

Biological Assessment of

St. Augustine WWTP #1

St. Johns County

NPDES #FL0021938

Sampled February 20, 2003

September 2003

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:	St. Augustine WWTP #1
County:	St. Johns
NPDES Number:	FL0021938
Permit Expiration:	May 3, 2003

Toxics Sampling Inspection **(XSI)**

Date Sampled: February 20, 2003

Results: Atrazine was detected in the effluent (0.18 μg/L) at a level above the minimum detection limit but below the practical quantitation limit. Six metals were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria. The metals iron, lead and silver were detected in the effluent at levels greater than the practical quantitation limit; aluminum, copper and zinc were detected in the effluent at levels greater than the minimum detection limit but below the practical quantitation limit.

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: February 20, 2003

Results: The effluent sample was not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during the 96-hour acute static-renewal bioassays.

Water Quality Inspection **(WQI)**

Date Sampled: February 20, 2003

Results: Fecal and total coliform bacteria were detected in the effluent and the receiving water at levels that did not exceed Class III Marine Water Quality Criteria or the facility's permit limits.

Impact Bioassessment Inspection **(IBI)**

Date Sampled: February 20, 2003

Results: The effluent discharge pipe was found to be broken during the inspection. An estimated 50% of the effluent was discharged into the adjacent salt marsh instead of the designated receiving water, the Matanzas River.

Stations were established along an effluent dilution gradient established using rhodamine dye injections into the effluent stream. The percent organic content in sediments was greater at Stations

1 and 4 near the outfall, almost doubling from stations unexposed to effluent (Stations 3 and 6, <1% effluent in overlying water) to those nearest the outfall (10-30% exposure to effluent). In concert with the greater percent organic content close to the outfall, the discontinuity layer was deeper (~25-50 mm) at unexposed stations than near the outfall (<12 mm). The discontinuity layer is a measurement of the depth of oxygen penetration in sediments, marking the point where the sediments shift to reducing, anoxic conditions.

A total of four hydrocarbons were detected in sediment samples from the two stations closest to the outfall (Stations 1 and 4) at levels above the minimum detection limit but below the practical quantitation limit (benzo(a)pyrene, benzo(b)fluoranthene, chrysene, pyrene). Two hydrocarbons (chrsene, benzo(a)pyrene) exceeded the Threshold Effects Level values (TEL) for organic constituents. Cadmium, chromium, copper, lead, nickel and silver were detected in sediment samples. There was no consistent pattern of enrichment in metals content with distance from the outfall and no metals exceeded TEL values.

Quantitative measures of benthic macroinvertebrate assemblages from ponar samples showed no sign of degradation related to the facility's effluent despite the presence of potentially toxic hydrocarbons in the sediments. It is not known if this result is related to the release of approximately half of the effluent before the point of discharge.

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 City of St. Augustine WWTP #1 facility is located in St. Johns County, Florida (Appendix 1). This facility is a complete mix activated sludge wastewater treatment facility. The plant consists of two 1.2 million gallon aeration basins with paddle-type surface aerators and two 0.76 million gallon secondary clarifiers with chlorine disinfection and dechlorination (see Facility Summary in Appendix 2). The discharge pipe leaves the facility and crosses ~300 meters of saltmarsh before discharging into a Class III Marine receiving water, the Matanzas River. The design flow of the wastewater system is 5.0 million gallons per day (MGD), with a permitted maximum flow of 4.95 MGD. The actual mean flow during this survey was 4.218 MGD (per St. Augustine WWTP #1 personnel, 4 August 2003).

Surface Water Quality Criteria and facility permit limits are listed in Table 1. According to the facility's monthly discharge monitoring reports, during 2002 the plant exceeded the monthly total Kjeldahl nitrogen limit (April 2002), exceeded the Class III Criteria for mercury (January 2002), and failed a toxicity bioassay (May 2002, see also Appendix 2). The facility exceeded the permit limit for flow during 2002 and the permit was modified to increase the permitted capacity to 4.95 MGD from 4.5 MGD. The discharge pipe was found to be broken during the February 2003 inspection and approximately 50% of the effluent stream was discharging into the saltmarsh (J. Jackson, FDEP Bureau of Laboratories, personal observation, see below).

Methods

The purpose of this investigation was to determine the discharger's effects on the biota of the receiving waters. Chemical and biological comparisons were made along a gradient of effluent exposure. Exposure to effluent was estimated using rhodamine dye measurements of effluent mixing during incoming and outgoing tides. The outfall pipe was located <5 m from the edge of the saltmarsh in approximately 1 m of water at low tide. Stations were located at approximate exposures of 10-30%, 3-5%, and 0% effluent. The wide range in estimated effluent exposure near the outfall is related to the variation in dilution rate observed over a tidal cycle during the dye study on February 19, 2003. Because of the strong flow of the Matanzas River, the dye plume moved approximately upstream and downstream from the outfall during incoming and outgoing tides, remaining within <10 m of the shore and close-in shallow sandbars. At slack water for approximately an hour, the effluent plume formed a more concentrated pool (20-30% effluent) in a 5-10 m circle around the outfall.

Details of measurements and data interpretation are given in Appendix 3. All field and laboratory 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: Patrick O'Connor and Sharon Evans (FDEP Northeast District), and Kenneth Espy, Joy Jackson, Sally Levings, and Cheryl Swanson (FDEP Central Laboratory in Tallahassee). The report was reviewed by District representatives and the Point Source Studies Review Committee (Wayne Magley, Chuck Ziegmont and Michael Tanski).

Results and Discussion

- Specific chemical results from the effluent sample are reported in Table 1 and a complete list of chemical analytes can be reviewed in Appendix 4. The metals aluminum, copper, iron, lead, silver and zinc were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria (FAC 62-302) and the facility's permit limits. Aluminum, copper and zinc were present at levels above the minimum detection limit, but below the practical quantitation limit; iron, lead and silver were present at levels above the practical quantitation limit. The herbicide atrazine was detected in the effluent at a level that was above the minimum detection limit but below the practical quantitation level. This level of atrazine has not been associated with toxic effects in the EPA ECOTOX database. Effluent pH (Standard Units) and dissolved oxygen (mg/L) did not exceed Class III Marine Water Quality Criteria (62-302 F.A.C.) or facility permit limits.
- The effluent sample was not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during 96-hour acute static-renewal bioassays (See Table 1 for percent mortality and Appendix 7 for bioassay bench sheets).
- The St. Augustine WWTP #1 is located at the edge of an intact section of saltmarsh approximately 300-meters wide on the west bank of the Class III Marine Matanzas River (Appendix 1). The effluent pipe crosses the saltmarsh in an excavated ditch and discharges into the Matanzas River <5 m from the edge of the saltmarsh and at approximately 1 m depth at low tide.

