesium	5.4	mg/L		0.02	0.08
8/25/2004 9:20	OUTFALL D001	Metals-Water	Nickel	6.2	ug/L	I	2	8
8/25/2004 9:20	OUTFALL D001	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/25/2004 9:20	OUTFALL D001	Metals-Water	Silver	0.01	ug/L	U	0.01	0.04
8/25/2004 9:20	OUTFALL D001	Metals-Water	Zinc	29	ug/L		3	12
8/25/2004 9:20	OUTFALL D001	Nutrients-Liquid	Ammonia-N	0.058	mg N/L		0.01	0.02
8/27/2004 9:40	OUTFALL D001	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9

8/27/2004 9:40	OUTFALL D001	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
8/27/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
8/27/2004 9:40	OUTFALL D001	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/27/2004 9:40	OUTFALL D001	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzidine	97	ug/L	U	97	390
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
8/27/2004 9:40	OUTFALL D001	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
8/27/2004 9:40	OUTFALL D001	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
8/27/2004 9:40	OUTFALL D001	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Diethyl phthalate	18	ug/L	UJ	18	74

8/27/2004 9:40	OUTFALL D001	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
8/27/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
8/27/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
8/27/2004 9:40	OUTFALL D001	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
8/27/2004 9:40	OUTFALL D001	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/27/2004 9:40	OUTFALL D001	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/27/2004 9:40	OUTFALL D001	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
8/27/2004 9:40	OUTFALL D001	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
8/27/2004 9:40	OUTFALL D001	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Atrazine	0.055	ug/L	I	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
8/27/2004 9:40	OUTFALL D001	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
8/27/2004 9:40	OUTFALL D001	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Chlorpyrifos Methyl	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Ethoprop	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
8/27/2004 9:40	OUTFALL D001	GC-Water	Fonofos	0.099	ug/L	U	0.099	0.4

8/27/2004 9:40	OUTFALL D001	GC-Water	Hexazinone	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
8/27/2004 9:40	OUTFALL D001	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
8/27/2004 9:40	OUTFALL D001	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
8/27/2004 9:40	OUTFALL D001	GC-Water	Metribuzin	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
8/27/2004 9:40	OUTFALL D001	GC-Water	Naled	0.79	ug/L	UJ	0.79	3.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Norflurazon	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
8/27/2004 9:40	OUTFALL D001	GC-Water	Parathion Methyl	0.099	ug/L	U	0.099	0.4
8/27/2004 9:40	OUTFALL D001	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
8/27/2004 9:40	OUTFALL D001	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
8/27/2004 9:40	OUTFALL D001	Metals-Water	Aluminum	22	ug/L	U	22	88
8/27/2004 9:40	OUTFALL D001	Metals-Water	Arsenic	6	ug/L	U	6	24
8/27/2004 9:40	OUTFALL D001	Metals-Water	Cadmium	0.063	ug/L	I	0.025	0.1
8/27/2004 9:40	OUTFALL D001	Metals-Water	Calcium	65.8	mg/L	A	0.05	0.2
8/27/2004 9:40	OUTFALL D001	Metals-Water	Chromium	2	ug/L	U	2	8
8/27/2004 9:40	OUTFALL D001	Metals-Water	Copper	13.7	ug/L	A	1	4
8/27/2004 9:40	OUTFALL D001	Metals-Water	Iron	116	ug/L	A	10	40
8/27/2004 9:40	OUTFALL D001	Metals-Water	Lead	0.4	ug/L	U	0.4	1.6
8/27/2004 9:40	OUTFALL D001	Metals-Water	Magnesium	5.3	mg/L	A	0.02	0.08
8/27/2004 9:40	OUTFALL D001	Metals-Water	Nickel	5.9	ug/L	I	2	8
8/27/2004 9:40	OUTFALL D001	Metals-Water	Selenium	0.5	ug/L	U	0.5	2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/27/2004 9:40	OUTFALL D001	Metals-Water	Silver	0.014	ug/L	I	0.01	0.04
8/27/2004 9:40	OUTFALL D001	Metals-Water	Zinc	50	ug/L	A	3	12
8/27/2004 9:40	OUTFALL D001	Nutrients-Liquid	Ammonia-N	0.046	mg N/L		0.01	0.0

6/21/04	FIELD BLANK	Not the equipment blank for the composite
6/21/04	D001-COMPOSITE	Toxicity & composite samples for metals and nutrients
6/21/04	OUTFALL D001	Regular outfall sampling
6/23/04	D001-GRAB	Day #3 renewal chemistry for toxicity test
6/25/04	D001-GRAB	Day #5 renewal chemistry for toxicity test

Appendix 5

Typical Values for Selected Parameters in Florida Waters

Percentile Distribution (1617 stations)

CONTROL SITE

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Periphyton Chlorophyll *a* (mg/m^2)	0.31	0.43	0.77	1.04	2.16	2.94	6.45	10.51	17.00	39.51	60.85	-
Hester-Dendy Diversity	0.84	2.12	2.48	2.74	2.88	3.09	3.25	3.40	3.52	3.76	3.90	**3.06**
Hester-Dendy Taxa Richness	6	6.5	9	11.5	13	15	17	21.5	26	29	32	**23**
Dipnet Taxa Richness	9	12	17	20	22	24.5	26	28	31	37	53	**20**
Total Kjeldahl Nitrogen	0.30	0.39	0.56	0.73	0.87	1.00	1.11	1.26	1.49	1.93	2.80	**0.53**
Total Ammonia	0.02	0.02	0.04	0.05	0.06	0.08	0.11	0.14	0.20	0.34	0.60	**0.042**
Nitrate plus Nitrite	0.01	0.01	0.03	0.05	0.07	0.10	0.14	0.20	0.32	0.64	1.05	**0.19**
Total Phosphorus	0.02	0.03	0.05	0.06	0.10	0.13	0.18	0.25	0.39	0.74	1.51	**0.088**
Orthophosphate	0.01	0.01	0.03	0.04	0.05	0.08	0.11	0.17	0.27	0.59	1.37	**0.097**
Turbidity (NTU)	0.60	0.90	1.20	1.45	2.10	2.80	3.60	4.50	6.65	10.45	16.30	**0.95**

TEST SITE

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Periphyton Chlorophyll *a* (mg/m^2)	0.31	0.43	0.77	1.04	2.16	2.94	6.45	10.51	17.00	39.51	60.85	**19**
Hester-Dendy Diversity	0.84	2.12	2.48	2.74	2.88	3.09	3.25	3.40	3.52	3.76	3.90	**3.04**
Hester-Dendy Taxa Richness	6	6.5	9	11.5	13	15	17	21.5	26	29	32	**19**
Dipnet Taxa Richness	9	12	17	20	22	24.5	26	28	31	37	53	**28**
Total Kjeldahl Nitrogen	0.30	0.39	0.56	0.73	0.87	1.00	1.11	1.26	1.49	1.93	2.80	**0.6**
Total Ammonia	0.02	0.02	0.04	0.05	0.06	0.08	0.11	0.14	0.20	0.34	0.60	**0.038**
Nitrate plus Nitrite	0.01	0.01	0.03	0.05	0.07	0.10	0.14	0.20	0.32	0.64	1.05	**0.62**
Total Phosphorus	0.02	0.03	0.05	0.06	0.10	0.13	0.18	0.25	0.39	0.74	1.51	**0.33**
Orthophosphate	0.01	0.01	0.03	0.04	0.05	0.08	0.11	0.17	0.27	0.59	1.37	**0.3**
Turbidity (NTU)	0.60	0.90	1.20	1.45	2.10	2.80	3.60	4.50	6.65	10.45	16.30	**1.5**

Taxa richness and diversity values are for benthic macroinvertebrates. Hester-Dendy sample= benthic macroinvertebrates collected from a standardized multi-plate sampler. Dipnet taxa richness = number of taxa collected in standardized dipnet sweep samples. Diversity = Shannon-Weaver H'. NTU = Nephelometric turbidity units. Adapted from Joe Hand, FDER, personal communication, 1991 (data collected 1980-1989). ND = No data.

Appendix 6

Additional physical, chemical, toxicological and microbiological results



Chronic Screening Bioassay Benchsheet

Sample Identification, Test Conditions and Physical Chemistry

State of Florida
Department of Environmental Protection
Biology Laboratory Chronic Screening Bioassay
Ceriodaphnia dubia Bench Sheet

Sample Source: Mid County Services, Inc.
Address: 2299 Spanish Vista Drive, Palm Harbor
County: Pinellas
NPDES Permit #FL 0034789
Contact/District Lori Pillsbury / Southwest
Start Date 6/22/04 Time 1400 End Date: ~~7/30/04~~ Time 1400
LIMS entry: 7/16/04 Verified: 7.16.04 CAP 6.30.04 CAP
Incubator # 3 Temperature Range: 22.5-24.0°C
Room B246 Temperature Range: 24.5-26.0°C

SOP#: TA07_05
Light Intensity : 50 - 100 ft. candles (yes) no
Photoperiod : 16 light 8 dark - (yes) no
Chamber size : 30 ml Organism Batch #: 22
Sample volume : 20 ml Organism age : <24 hours

Feeding: Daily
0.2 mls
YCT Batch#: 2
P. subcapitata Batch #: 27

Organism: *Ceriodaphnia dubia*

Water Quality Parameters

	Field Chlorine mg/L			Lab Chlorine mg/L			Alkalinity mg/L as $CaCO_3$			Hardness mg/L as $CaCO_3$		
Lab Sample #:	1	2	3	1	2 (A)	3	1	2	3	1	2	3 (A) 004
Sample:	N/A	N/A	N/A	<0.03	~~<0.03~~	<0.03	176	177	183	200	186	~~184~~
Diluent/Control:				<0.03	<0.03	<0.03	89	87	87	100	102	(C) 189 (CAP)
Method:	—	—	—	Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach (B) 189
Measured by:	CAP	CAP	CAP	CAP	DN	CAP	CAP	MF	MF	CAP	MF	MF (C) 102
Verified by:	~~DN~~	~~DN~~	~~DN~~	MF	CAP	MF	MF	CAP	CAP	MF	CAP	CAP

	Conductivity (circle one) umhos-cm / mmhos-cm			Ammonia mg/L			Salinity ‰		
Lab Sample#:	1	2	3	1	2	3	1	2	3
Sample:	950	935	900	<0.017	<0.017	<0.017	<1	<1	<1
Diluent/Control:	175	180	180	<0.017	<0.017	<0.017	<1	<1	<1
Method:	YSI	YSI	YSI	~~Nessler~~	~~Nessler~~ Denver Conv.	~~Nessler~~ Denver Conv.	Conv.	Conv.	Conv.
Measured by:	CAP	DN	DN	DN	DN	DN	MF	MF	CAP
Verified by:	MF	CAP	CAP	MF	MF	MF	CAP	CAP	DN

conv. = conversion based on conductivity and temperature Ammonia method = Denver MF 6/24/04

Sample Received	LAB ID #	LIMS SAMPLE #	LIMS JOB #
Test Day 0	Sample: 1	762484	TLH -2004-06-22-23
Test Day 2	Sample: 2	762991	TLH -2004-06-24-01
Test Day 4	Sample: 3	763654	TLH -2004-06-28-08

Lab Sample #	Collection Date/Time	Received Date/Time
1	6/21/04 / 9:30	6.22.04 / 11:00
2	6/23/04 / 8:00	6.24.04 / 11:00
3	6.25.04 / 8:00	6.28.04 / 12:00

Diluent / Control Batch #:	Days Used
DMW / #27	5
DMW / #22	3

Investigators' signatures
Christa Pierini
Marshall Faircloth
Sarah Pritchard
Deena Nicholson
James Daniels

reviewer Nicole Nellendorf

Comments:
loading error MF 6/23/04
(1) B5 (9) B4
(2) B6 (10) B2
(3) B7
(4) B10
(5) B8
(6) B19
(7) D23
(8) A9
Reported in LIMS as NO Result.
NCR created MF 7/14/04
(Due to problem of receiving 3rd Sample) NCR # 1298

revised 6/14/04 JF

Test Page 1 000009

Facility: Mid County

Begin Test:
Date: 6/22/04 Time: 1400
End Test:
Date: 6/30/04 Time: 1400

State of Florida
Department of Environmental Protection
Biology Laboratory Chronic Screening Bioassay
Ceriodaphnia dubia Bench Sheets - Reproduction
SOP TA07_05

LIMS Sample # 762484 for lab sample #1.

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	total # young	# original organisms	young per adult
Control	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	0	0	0	0	0	10	0
	4	0	2	0	0	0	0	0	0	0	0	2	10	0.2
	5	1	0	3	3	1	3	3	5	2	5	26	10	2.6
	6	4	5	3	3	2	6	6	5	6	10	50	10	5.0
	7	0	8	0	0	0	0	1	12	1	0	22	10	2.2
	8	10	0	0	11	8	9	10	2	11	9	70	10	7.0
	Total	15	15	6	17	11	18	20	24	20	23	169	10	16.9
100%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	0	0	0	0	0	10	0
	4	4	4	4	2	X0	2	4	4	4	2	30	9 (10)	3.0
	5	0	0	0	0	1	0	0	5	08	8	13	9 (10)	1.3
	6	X9	X6	X5	X6	1	4	7	X0	6	X0	41	3 (10)	4.1
	7	1	1	1	1	1	0	0	1	X0	1	0	D.N. 2 (10)	0 error recount
	8	1	1	1	1	1	X0	0	1	1	1	0	1 (10)	0
	Total	11	10	9	8	0	X6	11	9	10	10	84	10	8.4

*Day 0 = equals test initiation day. D.N. recording error
X = dead adult (original organism)

Day	**Counted by:
0	MF
1	JP
2	MF
3	MF
4	MF
5	MF
6	DN
7	DN
8	DN

**Initials-signatures on Chemistry page.

Comments: loaded by MF 6/22/04
Day 5 Rep 9 100% count is 0
MF 6-27-04 - recorded 10 (Rep) in 9 rep space.

sample #3 did not arrive used sample #2 6.26.04

Reported in LIMS as no result (NCR #1298 created) due to problem receiving 3rd sample.

T-test Value no result
T-Table Value See comments df =

reproduction
LOEC = no result
NOEC = See comments

Test acceptability
Mean control reproduction 15/female (yes) no
Third Brood ≥8 in 60% of surviving females (yes) no
Temperature range ≤3°: (yes) no
Control survival ≥80%: (yes) no

revised 1/14/04 JA

000010

000010

Ceriodaphnia dubia Chronic Bioassay Parameters

SOP TA07_05

Sample Source: Ada County

LIMS Sample #: 762474 1 (for lab sample 1)

Start Date: 6/22/04 End Date: 6-30-04

Time: 1400 Time: 1300 → 1400

Comment: Day 4 SAT, 6-26-04. Sample #3 did not arrive. Used Sample # 2 mf 6-26-04 reported in LIMS as no result due to problem receiving 3rd sample (ACZ #1298).