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

St. Augustine WWTP #1	Class III Marine Criteria	Effluent Limits	Effluent Samples	Site 3	Site 2	Site 1 Outfall	Site 4 Outfall	Site 5	Site 6
Exposure to effluent									
Percent effluent in overlying site water	-	-	-	0%	3-5%	10-30%	10-30%	3-5%	0%
Organic Constituents (ug/L)									
Atrazine	-	-	0.18 I	-	-	-	-	-	-
Metals (ug/L unless otherwise noted, Class III Criteria are less than or equal to the value given)									
Aluminum	1500	-	14 I	-	-	-	-	-	-
Arsenic	50	-	3 U	-	-	-	-	-	-
Cadmium	9.3	-	0.025 U	-	-	-	-	-	-
Calcium (mg/L)	-	-	71.8	-	-	-	-	-	-
Chromium	-	-	2 U	-	-	-	-	-	-
Copper	3.7	-	1.8 I	-	-	-	-	-	-
Iron	300	-	98	-	-	-	-	-	-
Lead	8.5	-	0.47	-	-	-	-	-	-
Magnesium (mg/L)	-	-	24.7	-	-	-	-	-	-
Nickel	8.3	-	2 U	-	-	-	-	-	-
Selenium	71	-	1 U	-	-	-	-	-	-
Silver	2.3	Report	0.24	-	-	-	-	-	-
Zinc	86	-	13 I	-	-	-	-	-	-
Nutrients (mg/L)									
Ortho-phosphate	-	Report	1.2	0.009 I	0.011	0.012	0.13	0.012	0.007 I
Total Phosphorus	-	Report	1.4	0.048 I	0.05 I	0.055 I	0.049 I	0.05 I	0.046 I
Total Ammonia	-	Report	1.6	0.042	0.01 U	0.031	0.01 U	0.034	0.015 I
Un-ionized Ammonia	-	-	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Nitrate and Nitrite	-	Report	5.5	0.007 I	0.012	0.012	0.004 U	0.036	0.007 I
Total Kjeldahl Nitrogen	-	28 s	3.1	0.37	0.35	0.36	0.36	0.35	0.33
Organic Nitrogen	-	Report	1.5	0.328	0.35	0.329	0.36	0.316	0.315
Total Nitrogen	-	Report	8.6	0.377	0.362	0.372	0.364	0.386	0.337
General Physical and Chemical Parameters									
Dissolved Oxygen (mg/L)	≥ 4.0 s	5.1 s	5.9	8.1	7.9	7.8	8.3	8.3	8.4
pH (SU)	6.5-8.5 s	6.5-8.5 s	6.8	8.1	8.1	8.1	8.1	8.1	8.1
Conductivity (μmhos/cm)	-	Report	1271	-	-	-	-	-	-
Salinity (ppt))	-	-	0.64	33.3	33	32.7	33.2	33.1	33.6
Temperature (°C)	-	-	19.7	14.9	15	15.1	15.6	15.1	14.8
Total Suspended Solids (mg/L)	-	60 s	4 U	29	35	40	26	25	32
Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01 s	<0.03	-	-	-	-	-	-
CBOD, 5 day (mg/L)	-	60 s	-	-	-	-	-	-	-
BOD, 5 day (mg/L)	-	-	2.1	2 K	2 K	2 K	2 K	2 K	2 K
Chlorophyll *a* (ug/L)	-	-	-	0.96 U	0.85 U	0.96 U	0.85 U	0.85 U	0.85 U
Phaeophytin (ug/L)	-	-	-	0.96 U	0.85 U	0.96 U	0.85 U	0.85 U	0.85 U
Oils and Greases (mg/L)	5	-	0.55 U	-	-	-	-	-	-
Flow (MGD)	-	4.95 a		-	-	-	-	-	-
Algal growth potential (AGP, mg dry weight/L)									
AGP	-	-	258 A	0.4	0.8	1.0	1.5	0.6	0.3
Predicted AGP (TSIN:OP = 9.2)	-	-	270 + 54	-	-	-	-	-	-
Toxicity (96-hour static renewal acute bioassay, percent mortality in 100% effluent)									
Bioassay - Water flea	-	0%	0%	-	-	-	-	-	-
Bioassay - Fish	-	0%	0%	-	-	-	-	-	-
Microbiology (Number of counts/100ml)									
Fecal Coliforms	800 s	800 s	30 B	4 B	14 AB	10 B	4 K	43 AB	4 K
Total Coliforms	2400 s	-	580	23 AB	4 K	4 K	8 B	96	4 K

a - Annual average
A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range
I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit
K - Actual value is known to be less than value given
U - Material analyzed for but not detected; value reported is the minimum detection limit
s - Single sample

The Intracoastal Waterway is offshore in the main channel and the river is ~400m wide at the outfall location. Intact saltmarsh extends several hundred meters north and south of the outfall on the west bank of the river.

- Rhodamine dye was fed into the effluent pipe to read ~100-135 ppb at the end of the effluent pipe during an approximate 6 hr continuous injection (see Appendix 3 for a complete methods description). The dye plume was followed for several hours during the ebbing tide on February 19, 2003 and for <1 hour on the flowing tide. Stations were located along the effluent plume at the same depth both on the incoming and outgoing tides (i.e. "up" and "downstream" of the outfall approximately parallel to the saltmarsh edge). This placement ensured that the stations reflected the pattern of effluent flow during the dye study. Stations were placed at effluent dilutions of approximately 10-30% effluent (Stations 1 and 4), 3-5% effluent (Stations 2 and 5) and 0% effluent (Stations 3 and 6; see Appendices 1 and 3 for additional details).
- The break in the effluent pipe discovered during the inspection may have altered exposure to effluent at sampling sites in unpredictable ways over time; effluent diluted by ~50% site water flowed from the ditch containing the outfall pipe at low tide (J. Jackson and P. O'Connor, personal observations). The effluent discharged in the saltmarsh may have had effects on the exposed saltmarsh, but possible effects were not measured in this inspection.
- Dissolved oxygen (DO as mg/L) and pH (Standard Units) at the sampling stations complied with Class III Marine Water Quality Criteria (Table 1, 62-302.530 F.A.C.).
- Fecal and total coliform bacteria were detected in the effluent and receiving waters at levels that did not exceed Class III Marine Water Quality Criteria or facility permit limits (See Table 1 for results and Appendix 7 for laboratory worksheets).
- The effluent total nitrogen concentration was 8.6 mg/L and total phosphorus was 1.4 mg/L (Table 1). Effluent total Kjeldahl nitrogen was 3.1 mg/L, which complied with facility permit limits. There was no detectable enrichment of the receiving waters from the

Table 2. Sediment charcterisitcs, presence of organic constituents and metals content