Test Day		Conc.	New Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)	Old Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)
Day 0	sample:	Control	A	8.2	25.8	7.7	175					
	1	100%	A	7.5	25.6	8.2	950					
	Measured by:			CP	CP	CP	CP					
	Recorded by:			CP	CP	CP	CP					
Day 1	sample:	Control	B	8.1	25.3	7.8	175	B	8.2	25.3	7.6	210
	1	100%	B	7.8	25.6	7.7	940	B	8.4	24.7	7.5	930
	Measured by:			CP	CP	CP	CP		CP	CP	CP	CP
	Recorded by:			CP	CP	CP	CP		CP	CP	CP	CP
Day 2	sample:	Control	C	8.1	24.7	5.0	180	C	8.2	25.0	8.2	200
	2	100%	C	7.9	25.0	5.0	935	C	8.4	25.0	8.0	1000
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 3	sample:	Control	D	8.1	24.3	7.2	178	D	8.2	24.2	7.4	185
	2	100%	D	8.0	24.4	7.4	935	D	8.5	24.7	7.2	930
	Measured by:			DN	DN	DN	DN		DN	DN	DN	DN
	Recorded by:			DN	DN	DN	DN		DN	DN	DN	DN
Day 4	sample:	Control	E	8.2	24.0	7.4	178	E	8.0	24.2	7.7	190
	3	100%	E	8.0	24.2	7.7	935	E	8.4	24.2	7.6	1015
	Measured by:			DN	DN	DN	DN		DN	DN	DN	DN
	Recorded by:			DN	DN	DN	DN		DN	DN	DN	DN
Day 5	sample:	Control	F	8.2	24.1	7.7	170	F	8.0	24.4	8.1	195
	3	100%	F	8.0	24.2	7.9	920	F	8.5	24.3	7.9	965
	Measured by:			MF	MF	MF	MF	X	MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF	X	MF	MF	MF	MF
Day 6	sample:	Control	G	8.2	25.8	7.7	180	G	8.1	25.1	7.8	210
	3	100%	G	8.3	~~24.7~~ 7	7.8	900	G	8.6	25.1	8.0	1080
	Measured by: DN			DN	DN	DN	DN		DN	DN	DN	DN
	Recorded by: DN			DN	DN	DN	DN		DN	DN	DN	DN
Day 7	sample:	Control	H	~~7.7~~	25.4	7.5	185	H	8.2	25.0	7.6	190
	3	100%	H	8.3	24.7	7.3	950	H	8.5	24.6	7.4	1065
	Measured by: DN			DN	DN	DN	DN		DN	DN	DN	DN
	Recorded by: DN			DN	DN	DN	DN		DN	DN	DN	DN
Day 8	sample:	Control						I	8.3	25.0	7.6	215
	3	100%						I	8.5	24.2	7.9	1015
	Measured by:								DN	DN	DN	DN
	Recorded by:								DN	DN	DN	DN

Test Rep. = Replicate Circle µmhos-cm or mmhos-cm

revised 6/24/04 mf

(A) T= 25.7 – D.N. 6/28/04

(B) pH = 8.3

Chronic Screening Bioassay Benchsheet

Sample Identification, Test Conditions and Physical Chemistry

State of Florida
Department of Environmental Protection
Biology Laboratory Chronic Screening Bioassay
P. promelas and *M. beryllina* Bench Sheet

Sample Source: Mid County Services, Inc.
Address: 2299 Spanish Vista Drive, Palm Harbor
County: Pinellas
NPDES Permit #FL 0034789
Contact/District Lori Pillsbury / Southwest
Start Date 6/22/04 Time 1400 End Date: 6.29.04 Time 1200
LIMS entry: 7/6/04 MF verified: 7.16.04 CAP
Incubator # 3 Temperature Range: 22.5-24.0°C
Room B246 Temperature Range: 24.5-26.0°C

Feeding: 2 X Daily Artemia Lot:#: 0194/0425 G

P. promelas SOP#: TA07_09 *M. beryllina* SOP#: TA07_14
Light Intensity : 50 - 100 ft. candles - (yes) no
Photoperiod : 16 light 8 dark - (yes) no
Chamber size : 1 L Organism Batch #: 17
Sample volume : 500 ml Organism age : <24h-5 (hours) days
Organism: (*P. promelas*) *M.beryllina* (circle one)

Water Quality Parameters

	Field Chlorine mg/L			Lab Chlorine mg/L			Alkalinity mg/L as $CaCO_3$			Hardness mg/L as $CaCO_3$		
Lab Sample #:	1	2	3	1	2	3	1	2	3	1	2	3
Sample:	N/A	N/A	N/A	<0.03 ~~<0.03~~	<0.03		176	177	183	200	184	189
Diluent/Control:				<0.03	<0.03	<0.03	79	79	~~76~~ 75	99	99	98
Method:	—	—	—	Hach	Hach	Hach	Hach	Hach	Hach (CAP)	Hach	Hach	Hach
Measured by:	CAP	CAP	CAP	CAP	DN	CAP	CAP	CAP	CAP	CAP	CAP	CAP
Verified by:	DN	DN	DN	MF	CAP	MF	MF	DN	DN	MF	DN	DN

(A) 0.04 CAP

	Conductivity (circle one) umhos-cm		mmhos-cm	Ammonia mg/L			Salinity ‰		
Lab Sample#:	1	2	3	1	2	3	1	2	3
Sample:	950	900	920	<0.017	<0.017	<0.017	<1	<1	<1
Diluent/Control:	315	320	315	<0.017	<0.017	<0.017	<1	<1	<1
Method:	YSI	YSI	YSI	~~Denver Conv.~~	~~Denver Conv.~~	~~Denver Conv.~~	Conv.	Conv.	Conv.
Measured by:	CAP	JD	JD	DN	DN	DN	CAP	JD	CAP
Verified by:	DN	CAP	CAP	MF	CAP	CAP	(B) CAP	CAP	DN

(B) DN

conv. = conversion based on conductivity and temperature

Ammonia Method = Denver MF 6/24/04

Sample Received	LAB ID #	LIMS SAMPLE #	LIMS JOB #
Test Day 0	Sample: 1	762484	TLH TLH-200406-22-23
Test Day 2	Sample: 2	762991	TLH TLH-2004-06-24-01
Test Day 4	Sample: 3	763654	TLH TLH-2004-06-28-08

Lab Sample #	Collection Date/Time	Received Date/Time
1	6/21/04 9:30	6/22/04 11:00
2	6.23.04 8:00	6.24.04 11:00
3	6.25.04 8:00	6.28.04 12:00

Diluent / Control Batch #:	Days Used
MHW/#14	5
MHW/#15	2

Investigators' signatures
Christa A. Fiorine
Deanna Nicholson
Marshall Faircloth
James Davis

reviewer Nijs Wellendorf

Comments:
Reported in LIMS as no result due to problem of receiving 3rd sample. NCR #1298 created.

Invalidated → due to lack of 3rd sample until day 6

revised 6/14/04 JF

000009

Chronic Screening Test Survival Benchsheet

Facility: Mid County Services, Inc.

LIMS Sample Number: 76284
(for Lab Sample # 1)

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

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

		TEST DAY							
Concentration	Replicate	0	1	2	3	4	5	6	7
Control	A	10	10	10	10	9	9	9	9
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
100 % sample concentration	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
Control	A	10							
	B	10							
	C	10							
	D	10							
% sample concentration	A	10							
	B	10							
	C	10							
	D	10							
Loaded by: TD	Checked by: [redacted]		CK	MF	MF	DN	MF	DD	JD
Verified by: MF									

Survival	%CV	PMSD
Control	no result	see comments

Survival	Table	Calculated	dF
T-test	no result	see comments	

Comments:
Reported in LIMS as no result, NCR created 7.14.04, #1298.
due to problem receiving 3rd sample

revised 6/24/04 MF

Biology Laboratory Chronic Screening Bioassay Benchsheet
Parameters
***P. promelas* SOP TA_09** *M. beryllina* **SOP TA-07_14**

Sample Source: Mid County
LIMS Sample #: 702454 (for Lab sample #1)
Start Date: 6/22/04 End Date: 6.29.04
Time: 1400 Time: 1200

Test Day ↓		Conc.	New Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)	Salinity ppth	Old Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)	Salinity ppth
Day 0	sample:	Control	A	8.1	24.4	7.7	315	<1						
	1	100%	A	6.9	24.6	8.0	950	<1						
	Measured by:			CAP	CAP	CAP	CAP	CAP						
	Recorded by:			CAP	CAP	CAP	CAP	CAP						
Day 1	sample:	Control	B	8.0	24.5	7.2	325	<1	B	8.1	24.1	7.8	305	<1
	1	100%	B	8.1	24.6	8.0	920	<1	B	7.9	24.7	7.7	915	<1
	Measured by:			CAP	CAP	CAP	CAP	CAP		CAP	CAP	CAP	CAP	CAP
	Recorded by:			CAP	CAP	CAP	CAP	CAP		CAP	CAP	CAP	CAP	CAP
Day 2	sample:	Control	C	7.8	25.0	8.2	320	<1	C	7.9	25.5	7.9	320	<1
	2	100%	C	8.0	25.1	5.1	900	<1	C	7.9	25.6	5.7	910	<1
	Measured by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
	Recorded by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
Day 3	sample:	Control	D	8.1	25.4	7.1	320	<1	D	7.9	25.7	6.3	325	<1
	2	100%	D	7.9	25.3	5.1	910	<1	D	8.1	25.4	6.5	915	<1
	Measured by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
	Recorded by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
Day 4	sample:	Control	A	8.0	24.4	7.9	304	<1	A	7.9	24.5	7.3	313	<1
	3	100%	A	8.0	24.4	7.8	916	<1	A	8.0	24.5	6.9	911	<1
	Measured by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
	Recorded by:			DN	DN	DN	DN	DN		DN	DN	DN	DN	DN
Day 5	sample:	Control	B	7.6	24.6	7.8	300	<1	B	7.9	24.5	7.5	330	<1
	3	100%	B	8.0	24.5	7.0	935	<1	B	8.0	24.5	7.6	930	<1
	Measured by:			MF	MF	MF	MF	MF	X	MF	MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF	MF	X	MF	MF	MF	MF	MF
Day 6	sample:	Control	C	8.0	25.2	7.2	315	<1	C	7.6	25.7	6.5	340	<1
	3	100%	C	8.2	25.3	7.6	920	<1	C	8.1	25.0	6.4	940	<1
	Measured by:			JD	JD	JD	JD	JD		JD	JD	JD	JD	JD
	Recorded by:			JD	JD	JD	JD	JD		JD	JD	JD	JD	JD
Day 7	sample:	Control							D	7.8	25.7	6.4	342	<1
	3	100%							D	8.1	25.3	5.8	1602	<1
	Measured by:									JD	JD	JD	JD	JD
	Recorded by:									JD	JD	JD	JD	JD

Test Rep. = Replicate — Record Salinity < 1 if freshwater — Circle µmhos-cm or mmhos-cm

Comments: 6-26-04 Day 4 Sept # 3 bad, no ammo. used Sept 2 MF 6-26-04
1-27 ~~MF~~ Steven, used old sample ~ result reported in LIMS as NO Result 1-12-05 MF
6-28 ~ used 3rd sample. Day 6 ~ MF 1-12-05

revised 6/24/04 mf

0000011

FL DEP SW Disctrict Chemistry Laboratory Report
Phone # 813-744-6100 DEP CompQAP # 880078 NELAP # E34886

3804 Coconut Palm Dr.
Tampa, FL 33619

Project: MID COUNTY *Type:* PS *Requested by:* PILLSBURY

Site	*Time*	*Date*	*Log*	*Samplers*	*RQ#*	*Notes*
OUTFALL	1040	6/21/2004	30420	CORNWELL, PILLSBURY	2004-06-21-25	
CURLEWT1	1100	6/21/2004	30421	CORNWELL, PILLSBURY	2004-06-21-25	
CURLEWC1	1035	6/21/2004	30422	CORNWELL, PILLSBURY	2004-06-21-25	
FIELD BLANK	1045	6/21/2004	30423	CORNWELL, PILLSBURY	2004-06-21-25	

Code	*parameter*	*units*	*site:OUTFAL*	*site:CURT1*	*site:CURC1*	*site: FB*	**site:**	*site:*	*site:*
29	log#	log	30420	30421	30422	30423			
10	water temp.	deg C							
78	secchi	meters							
94	conductivity	umho/cm							
299	diss.Oxygen	mg/l							
301	diss.Oxygen	%							
406	pH	units							
480	salinity	0/00							
82903	total depth	meters							
31501	t-coliforms	#/100ml	1K	600	720	1K			
31616	f-coliforms	#/100ml	1K	195	50BK	1K			
4192	sample depth	meters							

A denotes mean, B counts unacceptable, J estimate, K less than, L greater than, O data lost, Q out of holding time, T value is less than MDL, U not detected, V analyte detected in blank, Y improperly preserved, Z too numerous to count, D field measurement

Results for NELAP accredited tests contained in this report meet the requirements specified for the National Environmental Laboratory Accreditation Program. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

Appendix 7

Habitat Assessment Field Sheets

DEP-SOP-001/01: Form FD 9000-3 (June 20 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y): 6/21/04	TIME	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Pinellas	LOCATION: Control		FIELD ID/NAME: CURLEW1

RIPARIAN ZONE/STREAM FEATURES

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

FOREST/NATURAL	SILVICULTURE	FIELD/PASTURE	AGRICULTURAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER (SPECIFY)
5				95			

LOCAL WATERSHED EROSION (check box): None ☐ Slight ☐ Moderate ☑ Heavy ☐

LOCAL WATERSHED NPS POLLUTION (check box): No evidence ☐ Slight ☐ Moderate potential ☑ Obvious sources ☐

WIDTH OF RIPARIAN VEGETATION (m) On least buffered side: 4m

LIST & MAP DOMINANT VEGETATION ON BACK

ARTIFICIALLY CHANNELIZED ☐ no ☐ ☐ ☑ (recent, severe some recovery mostly recovered more sinuous)

ARTIFICIALLY IMPOUNDED ☐ yes

HIGH WATER MARK 2.0 + 0.2 = (m above present water level) (present depth in m) (m above bed)

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT ___ m wide

0.5 m/s	0.5 m/s	0.3 m/s
0.2 m deep	0.2 m deep	0.2 m deep

CANOPY COVER %: OPEN: ☑ < 11% SLIGHTLY SHADED (11-45%): ☐ MODERATELY SHADED (46-80%): ☐ HEAVILY SHADED: ☐

SEDIMENT/SUBSTRATE

SEDIMENT ODORS: NORMAL: ☑ SEWAGE: ☐ PETROLEUM: ☐ CHEMICAL: ☐ ANAEROBIC: ☐ OTHER: ☐

SEDIMENT OILS: ABSENT: ☑ SLIGHT: ☐ MODERATE: ☐ PROFUSE: ☐

SEDIMENT DEPOSITION: SLUDGE: ☐ SAND SMOTHERING: NONE MODERATE SLIGHT SEVERE ☐ SILT SMOTHERING: NONE MODERATE SLIGHT SEVERE ☐ OTHER: ___

SUBSTRATE TYPE	% COVERAGE	# TIMES SAMPLED	METHOD	SUBSTRATE TYPES	% COVERAGE	# TIMES SAMPLED	METHOD
WOODY DEBRIS (SNAGS)	1	2	20X	SAND		5	20X
LEAF PACKS OR MATS				MUD/MUCK/SILT			
AQUATIC VEGETATION				OTHER:			
ROCK OR SHELL RUBBLE	5	3	20X	OTHER:			
UNDERCUT BANKS/ROOTS	5	2	20X	DRAW AERIAL VIEW SKETCH OF HABITATS FOUND IN 100 M SECTION			

WATER QUALITY	DEPTH (M):	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):			SECCHI (M):
TOP	0.2	27.47	7.56	6.31	46.3/0.22			VOB
MID-DEPTH								0.2
BOTTOM	0.2							

SYSTEM TYPE: STREAM: 1ST-2ND ORDER ☐ 3RD-4TH ORDER ☐ 5TH – 6TH ORDER ☐ 7TH ORDER OR GREATER ☐ LAKE: ☐ WETLAND: ☐ ESTUARY: ☐ OTHER: ☐