St. Augustine WWTP #1	Site 3	Site 2	Site 1 (outfall)	Site 4 (outfall)	Site 5	Site 6
Effluent exposure						
Percent effluent in overlying water	0%	3-5%	10-30%	10-30%	3-5%	0%
Particle size distribution (percent volume <2mm, unless otherwise noted)						
<0.063 mm	32.2	34.5	42.0	35.2	29.5 A	25.3
0.063-0.125 mm	31.4	27.1	20.7	16.4	20.0 A	24.2
0.125-0.25 mm	34.4	31.9	23.0	22.5	38.5 A	43.5
0.25-0.5	1.95	6.46	6.72	10.7	6.9 A	4.47
0.5-2.0 mm	0.0027	0.02	7.56	15.2	5.06 A	2.49
>2.0 mm (percent dry weight)	1.7	0.64	0.07	0.95	0.032 A	0.031
Organic content and depth of the discontinuity layer						
Organic content as percent of dry weight	2.7	3.5	4.1	5.4	2.6	2.5
Depth of discontinuity layer in mm (N)	25.2 (6)	24.8 (5)	11.3 (6)	8.8 (4)	24.7 (6)	51.0 (6)
Organic constituents (ug/kg)						
Benzo(a)pyrene	94 U	100 U	100 U	150 * I	88 U	85 U
Benzo(b)floranthene	94 U	100 U	120 I	160 I	88 U	85 U
Chrysene	94 U	100 U	110 * I	140 * I	88 U	85 U
Pyrene	94 U	100 U	100 U	110 I	88 U	85 U
Metals (mg/kg)						
Cadmium	0.088	0.089	0.092	0.11	0.068 A	0.07
Chromium	13.9	15.6	16	14.2	10.2 A	7.35
Copper	3.7	3.6	5.6	3.8	2.4 A	1.6 I
Lead	6.2	7.5	8.9	6.3	4.5 A	3.6
Nickel	2.91	3.3	3.44	3.02	2.18 A	1.33
Silver	0.037 I	0.046 I	0.061	0.049 I	0.039 I	0.025 I

* Exceeds the threshold effects level from the Sediment Quality Guidelines (MacDonald et al. 1984). Chrysene=88.8 ug/kg, benzo(a)pyrene=108 ug/kg.

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

I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit

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

N - Number of measurements

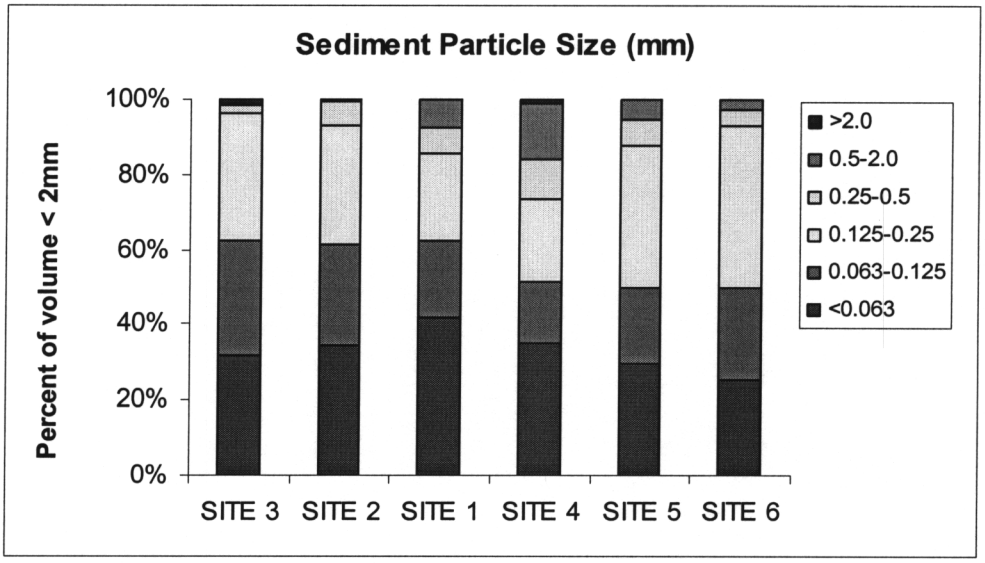


Figure 1. Sediment particle size at sampling stations, St. Augustine WWTP #1. Outfall is located between stations 1 and 4.

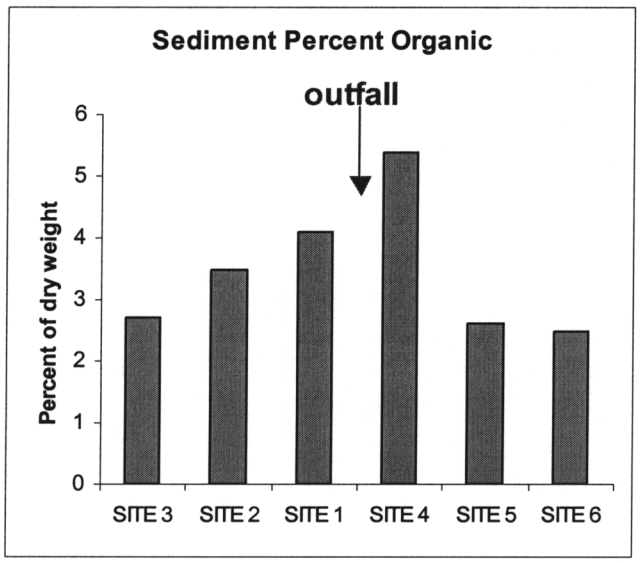


Figure 2. Percent organic content of sediments from sampling stations, St. Augustine WWTP #1. Outfall is located between stations 1 and 4.

facility's effluent. Levels of most nutrients at sampling stations were similar to those in the lowest 5-20% of typical Florida estuaries, although nitrate + nitrite levels were typical of approximately 50% of Florida estuaries at most stations (Appendix 6).

- 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 10.0 mg dry weight/L represent a "problem" threshold for marine receiving waters, implying nutrient enrichment. The AGP value for the effluent sample was 258 mg dry weight/L and was within the range expected for the nutrient content of the effluent (Table 1). AGP values for the receiving water sampling stations were <2 mg dry weight/L and were slightly higher at the stations with effluent exposure than at the two