WATER ODORS (CHECK BOX): NORMAL: ☑ SEWAGE: ☐ PETROLEUM: ☐ CHEMICAL: ☐ OTHER: ☐

WATER SURFACE OILS (CHECK BOX): NONE: ☑ SHEEN: ☐ GLOBS: ☐ SLICK: ☐

CLARITY (CHECK BOX): CLEAR: ☑ SLIGHTLY TURBID: ☐ TURBID: ☐ OPAQUE: ☐

COLOR (CHECK BOX): TANNIC: ☐ GREEN (ALGAE): ☐ CLEAR: ☑ OTHER: ☐

WEATHER CONDITIONS/NOTES: Clear, sunny hot

ABUNDANCE:	ABSENT	RARE	COMMON	ABUNDANT
PERIPHYTON	☐	☐	☑	☐
FISH	☐	☐	☑	☐
AQUATIC MACROPHYTES	☐	☑	☐	☐
IRON/SULFUR BACTERIA	☑	☐	☐	☐

SAMPLING TEAM: Peggy Morgan

SIGNATURE:

DATE: 6/21/04

DEP-SOP-001/01: Form FD 9000-5 (December 11, 2001)

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

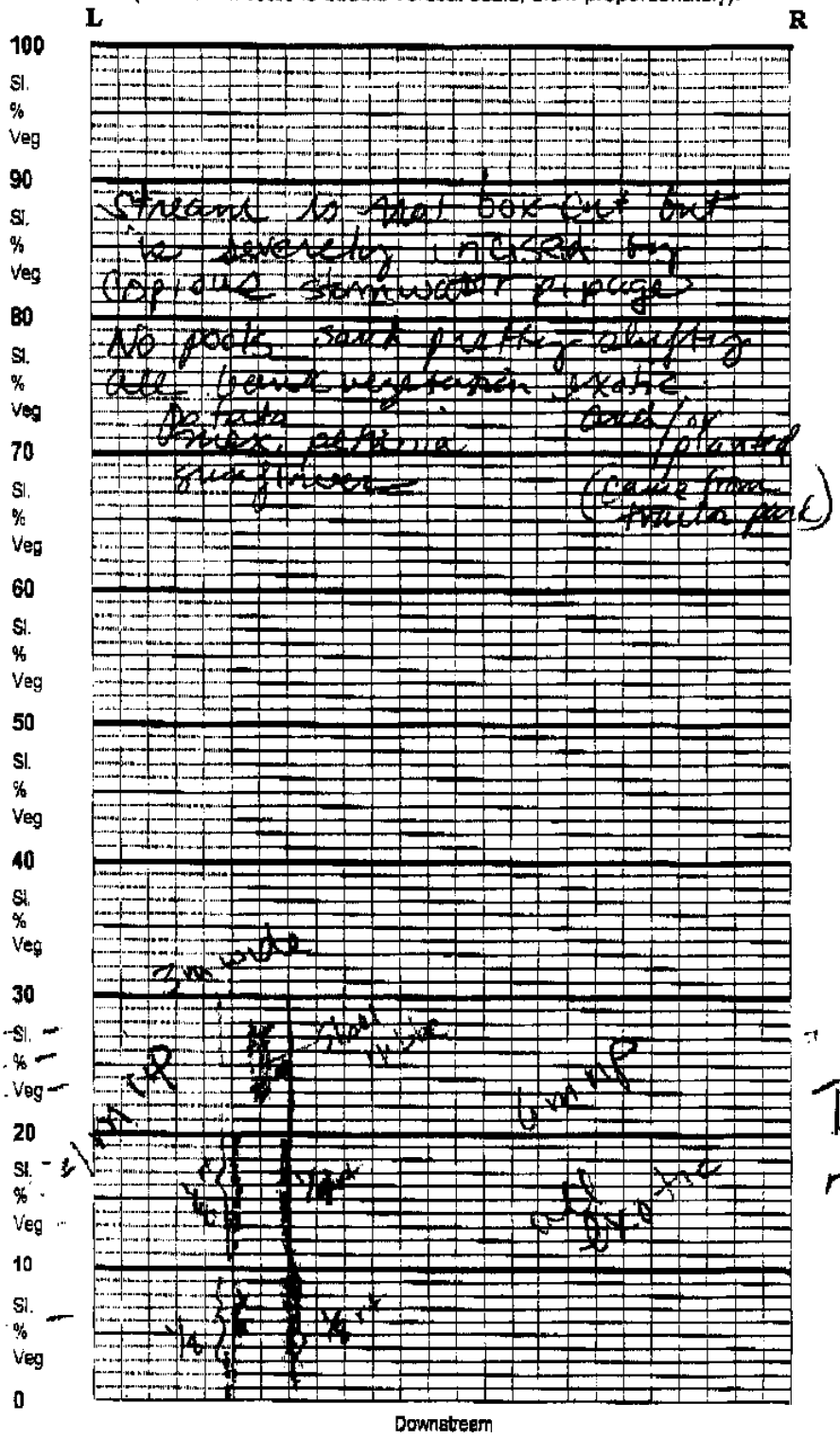
SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE mm/dd/yy: 6/21/04	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Pinellas	LOCATION: Curlew central	FIELD ID/NAME: Curlew C1

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 12	Four or more productive habitats present [snags, tree roots/undercut banks, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 8	Greater than 30% productive habitat present at site 20 19 18 17 16	16% to 30% productive habitat, by aerial extent 15 14 13 12 11	6% to 15% productive habitat 10 9 8 7 6	Less than 5% productive habitat 5 4 3 2 1
Water Velocity 18	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec 20 19 18 17 16	Max. observed at typical transect: 0.1 to 0.25 m/sec 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec 5 4 3 2 1
Habitat Smothering 7 Primary Score 45	Less than 20% of habitats affected by sand or silt accumulation 20 19 18 17 16	20%-50% of habitats affected by sand or silt accumulation 15 14 13 12 11	Smothering of 50%-80% of the habitats with sand or silt, pools shallow, frequent sediment movement 10 9 8 7 6	Smothering of >80% of habitats with sand or silt, as severe problem, pools absent 5 4 3 2 1
Secondary Habitat Components Artificial Channelization 12	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	May have been channelized in the past (>20 yrs), but mostly recovered, fairly good sinuous pattern 15 14 13 12 11	Channelized, somewhat recovered, but > 50% of area affected 10 9 8 7 6	Artificially channelized, box-cut banks, straight, instream habitat highly altered 5 4 3 2 1
Bank Stability Right Bank 7 Left Bank 7	Stable. No evidence of erosion or bank failure. Little potential for future problems. 10 9	Moderately stable. Infrequent or small areas of erosion, mostly healed over. 8 7 6	Moderately unstable. Moderate areas of erosion, high erosion potential during floods. 5 4	Unstable. Many (60%-80%) raw, eroded areas. Obvious bank sloughing. 3 2 1
Riparian Buffer Zone Width Right Bank 3 Left Bank 3	Width of native vegetation (least buffered side) greater than 18 m 10 9	Width of native vegetation (least buffered side) 12 to 18 m 8 7 6	Width of native vegetation 6 to 12 m, human activities still close to system 5 4	Less than 6 m of native buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 2 Left Bank 2 Secondary Score 25	Over 60% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody macrophytes. Normal, expected plant community for given sunlight & habitat conditions 10 9	50% to 60% of riparian zone is vegetated, and/or one class of plants normally expected for the sunlight & habitat conditions is not represented. Some disruption in community evident. 8 7 6	25% to 50% of riparian zone is vegetated, and/or one or two expected classes of plants are not represented. Patches of bare soil or closely cropped vegetation, disruption obvious. 5 4	Less than 25% of stream bank surfaces are vegetated and/or poor plant community (e.g. grass monoculture or exotics) present. Vegetation removed to stubble height of 2 inches or less 3 2 1

70 **TOTAL SCORE**

ANALYSIS DATE: 6/21/04	ANALYST: Peggy Morgan	SIGNATURE:

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (December 11, 2001)
Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Substrates: Code key, draw proportionate habitat abundance.

- Snags 3%, 1%
- Roots/undercut banks 7%
- Leaf Packs (or mats)
- Macrophytes
- rock/shell 5%
- _____
- _____

Velocity:
Note where velocity measures were taken.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed/other notes:

roots 6m
snag 1m
9011.00
Total W = 90
rubble/shell 5m
9015.00
450
50

Prod. hab	1	2	3	4	5
Sweeps (Maj)	10	7	5	4	3
Sweeps (Min)	10	6	5	4	5

DEP-SOP-001/01: Form FD 9000-3 (June 20 2001)
PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		6/21/04		

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Pinellas	Curlew Test	Curkwt1

RIPARIAN ZONE/STREAM FEATURES

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

FOREST/NATURAL	SILVICULTURE	FIELD/PASTURE	AGRICULTURAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER (SPECIFY)
5				95			

LOCAL WATERSHED EROSION (check box): None ☐ Slight ☐ Moderate ☑ Heavy ☐

LOCAL WATERSHED NPS POLLUTION (check box): No evidence ☐ Slight ☐ Moderate potential ☑ Obvious sources ☐

WIDTH OF RIPARIAN VEGETATION (m) On least buffered side: 4 m

LIST & MAP DOMINANT VEGETATION ON BACK

ARTIFICIALLY CHANNELIZED ☐ no ☐ recent, severe ☐ some recovery ☑ mostly recovered

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

HIGH WATER MARK: 2 m − .3 = 2.3
(m above present water level) (present depth in m) (m above bed)

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT ____ m wide

.33 m/s	.32 m/s	.23 m/s
3 sec	3 sec	3 sec
.2 m deep	.25 m deep	.3 m deep

CANOPY COVER %: OPEN: ☑ LIGHTLY SHADED (11-45%): ☐ MODERATELY SHADED (46-80%): ☐ HEAVILY SHADED: ☐

SEDIMENT/SUBSTRATE

SEDIMENT ODORS: NORMAL: ☑ SEWAGE: ☐ PETROLEUM: ☐ CHEMICAL: ☐ ANAEROBIC: ☐ OTHER: ☐

SEDIMENT OILS: ABSENT: ☑ SLIGHT: ☐ MODERATE: ☐ PROFUSE: ☐

SEDIMENT DEPOSITION: SLUDGE: ☐ SAND SMOTHERING: NONE MODERATE SLIGHT SEVERE (circled) SILT SMOTHERING: NONE MODERATE SLIGHT (circled) SEVERE OTHER: ____

SUBSTRATE TYPE	% COVERAGE	# TIMES SAMPLED	METHOD	SUBSTRATE TYPES	% COVERAGE	# TIMES SAMPLED	METHOD
WOODY DEBRIS (SNAGS)	2	4	SCI	SAND		5	SCI
LEAF PACKS OR MATS				MUD/MUCK/SILT			
AQUATIC VEGETATION				OTHER:			
ROCK OR SHELL RUBBLE	10	3	SCI	OTHER:			
UNDERCUT BANKS/ROOTS	2	4	SCI	DRAW AERIAL VIEW SKETCH OF HABITATS FOUND IN 100 M SECTION			

WATER QUALITY	DEPTH (M):	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):			SECCHI (M):
TOP	.3	28.04	7.61	6.67	577 / 0.29			0.3
MID-DEPTH								
BOTTOM								

SYSTEM TYPE: STREAM: 1ST-2ND ORDER ☐ 3RD-4TH ORDER ☐ 5TH – 6TH ORDER ☐ 7TH ORDER OR GREATER ☐ LAKE: ☐ WETLAND: ☐ ESTUARY: ☐ OTHER: ☐ ____

WATER ODORS (CHECK BOX): NORMAL: ☐ SEWAGE: ☐ PETROLEUM: ☐ CHEMICAL: ☐ OTHER: ☐ ____

WATER SURFACE OILS (CHECK BOX): NONE: ☑ SHEEN: ☐ GLOBS: ☐ SLICK: ☐

CLARITY (CHECK BOX): CLEAR: ☑ SLIGHTLY TURBID: ☐ TURBID: ☐ OPAQUE: ☐

COLOR (CHECK BOX): TANNIC: ☐ GREEN (ALGAE): ☐ CLEAR: ☑ OTHER: ☐ ____

WEATHER CONDITIONS/NOTES: sunny, clear hot

ABUNDANCE:	ABSENT	RARE	COMMON	ABUNDANT
PERIPHYTON	☐	☐	☑	☐
FISH	☐	☐	☑	☐
AQUATIC MACROPHYTES	☐	☑	☐	☐
IRON/SULFUR BACTERIA	☑	☐	☐	☐

SAMPLING TEAM: Todd Faikner

SIGNATURE:

DATE: 6/21/04

DEP-SOP-001/01: Form FD 9000-5 (December 11, 2001)

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:

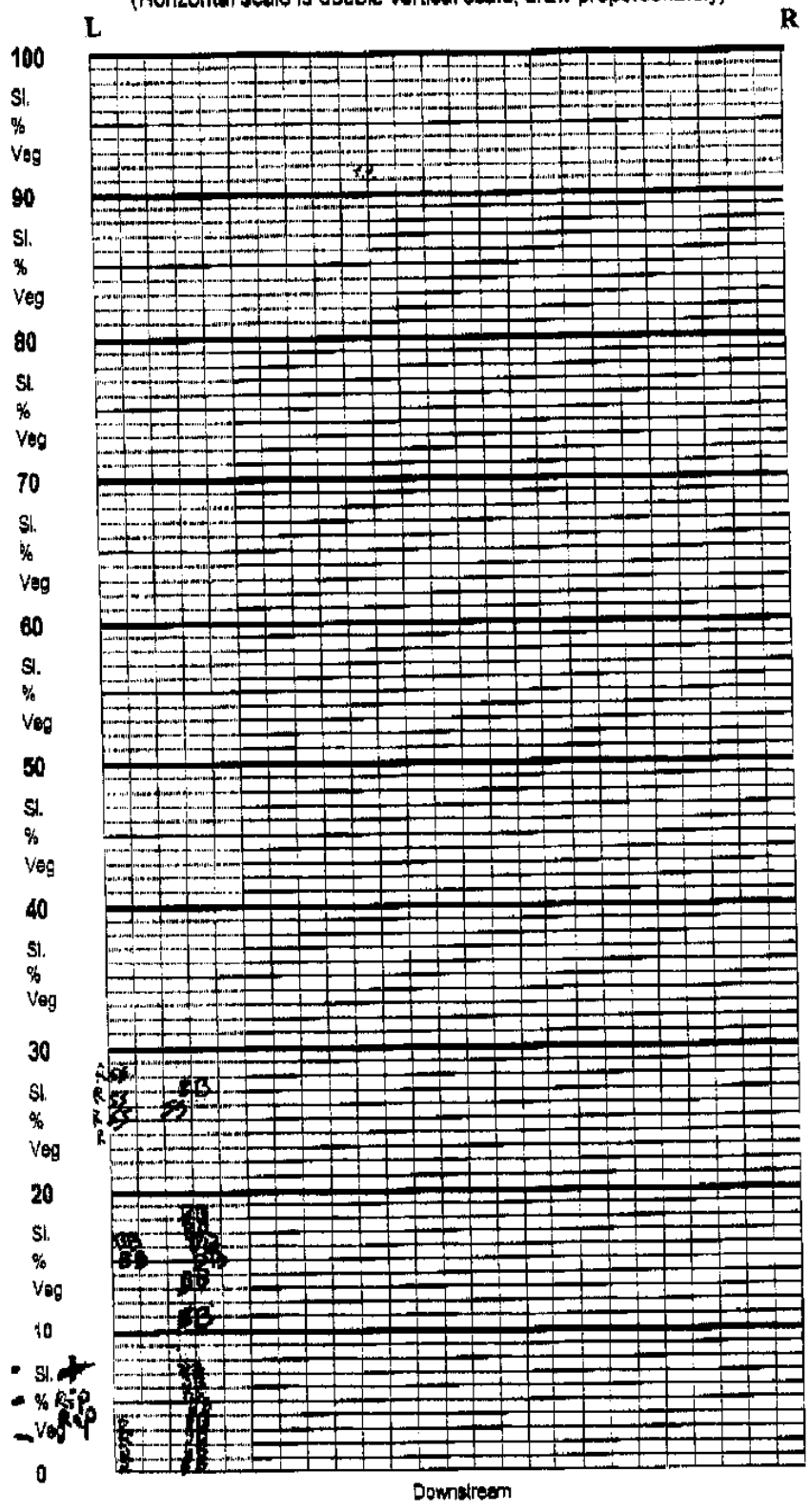
REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Pinellas	Curlew test	CurlewT1