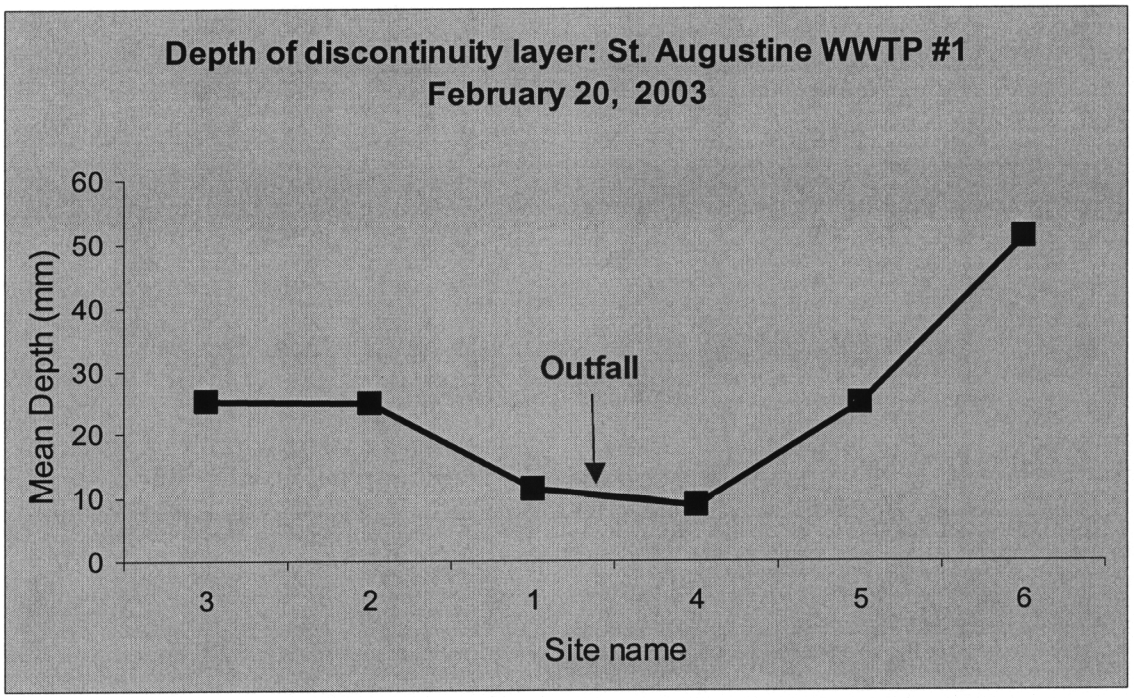


Figure 3. Depth of the discontinuity layer at sampling stations, St. Augustine WWTP #1. Outfall is located between stations 1 and 4.

unexposed stations (Table 1). The AGP values of the receiving water samples were not above the suggested problem threshold.

- Chlorophyll *a* was not detected in the receiving water at any station (Table 1).
- Sediments were collected at all stations for determination of grain size and percent organic content. Sediments were sand/silt/clay mixtures, with a greater percentage of both large and small particle sizes near the outfall (Stations 1 and 4, Table 2, Figure 1). The percent organic content was also greatest nearer the outfall, with almost twice the organic content (~4-5% of sediment dry weight) at sites near the outfall than at unexposed sites (~2.5%, Table 2, Figure 2).
- The discontinuity layer is a measurement of the depth of oxygen penetration in sediments, marking the point in the sediments where the balance between reduction and oxygenation reactions shifts to reducing, anoxic conditions. This layer is usually marked with a strong color shift from light to black sediments, and can easily be measured in core samples. Organic loading tends to shift the discontinuity layer upwards in the sediments, reducing the area where benthic macroinvertebrates can persist. In concert with the greater percentage organic content close to the outfall, the discontinuity layer was much shallower near the outfall (<12 mm) than at unexposed sites (~25-50 mm, Table 2, Figure3).
- Sediment content of organic constituents and metals was measured. Metals were extracted using total recoverable metals techniques. However, because it was not possible to use perchloric and hydrofluoric acid digestions, results are underestimates of sediment metal content. Data were compared to Florida Sediment Quality Guidelines (MacDonald 1994). A total of four hydrocarbons were detected at the two stations closest to the outfall (Stations 1 and 4, Table 2, Appendix 4). Chrysene (both stations) and benzo(a)pyrene (station 4 only) exceeded the Threshold Effects Level (TEL) but were below the Probable Effects Level (PEL) identified in the sediment quality guidelines while Benzo(b)floranthene and pyrene were detected at levels below the TEL. TEL values are the sediment content of a contaminant that has been associated with toxic effects in 15% of toxicity test data used to generate the Florida Sediment Quality Guidelines. Cadmium, chromium, copper, lead, nickel and silver were detected in sediment samples. There was no consistent

Table 3. Macroinvertebrate Ponar Samples - Quantitative

St. Augustine WWTP #1	3	2	1 (outfall)	4 (outfall)	5	6
Effluent exposure						
Percent effluent in overlying water	0%	3-5%	10-30%	10-30%	3-5%	0%
Summary Statistics						
Shannon-Weaver Diversity	2.37	3.23	3.52	2.74	3.27	3.42
Number of Taxa	49	39	64	81	71	61
Percent Dominant Taxon	45.5	28.4	34.5	61.9	39.9	41.0
Dominant Taxon (name)	*Mediomastus ambiseta*	*M. ambiseta*	*Streblospio* sp.	*M. ambiseta*	*M. ambiseta*	*M. ambiseta*
Dominant Taxon (group)	Polychaeta	Polychaeta	Polychaeta	Polychaeta	Polychaeta	Polychaeta
Number of samples	5	5	5	5	5	5
Density (number/m2)	15,442	8,950	10,475	29,108	18,825	12,708
Total Number of Individuals	1853	1074	1257	3493	2259	1535
Community Composition: Percent of total						
Amphipoda	0.8	1.9	2.2	6.4	1.9	2.3
Bivalvia	4.5	17.1	19.3	11.6	16.2	7.5
Coleoptera	0.0	0.0	0.2	0.0	0.0	0.0
Decapoda	0.0	0.2	0.6	0.2	0.1	0.0
Gastropoda	1.1	0.4	0.4	0.7	0.9	0.3
Isopoda	0.1	0.0	0.2	0.0	0.1	0.1
Oligochaeta	0.2	0.1	0.9	0.8	6.8	5.7
Polychaeta	91.3	72.0	70.0	76.3	72.2	80.9
Functional Feeding Groups: Percent of total						
Burrowing Deposit Feeders	52.7	36.9	25.7	67.3	52.1	55.6
Predators	2.6	8.5	5.7	4.3	2.5	4.1
Surface Deposit Feeders	19.2	19.2	24.8	6.0	14.0	16.4
Suspension Feeders	23.2	33.1	39.6	15.5	27.7	20.5
Scavengers	0.7	0.9	1.3	3.4	1.3	1.2
Scrapers	0.9	0.3	0.4	0.6	0.6	0.3
Shredders	0.1	0.0	0.0	0.0	0.0	0.0
Other	0.4	0.9	1.0	2.8	1.1	1.0
Unknown	0.3	0.2	1.4	0.2	0.7	0.9

pattern of enrichment in metals content with distance from the outfall and no metal exceeded TEL values.

- Quantitative measures of benthic macroinvertebrate assemblages from ponar samples showed no sign of degradation related to the facility's effluent (Table 3, Appendix 10). The macroinvertebrate assemblage consisted predominantly of polychaetes at all stations (>70% of the total), with smaller numbers of bivalves, gastropods, crustaceans and oligochaetes. Shannon-Weaver diversity varied among stations, but showed no pattern with exposure to effluent.

Summary

The metals aluminum, copper, iron, lead, silver and zinc were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria (FAC 62-302) and facility permit limits. The herbicide atrazine was detected in the effluent at a level that was above the minimum detection limit but below the practical quantitation level. The effluent sample was not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during 96-hour acute static renewal bioassays. Fecal and total coliform bacteria were detected in the effluent and receiving waters at levels that did not exceed Class III Water Quality Criteria and facility permit limits.

There was no detectable effect of the effluent on nutrient concentration in the receiving water. The AGP values of the receiving water samples were not above the suggested problem threshold. Chlorophyll *a* was not detected in the receiving water at any station.