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 12	Four or more productive habitats present (snags, tree roots/undercut banks, aquatic vegetation, leaf packs (partially decayed), rock) 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 9	Greater than 30% productive habitat present at site 20 19 18 17 16	16% to 30% productive habitat, by areal extent 15 14 13 12 11	5% to 15% productive habitat 10 9 8 7 6	Less than 5% productive habitat 5 4 3 2 1
Water Velocity 17	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec 20 19 18 17 16	Max. observed at typical transect: 0.1 to 0.25 m/sec 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec 5 4 3 2 1
Habitat Smothering 16 Primary Score 44	Less than 20% of habitats affected by sand or silt accumulation 20 19 18 17 16	20%-50% of habitats affected by sand or silt accumulation 15 14 13 12 11	Smothering of 50%-80% of the habitats with sand or silt, pools shallow, frequent sediment movement 10 9 8 7 6	Smothering of >80% of habitats with sand or silt, as severe problem, pools absent 5 4 3 2 1
Secondary Habitat Components - Artificial Channelization 11	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	May have been channelized in the past (>20 yrs), but mostly recovered, fairly good sinuous pattern 15 14 13 12 11	Channelized, somewhat recovered, but > 80% of area affected 10 9 8 7 6	Artificially channelized, box-cut banks, straight, instream habitat highly altered 5 4 3 2 1
Bank Stability Right Bank 5 Left Bank 5	Stable. No evidence of erosion or bank failure. Little potential for future problems. 10 9	Moderately stable. Infrequent or small areas of erosion, mostly healed over. 8 7 6	Moderately unstable. Moderate areas of erosion, high erosion potential during floods. 5 4	Unstable. Many (60%-80%) raw, eroded areas. Obvious bank sloughing. 3 2 1
Riparian Buffer Zone Width Right Bank 2 Left Bank 2	Width of native vegetation (least buffered side) greater than 18 m 10 9	Width of native vegetation (least buffered side) 12 to 18 m 8 7 6	Width of native vegetation 6 to 12 m, human activities still close to system 5 4	Less than 6 m of native buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 5 Left Bank 5 Secondary Score 32	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody macrophytes. Normal, expected plant community for given sunlight & habitat conditions 10 9	50% to 80% of riparian zone is vegetated, and/or one class of plants normally expected for the sunlight & habitat conditions is not represented. Some disruption in community evident. 8 7 6	25% to 50% of riparian zone is vegetated, and/or one or two expected classes of plants are not represented. Patches of bare soil or closely cropped vegetation, disruption obvious. 5 4	Less than 25% of stream bank surfaces are vegetated and/or poor plant community (e.g. grass monoculture or exotics) present. Vegetation removed to stubble height of 2 inches or less 3 2

76 TOTAL SCORE

ANALYSIS DATE:	ANALYST:	SIGNATURE:
6/21/04	Todd Filkner	

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (December 11, 2001)
Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Substrates: Code key, draw proportionate habitat abundance.

- [S] Snags
- [R] Roots/undercut banks
- [L] Leaf Packs (or mats)
- [M] Macrophytes
- [B] Boulders/Rocks
- [ ] _____
- [ ] _____

Velocity:
Note where velocity measures were taken.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed/other notes:

Vegetative roots
2 ~ Roots 3'
4 ~ Rocks 5 3 8
2 ~ Snags 2'
5 1 7

Prod. hab	1	2	3	4	5
Sweeps (Maj)	10	7	5	4	3
Sweeps (Min)	10	6	5	4	5

Appendix 8a

Taxa list and density (number/cm^2) for periphyton collected from glass microscope slides incubated for 28 days upstream and downstream of Mid-County WWTP facility discharge, June 21,2004.

	Control Site	Test Site
Bacillariophyta		
Achnanthes sp.	17,791	-
Achnanthes exigua	88,957	13,838
Achnanthes hungarica	-	1,384
Achnanthes lanceolata	9,884	24,908
Achnanthes lanceolata frequentissima	33,606	-
Achnanthes lanceolata rostrata	13,838	-
Achnanthes rupestoides	1,977	-
Bacillariophyceae	1,977	1,384
Capartogramma crucicula	-	2,768
Cocconeis sp.	5,930	-
Cocconeis placentula	189,775	146,680
Cocconeis scutellum	-	2,768
Cyclotella sp.	3,954	-
Cyclotella meneghiniana	-	2,768
Diadesmis confervacea	53,374	67,805
Eunotia sp.	17,791	84,410
Fragilaria capucina	1,977	-
Fragilariaceae	7,907	1,384
Geissleria decussis	-	1,384
Gomphonema sp.	1,977	2,768
Gomphonema parvulum	1,977	4,151
Hippodonta capitata	1,977	-
Navicula sp.	3,954	2,768
Navicula minima	23,722	9,686
Nitzschia sp.	9,884	12,454
Nitzschia amphibia	1,977	4,151
Planothidium delicatulum	7,907	1,384
Pleurosira laevis	-	2,768
Sellaphora sp.	-	1,384
Synedra ulna	19,768	2,768
Chlorophycota		
Characium sp.	5,930	4,151
Chlamydomonas	1,977	-
Chlorella sp.	5,930	6,919
Chlorococcum	5,930	-
Coleochaete sp.	7,907	-
Oedogonium sp.	1,977	-
Protococcus sp.	5,930	-
Scenedesmus abundans	1,977	-
Scenedesmus bijuga	-	1,384
Scenedesmus quadricauda	-	1,384
Stigeoclonium sp.	3,954	2,768
Cyanophycota		
Cyanobium parvum	11,861	-
Cyanothece sp.	1,977	-
Jaaginema sp.	13,838	5,535
Pseudanabaena sp.	-	1,384
Synechocystis sp.	17,791	2,768

Appendix 8b

Taxa list and number of individuals counted for periphyton collected from glass microscope slides incubated for 28 days upstream and downstream of Mid-County WWTP facility discharge, June 21,2004.

	Control Site	Test Site
Bacillariophyta		
Achnanthes sp.	9	-
Achnanthes exigua	45	10
Achnanthes hungarica	-	1
Achnanthes lanceolata	5	18
Achnanthes lanceolata frequentissima	17	-
Achnanthes lanceolata rostrata	7	-
Achnanthes rupestoides	1	-
Bacillariophyceae	1	1
Capartogramma crucicula	-	2
Cocconeis sp.	3	-
Cocconeis placentula	96	106
Cocconeis scutellum	-	2
Cyclotella sp.	2	-
Cyclotella meneghiniana	-	2
Diadesmis confervacea	27	49
Eunotia sp.	9	61
Fragilaria capucina	1	-
Fragilariaceae	4	1
Geissleria decussis	-	1
Gomphonema sp.	1	2
Gomphonema parvulum	1	3
Hippodonta capitata	1	-
Navicula sp.	2	2
Navicula minima	12	7
Nitzschia sp.	5	9
Nitzschia amphibia	1	3
Planothidium delicatulum	4	1
Pleurosira laevis	-	2
Sellaphora sp.	-	1
Synedra ulna	10	2
Chlorophycota		
Characium sp.	3	3
Chlamydomonas	1	-
Chlorella sp.	3	5
Chlorococcum	3	-
Coleochaete sp.	4	-
Oedogonium sp.	1	-
Protococcus sp.	3	-
Scenedesmus abundans	1	-
Scenedesmus bijuga	-	1
Scenedesmus quadricauda	-	1
Stigeoclonium sp.	2	2
Cyanophycota		
Cyanobium parvum	6	-
Cyanothece sp.	1	-
Jaaginema sp.	7	4
Pseudanabaena sp.	-	1
Synechocystis sp.	9	2