Sediments were sand/silt/clay mixtures, with a greater percentage of both large and small particle sizes near the outfall. The percent organic content was greater towards the outfall, almost doubling from

unexposed stations to those nearest to the outfall. In concert with the greater percent organic content close to the outfall, the discontinuity layer was deeper (~25-50 mm) at unexposed stations than near the outfall (<12 mm). A total of four hydrocarbons were detected at the two stations closest to the outfall. Chrysene (both Stations 1 and 4) and benzo(a)pyrene (station 4 only) exceeded the TEL identified in the sediment quality guidelines. There was no consistent pattern of enrichment in metals content with distance from the outfall and no metal exceeded TEL values, but results are based on total recoverable metals extractions, which may have underestimated actual metal content. Quantitative measures of benthic macroinvertebrate assemblages from ponar samples showed no sign of degradation related to the facility's effluent. The effluent may have had biological effects on the saltmarsh exposed to the effluent, but those were not measured in this inspection.

These non-significant biological results may have been related to the estimated 50% reduction in effluent exposure caused by the break in the effluent pipe. Additional monitoring should focus on nearfield effects of the effluent, given the rapid dilution rate found in the dye study. Repair of the damaged effluent pipe should be a priority for the facility.

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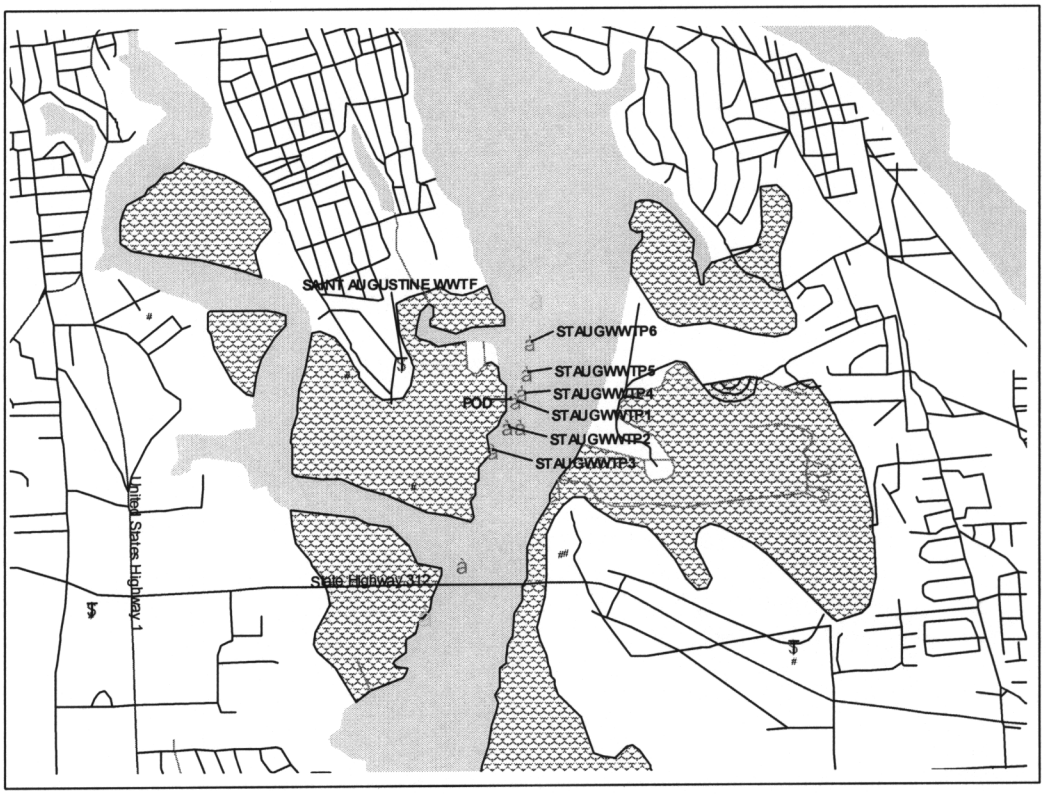
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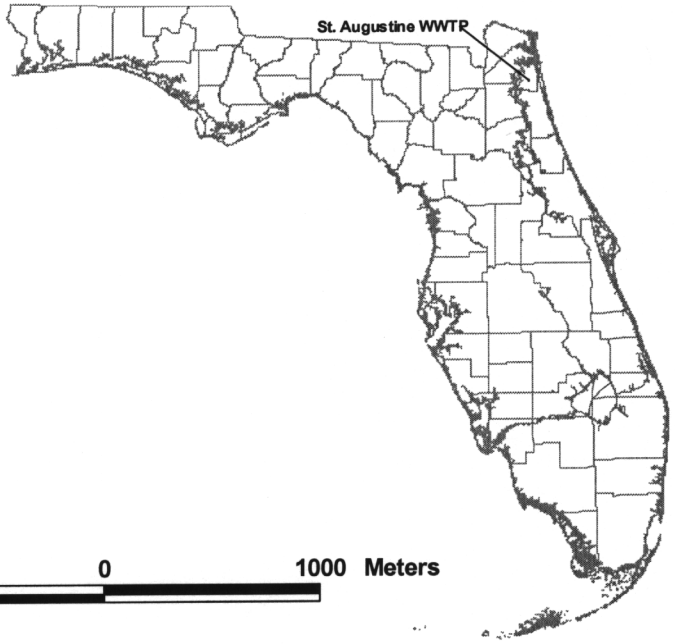
Appendices

- Appendix 1. Map of facility
- Appendix 2. Facility summary
- Appendix 3. Measurements and data interpretation
- Appendix 4. Chemical analyses of effluent and receiving water.
- Appendix 5. Typical values for selected parameters in Florida estuaries
- Appendix 6. Additional physical, chemical, toxicological and microbiological results
- Appendix 7. Habitat Assessment field sheets
- Appendix 8a. Ponar samples: Taxa list and macroinvertebrate density (average number of individuals per m^2)
- Appendix 8b. Ponar samples: Taxa list and total number of macroinvertebrates counted

Appendix 1

St. Augustine WWTP







1000 0 1000 Meters

Fifth Year Inspection Program
FDEP- Bureau of Laboratories
Created on: July 30, 2003
Created by: Julie Espy

Appendix 2

Facility Summary

Facility Name: St. Augustine WWTF # 1

Physical Address: 501 Riberia Street, St. Augustine, FL	**NPDES Permit No.:** FL0021938 Expiration Date: May 3, 2003 (Application is pending)	**Prepared By:** Kathleen H. Gerard
County: St. Johns **District:** Northeast District	**State Permit No.:** FL0021938 Expiration Date:	**Facility Type**: 5.0 MGD complete mix activated sludge

Function of Facility: Wastewater treatment

Sampling Location: Latitude of 29 degrees, 51 minutes, 57 seconds North.
Longitude of 81 degrees, 18 minutes, 19 seconds West.

Description of treatment process:
This facility is a 5.0 MGD complete mix activated sludge wastewater treatment facility consisting of two 1.2 Mgal aeration basins (with paddle type surface aerators), two 0.76 Mgal secondary clarifiers, with chlorine disinfection and dechlorination. The permitted capacity was revised in October 2002 and is limited to 4.95 MGD. An application for permit is pending and a new permit will be issued soon.

Receiving Waters: The facility discharges to the Matanzas River (ICW) Class III marine water at discharge location D001 which is approximately 150 feet from shore and discharges at a depth of approximately 3.5 feet.	Classification: Class III marine water

Temperature (C):	Design Flow: 5.0 MGD
pH (SU):	Mean Flow:
Conductivity (umhos/cm):	Flow During Survey:
Dissolved Oxygen (mg/L):	Total Residual Chlorine (mg/L):

Discharge is: Continuous

Facility Mixing Zone Details:

List Effluent Limits: (These limits were in effect during the sampling event on February 20, 2003.

Parameter and Units	Limit	Describe special permit conditions and permit modifications:
Flow	Annual Average: 4.95 mgd	Continuous Monitoring
CBOD5	Annual Average: 20.0 mg/L Monthly Average: 25.0 mg/L Maximum: 60.0 mg/L	Sample Weekly
CBOD5 % removal	Monthly Average: 85%	Calculate
TSS	Annual Average: 20 mg/L Monthly Average: 30 mg/L Maximum: 60 mg/L	Sample Weekly
TSS % removal	Monthly Average: 85%	Calculate
Total Kjeldahl Nitrogen	Annual Average: 14.0 mg/L Monthly Average: 17.5 mg/L Maximum: 28.0 mg/L	Sample Weekly

Nitrogen, Total as N	Maximum: Report mg/L	Sample Quarterly
Nitrogen, Organic, Total (as N)	Maximum: Report mg/L	Sample Quarterly
Nitrogen, Ammonia, Total (as N)	Maximum: Report mg/L	Sample Quarterly
NO2 + NO3, Total 1 DET, as N	Maximum: Report mg/L	Sample Quarterly
Dissolved Oxygen (DO)	Minimum 5.1 mg/L	Daily Sample
pH	Maximum: 8.5 std. units Minimum: 6.5 std. units	Continuous
Coliform, Fecal	Annual Average: 200 #/100 mL Monthly Geo. Mn: 200 #/100 mL Maximum: 800 #/100mL	Weekly Sample
Total Residual Chlorine (for disinfection)	Minimum: 0.5 mg/L	Continuous Monitoring
Total Residual Chlorine (for dechlorination)	Maximum: 0.01 mg/L	Daily Sample
Silver, Total Recoverable	Maximum: Report ug/L	Monthly Sample
Mercury, Total Recoverable	Maximum: Report ug/L	Monthly Sample
Chloro-dibromo-methane	Maximum: Report ug/L	Monthly Sample
Dichloro-bromo-methane	Maximum: Report ug/L	Monthly Sample
Phosphorus, Total as P	Maximum: Report ug/L	Quarterly Sample
Phosphorus, Tot. Orthophosphate as P	Maximum: Report ug/L	Quarterly Sample
Whole Effluent Toxicity		Once every six months - See Permit Condition I.A.8 & 9.
<u>Stream Monitoring:</u> Dissolved oxygen, pH, temperature, conductivity, CBOD5, NH3-N, TKN, NO2-N and NO3-N, Phosphorous, Ortho-phosphorous, and Chlorophyll A, salinity, Secchi Disk, alkalinity, color, chloride, tide stage	Report	Semi-annual to coincide with the quarterly nutrient monitoring. See Permit Condition I.A.10. Metered parameters (DO, pH, temperature, and conductivity, salinity) shall be sampled at the surface, mid-depth, and bottom. Grab samples at mid-depth for the other

Describe special permit conditions and permit modifications:

An application for permit will be issued soon. A more definitive test procedure will be required for mercury. The test procedure that is currently used by the WWTF has a detection limit higher than the permit limit. Therefore, compliance for this parameter cannot be determined using the present analytical methods.

Description of permitted outfall: Discharge location DOO1 to the Matanzas River (ICW) (Class III marine waters) is approximately 150 feet from shore and discharges at a depth of approximately 3.5 feet.

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

The facility exceeded the permit limit for flow during 2002. The permit was modified during October 2002 to increase the permitted capacity of the facility to 4.95 MGD. The City of St. Augustine has a very aggressive program to reduce infiltration/inflow into the system.

A sample result that was recorded on the April 2002 DMR for the monthly average TKN was 19.4 mg/L The sample exceeded the permit limit for the monthly average TKN of 17.5 mg/L.

A sample that was recorded on the January 2002 DMR for mercury was 0.6 ug/L. This exceeded the limit of less than or equal to 0.025ug/L for Class III marine waters as stated in the State Water Quality Standards.

Describe previous impact bioassessments, WQBEL's, and previous or current enforcement actions:

A bioassay that was taken by WWTF personnel during May 2002 was toxic. This was probably due to a high concentration of ammonia in the sample.

The facility exceeded it permitted capacity for flow during 2002. This issued was addressed in a meeting at the Department with the City during October 2002. The City of St. Augustine has an aggressive program to reduce I/I. Also, the City has several other options to reduce flow.

A new operation permit will be issued soon.

Discuss DMR trends to prior data; is trend improving or declining:

Flow recorded on the DMRs is decreasing due to relocation of the flow monitoring device in the reaeration unit that is located just before the effluent weir. Flow is also being reduced due to the aggressive elimination of I/I from the collection system.

Additional Information: Department personnel stated that the outfall line was broken during the sampling event. Dye testing was performed to confirm this. During the inspection, plant personnel were requested to inspect the outfall pipe line on a quarterly basis. Plant personnel were informed of the broken line.

Appendix 3

Measurements and data interpretation

(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 limits and the practical quantitation limits 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

Acute screening toxicity bioassays were performed on the effluent sample using the water flea, *Ceriodaphnia dubia,* and the fish, *Cyprinella leedsi* following FDEP SOPs TA07_01 and TA07_02. 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 sampling stations 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) Establishment of Sampling Stations

Chemical and biological comparisons were made among six sampling stations located on an effluent dilution gradient leading from close to the outfall where dilution was minimal (two stations) to an area of intermediate dilution (two stations) and an area unexposed to effluent (two control stations).

Rhodamine dye was continuously fed into the effluent stream and tracked in the receiving water using a fluorometer. Rhodamine is a conservative tracer and may be used to track dilution to <1% of effluent. Background readings of fluorescence were taken to correct for interference in the water column. Dye concentration was adjusted to give approximately 100-135 ppb at the end of the discharge pipe. The dye study was conducted on 19 February 2003. Dye injection began on an incoming tide (predicted high tide of 5.16 ft) and continued through slack water until low tide (predicted low tide of –0.71 ft, approximately 6 hr). A boat was used to continuously pump receiving water through the fluorometer, recording the dye concentration at the end of the outfall and tracking the path of the effluent plume. Weather conditions were good during collections with light winds and sunny skies.