Appendix 9a

Benthic macroinvertebrates collected from Hester-Dendy artificial substrates incubated upstream and downstream of the Mid-County WWTP facility for 28 days (June 21,2004). Taxa collected and density (average number of individuals/m^2) rounded to the nearest individual (n = 3 samples). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site	Test Site
Annelida		
Hirudinea		
Glossiphoniidae	3	-
Oligochaeta		
Lumbricidae	3	-
Tubificidae	5	-
Arthropoda		
Crustacea		
Amphipoda		
Hyalella azteca	5	96
Insecta		
Coleoptera		
Microcylloepus pusillus	19	88
Oedemeridae	3	-
Stenelmis sp.	19	318
Diptera		
Chironomus sp.	3	35
Cricotopus bicinctus	8	-
Dicrotendipes modestus	-	17
Dicrotendipes neomodestus	17	959
Paratanytarsus sp.	3	26
Pentaneura inconspicua	69	326
Polypedilum flavum	153	179
Polypedilum illinoense grp.	3	-
Polypedilum scalaenum grp.	142	222
Rheotanytarsus pellucidus	-	17
Stenochironomus sp.	290	2,321
Tanytarsus sp. C Epler	3	137
Thienemanniella sp.	3	-
Odonata		
Argia sedula	24	98
Enallagma sp.	3	-
Enallagma cardenium	-	62
Trichoptera		
Cheumatopsyche sp.	262	278
Mollusca		
Gastropoda		
Ferrissia sp.	49	179
Hebetancylus excentricus	-	869
Physella sp.	-	16
Melanoides sp.	25	-

Appendix 9b

Benthic macroinvertebrates collected from Hester-Dendy artificial substrates incubated upstream and downstream of the Mid-County WWTP facility for 28 days (June 21,2004). Taxa collected and total number of individuals counted (n = 3 samples).

	Control Site	Test Site
Annelida		
Hirudinea		
Glossiphoniidae	1	-
Oligochaeta		
Lumbricidae	1	-
Tubificidae	2	-
Arthropoda		
Crustacea		
Amphipoda		
Hyalella azteca	2	12
Insecta		
Coleoptera		
Microcylloepus pusillus	7	11
Oedemeridae	1	-
Stenelmis sp.	7	40
Diptera		
Chironomidae	13	39
Chironomus sp.	1	4
Cricotopus bicinctus	3	-
Dicrotendipes modestus	-	2
Dicrotendipes neomodestus	6	112
Paratanytarsus sp.	1	3
Pentaneura inconspicua	25	38
Polypedilum flavum	55	21
Polypedilum illinoense grp.	1	-
Polypedilum scalaenum grp.	51	26
Rheotanytarsus pellucidus	-	2
Stenochironomus sp.	104	271
Tanytarsus sp. C Epler	1	16
Thienemanniella sp.	1	-
Odonata		
Argia sp.	6	3
Argia sedula	3	8
Coenagrionidae	-	2
Enallagma sp.	1	5
Enallagma cardenium	-	2
Trichoptera		
Cheumatopsyche sp.	94	21
Undetermined	5	14
Mollusca		
Gastropoda		
Ancylidae	16	73
Ferrissia sp.	2	10
Hebetancylus excentricus	-	49
Physella sp.	-	2
Undetermined	1	-
Melanoides sp.	9	-

Appendix 10a

Qualitative benthic macroinvertebrate collections (n = 20 discrete dipnet sweeps) upstream and downstream of Mid-County WWTP facility (June 21,2004). Taxa list and number of individuals counted (collapsed). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site	Test Site
Annelida		
Hirudinea		
Helobdella triserialis	-	1
Oligochaeta		
Allonais pectinata	-	4
Dero digitata complex	1	-
Dero pectinata	-	1
Enchytraeidae	-	1
Lumbricidae	-	1
Lumbriculus variegatus	-	1
Nais communis complex	1	1
Slavina appendiculata	2	-
Tubificidae	2	-
Arthropoda		
Crustacea		
Amphipoda		
Hyalella azteca	17	8
Insecta		
Coleoptera		
Microcylloepus pusillus	7	15
Stenelmis sp.	4	4
Diptera		
Ablabesmyia mallochi	-	1
Cryptochironomus	1	-
Dicrotendipes neomodestus	2	2
Drosophilidae	-	1
Pentaneura inconspicua	-	4
Polypedilum flavum	2	1
Polypedilum illinoense grp.	-	2
Polypedilum scalaenum grp.	8	-
Stenochironomus	-	2
Tanytarsus sp. C Epler	2	2
Lepidoptera		
Pyralidae	-	1
Odonata		
Argia sp.	-	1
Argia sedula	6	-
Enallagma sp.	-	3
Enallagma cardenium	3	-
Trichoptera		
Cheumatopsyche sp.	4	4
Hydroptilidae	-	2
Mollusca		
Bivalvia		
Corbicula fluminea	8	-
Gastropoda		
Hebetancylus excentricus	-	4
Melanoides sp.	3	3
Physella sp.	1	2
Planorbidae	1	1
Pyrgophorus platyrachis	28	32

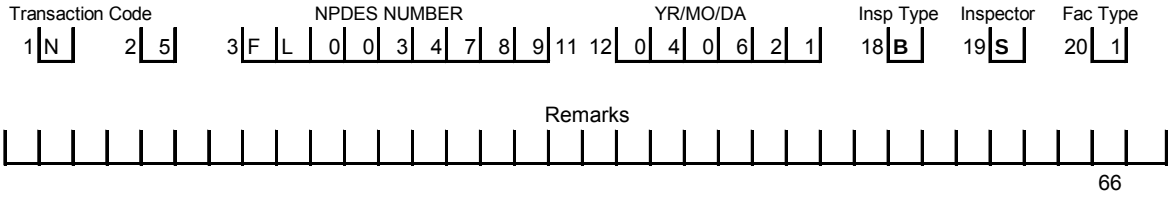
Appendix 10b

Qualitative benthic macroinvertebrate collections (n = 20 discrete dipnet sweeps) upstream and downstream of Mid-County WWTP facility (June 21,2004). Taxa list and number of individuals counted.

	Control Site	Test Site
Annelida		
Hirudinea		
Helobdella triserialis	-	1
Oligochaeta		
Allonais pectinata	-	4
Dero digitata complex	1	-
Dero pectinata	-	1
Enchytraeidae	-	1
Lumbricidae	-	1
Nais communis complex	1	1
Slavina appendiculata	2	-
Tubificidae	2	-
Lumbriculus variegatus	-	1
Arthropoda		
Crustacea		
Amphipoda		
Hyalella azteca	17	8
Insecta		
Coleoptera		
Elmidae	-	3
Microcylloepus pusillus	7	13
Stenelmis sp.	4	3
Diptera		
Ablabesmyia mallochi	-	1
Chironomidae	2	-
Cryptochironomus sp.	1	-
Dicrotendipes neomodestus	2	2
Drosophilidae	-	1
Pentaneura inconspicua	-	4
Polypedilum flavum	2	1
Polypedilum illinoense grp.	-	2
Polypedilum scalaenum grp.	6	-
Stenochironomus sp.	-	2
Tanytarsus sp. C Epler	2	2
Lepidoptera		
Pyralidae	-	1
Odonata		
Argia sp.	4	1
Argia sedula	1	-
Coenagrionidae	2	-
Enallagma sp.	-	3
Enallagma cardenium	2	-
Trichoptera		
Cheumatopsyche sp.	4	3
Hydroptilidae	-	1
Undetermined	-	2
Mollusca		
Bivalvia		
Bivalvia	1	-
Corbicula fluminea	7	-
Gastropoda		
Ancylidae	-	1
Hebetancylus excentricus	-	3
Physella sp.	1	2
Planorbidae	1	1
Hydrobiidae	5	13
Melanoides sp.	3	3
Pyrgophorus platyrachis	23	19

The Bioassay of Mid-County Services WWTP effluent sampled on 6/21/04, NPDES #FL0034789.

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



The Priority Pollutants Analysis for Bioassay of Mid-County Services WWTP effluent sampled on 6/21/04, NPDES #FL0034789.

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