Replicate stations were then established after measurement of effluent dilution in the receiving water. Because the effluent plume moved approximately parallel to the shoreline, stations were selected in the same depth of water at similar distances from the shoreline. Effluent dilution varied depending on tidal flow and was more rapid during periods of strong flow, so estimates of the exposure of stations to effluent were made based on the range of values recorded. Two stations (1 and 4) were located close to the outfall after the effluent entered the Matanzas River at estimated effluent exposures of 10-30%. One station was located "upstream" of the flowing tide while the other was located "downstream" of the flowing tide (see Appendix 1 for map). Stations 2 and 5 were located at estimated effluent dilutions of 1-3%, one "upstream" and one "downstream". Stations 3 and 6 were located "upstream" and "downstream" where no effluent was detected in the water column during the dye study.

(6) Algal Growth Potential (AGP)

The effluent and water samples from the six stations were autoclaved, filtered (0.45μm), inoculated with the unicellular green alga, *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum,* USEPA 2002*)* or *Dunaliella tertiolecta,* depending upon the salinity of the water sample. Samples were 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 10.0 mg dry weight/L represents a "problem" threshold for marine 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 in a low salinity sample under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al.* 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation

with an error of ± 20%. When the ratio of nitrogen to phosphorus (N:P) is less than 10:1, nitrogen limitation of algal production is likely. When the N:P ratio is 20:1 or greater, phosphorus limitation is likely (EPA-822-B-00-002). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may be a violation of 62-302.530(62) F.A.C.. Expected AGP cannot be calculated for marine samples incubated with *Dunaliella*.

(7) Sediment Sampling

Sediment cores were collected with a stainless steel core tube at all sampling stations following QA Rule SOP FS4000. Samples were analyzed for metals, organic constituents, pesticides, organic content and sediment grain size in the laboratory following FDEP SOPs.

When cores were collected, the core was split and the depth of the discontinuity layer was measured to the nearest mm with a ruler. The discontinuity layer, where present, is a line at varying depths in the sediment where the sediments become black and anoxic. Where it can be measured, the discontinuity layer provides an estimate of the oxygenation depth of sediments. For example, in polluted or highly organic sediments, the discontinuity layer is usually <10 mm deep while in well-aerated sediments, it may be >10 cm.

(8) Algal Phytoplankton

Methods: Phytoplankton were sampled using a 1 L grab sample (QA Rule SOP FS7100).

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..

(9) Benthic Macroinvertebrate Assemblages

Methods: Benthic macroinvertebrates were collected using a petite ponar dredge following QA Rule SOP FS7530. Five replicate ponar samples were collected at each station and sieved through a 500 μm mesh. Benthic macroinvertebrates were sorted and identified to the lowest practical taxonomic level, usually species (FDEP SOP IZ06).

Taxa richness: Taxa richness is the number of distinct macroinvertebrate taxa present in a sample. Decreases in taxa richness related to a facility's effluent may constitute 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..

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.). 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..

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 petite ponar samples at test and control sites constitutes a violation of 62-302.530(11) F.A.C..

(10) 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 analyses of effluent, receiving water and sediments

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,3,5-Trinitrobenzene	3.9	ug/L	UJ	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1,4-Naphthoquinone	19	ug/L	UJ	19	78
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	1-Naphthylamine	9.7	ug/L	UJ	9.7	39
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4-Dimethylphenol	49	ug/L	U	49	190
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4-Dinitrophenol	15	ug/L	UJ	15	58
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Naphthylamine	9.7	ug/L	UJ	9.7	39
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	2-Picoline	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4,4'-DDD	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4,4'-DDE	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4,4'-DDT	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Aminobiphenyl	3.9	ug/L	UJ	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Nitroaniline	0.97	ug/L	UJ	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	4-Nitrophenol	15	ug/L	U	15	58
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Acenaphthene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Acenaphthylene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Acetophenone	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Aldrin	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Aniline	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzidine	97	ug/L	UJ	97	390
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Benzyl alcohol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Bis(2-chloroethoxy)methane	0.97	ug/L	UJ	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Chrysene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dibenzofuran	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dieldrin	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dimethyl phthalate	49	ug/L	U	49	190
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Dinoseb	3.9	ug/L	U	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Diphenylamine	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Endosulfan I	3.9	ug/L	U	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Endosulfan II	3.9	ug/L	U	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Endrin	1.5	ug/L	UJ	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Endrin aldehyde	3.9	ug/L	U	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Fluorene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Heptachlor	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Hexachloroethane	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Hexachloropropene	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Isophorone	0.97	ug/L	UJ	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Isosafrole	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Methapyrilene	3.9	ug/L	UJ	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosodimethylamine	1.9	ug/L	UJ	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Naphthalene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Nitrobenzene	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Nitroquinoline-1-oxide	19	ug/L	UJ	19	78
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pentachloroethane	49	ug/L	U	49	190
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Phenacetin	3.9	ug/L	U	3.9	12
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Phenanthrene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Phenol	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pyrene	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Pyridine	3.9	ug/L	U	3.9	16
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	Safrole	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	alpha-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	beta-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	delta-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	gamma-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	m,p-Cresols	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	o-Cresol	1.9	ug/L	U	1.9	7.8
2/20/03	BLANK - EQUIP	BNA-Water	W-EQPMT-BK	o-Toluidine	0.97	ug/L	U	0.97	3.9
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Alachlor	0.58	ug/L	U	0.58	2.32
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Aldrin	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Alpha-BHC	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Ametryn	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Atrazine	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Beta-BHC	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Bromacil	0.19	ug/L	U	0.19	0.76
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Butylate	0.19	ug/L	U	0.19	0.76
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Chlordane	0.19	ug/L	UJ	0.19	0.76
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	DDD-p,p'	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	DDE-p,p'	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	DDT-p,p'	0.029	ug/L	UJ	0.029	0.116
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Delta-BHC	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Diazinon	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Dieldrin	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Endosulfan I	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Endosulfan II	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Endosulfan Sulfate	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Endrin	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Endrin Aldehyde	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Ethion	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Ethoprop	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Fonofos	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Gamma-BHC	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Heptachlor	0.0096	ug/L	U	0.0096	0.0384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Heptachlor Epoxide	0.019	ug/L	U	0.019	0.076
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Hexazinone	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Malathion	0.14	ug/L	U	0.14	0.56
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Methoxychlor	0.048	ug/L	U	0.048	0.192

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Metolachlor	0.48	ug/L	U	0.48	1.92
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Metribuzin	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Mevinphos	0.19	ug/L	UJ	0.19	0.76
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Naled	0.77	ug/L	U	0.77	3.08
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Norflurazon	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Parathion Methyl	0.096	ug/L	U	0.096	0.384
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Phorate	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Prometryn	0.14	ug/L	U	0.14	0.56
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Simazine	0.048	ug/L	U	0.048	0.192
2/20/03	BLANK - EQUIP	GC-Water	W-EQPMT-BK	Toxaphene	0.72	ug/L	U	0.72	2.88
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	TSS	4	mg/L	U	4	16
2/20/03	BLANK - EQUIP	Nutrients-Liquid	W-EQPMT-BK	Total-P	0.015	mg P/L	U	0.015	0.04
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,3,5-Trinitrobenzene	3.9	ug/L	UJ	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1,4-Naphthoquinone	19	ug/L	UJ	19	78
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	1-Naphthylamine	9.7	ug/L	UJ	9.7	39
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4-Dimethylphenol	49	ug/L	U	49	190
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4-Dinitrophenol	15	ug/L	UJ	15	58
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Naphthylamine	9.7	ug/L	UJ	9.7	39
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	2-Picoline	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4,4'-DDD	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4,4'-DDE	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4,4'-DDT	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Aminobiphenyl	3.9	ug/L	UJ	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Nitroaniline	0.97	ug/L	UJ	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	4-Nitrophenol	15	ug/L	U	15	58
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Acenaphthene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Acenaphthylene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Acetophenone	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Aldrin	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Aniline	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzidine	97	ug/L	UJ	97	390
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Benzyl alcohol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Bis(2-chloroethoxy)methane	0.97	ug/L	UJ	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Chrysene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dibenzofuran	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dieldrin	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dimethyl phthalate	49	ug/L	U	49	190
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Dinoseb	3.9	ug/L	U	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Diphenylamine	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Endosulfan I	3.9	ug/L	U	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Endosulfan II	3.9	ug/L	U	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Endrin	1.5	ug/L	UJ	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Endrin aldehyde	3.9	ug/L	U	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Fluoranthene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Fluorene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Heptachlor	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Hexachloroethane	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Hexachloropropene	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Isophorone	0.97	ug/L	UJ	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Isosafrole	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Methapyrilene	3.9	ug/L	UJ	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosodimethylamine	1.9	ug/L	UJ	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Naphthalene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Nitrobenzene	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Nitroquinoline-1-oxide	19	ug/L	UJ	19	78
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pentachloroethane	49	ug/L	U	49	190
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Phenacetin	3.9	ug/L	U	3.9	12
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Phenanthrene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Phenol	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pyrene	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Pyridine	3.9	ug/L	U	3.9	16
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	Safrole	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	alpha-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	beta-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	delta-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	gamma-BHC	1.5	ug/L	U	1.5	5.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	m,p-Cresols	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	o-Cresol	1.9	ug/L	U	1.9	7.8
2/20/03	CORE BLANK	BNA-Water	W-FIELD-BK	o-Toluidine	0.97	ug/L	U	0.97	3.9
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Alachlor	0.57	ug/L	U	0.57	2.28
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Aldrin	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Alpha-BHC	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Ametryn	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Atrazine	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Beta-BHC	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Bromacil	0.19	ug/L	U	0.19	0.76
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Butylate	0.19	ug/L	U	0.19	0.76
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Chlordane	0.19	ug/L	UJ	0.19	0.76
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	DDD-p,p'	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	DDE-p,p'	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	DDT-p,p'	0.028	ug/L	UJ	0.028	0.112
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Delta-BHC	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Diazinon	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Dieldrin	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Endosulfan I	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Endosulfan II	0.019	ug/L	U	0.019	0.076

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Endosulfan Sulfate	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Endrin	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Endrin Aldehyde	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Ethion	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Ethoprop	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Fonofos	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Gamma-BHC	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Heptachlor	0.0095	ug/L	U	0.0095	0.038
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Heptachlor Epoxide	0.019	ug/L	U	0.019	0.076
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Hexazinone	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Malathion	0.14	ug/L	U	0.14	0.56
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Methoxychlor	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Metolachlor	0.48	ug/L	U	0.48	1.92
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Metribuzin	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Mevinphos	0.19	ug/L	UJ	0.19	0.76
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Naled	0.76	ug/L	U	0.76	3.04
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Norflurazon	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Parathion Methyl	0.095	ug/L	U	0.095	0.38
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Phorate	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Prometryn	0.14	ug/L	U	0.14	0.56
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Simazine	0.048	ug/L	U	0.048	0.192
2/20/03	CORE BLANK	GC-Water	W-FIELD-BK	Toxaphene	0.71	ug/L	U	0.71	2.84
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Aluminum	10	ug/L	U	10	40
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Arsenic	3	ug/L	U	3	12
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Cadmium	0.025	ug/L	U	0.025	0.1
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Calcium	0.34	mg/L		0.05	0.2
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Chromium	2	ug/L	U	2	8
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Copper	0.75	ug/L	U	0.75	3
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Iron	7	ug/L	U	7	28
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Lead	0.1	ug/L	U	0.1	0.4
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Magnesium	0.92	mg/L		0.01	0.04
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Nickel	2	ug/L	U	2	8
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Selenium	1	ug/L	U	1	4
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Silver	0.02	ug/L	U	0.02	0.08
2/20/03	CORE BLANK	Metals-Water	W-FIELD-BK	Zinc	5.6	ug/L	U	4	16
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,2,4,5-Tetrachlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,3,5-Trinitrobenzene	3.8	ug/L	UJ	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1,4-Naphthoquinone	19	ug/L	UJ	19	76
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	1-Naphthylamine	9.5	ug/L	UJ	9.5	38
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4,5-Trichlorophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4-Dimethylphenol	48	ug/L	U	48	190
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4-Dinitrophenol	14	ug/L	UJ	14	57

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,6-Dichlorophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Acetylaminofluorene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Methylnaphthalene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Naphthylamine	9.5	ug/L	UJ	9.5	38
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Nitroaniline	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	2-Picoline	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	76
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	3-Methylcholanthrene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	3-Nitroaniline	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4,4'-DDD	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4,4'-DDE	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4,4'-DDT	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Aminobiphenyl	3.8	ug/L	UJ	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Chloroaniline	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Nitroaniline	0.95	ug/L	UJ	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	4-Nitrophenol	14	ug/L	U	14	57
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	5-Nitro-o-toluidine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	7,12-Dimethylbenz(a)anthracene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Acenaphthene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Acenaphthylene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Acetophenone	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Aldrin	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Aniline	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Anthracene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Azobenzene/1,2-Diphenylhydrazine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzidine	95	ug/L	UJ	95	380
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Benzyl alcohol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Bis(2-chloroethoxy)methane	0.95	ug/L	UJ	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Chrysene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dibenzofuran	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dieldrin	1.4	ug/L	U	1.4	5.7

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dimethyl phthalate	48	ug/L	U	48	190
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dimethylaminoazobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Dinoseb	3.8	ug/L	U	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Diphenylamine	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Endosulfan I	3.8	ug/L	U	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Endosulfan II	3.8	ug/L	U	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Endrin	1.4	ug/L	UJ	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Endrin aldehyde	3.8	ug/L	U	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Ethyl methanesulfonate	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Fluoranthene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Fluorene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Heptachlor	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Hexachloroethane	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Hexachloropropene	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Isophorone	0.95	ug/L	UJ	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Isosafrole	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Methapyrilene	3.8	ug/L	UJ	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Methyl methanesulfonate	0.95	ug/L	UJ	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosodi-n-butylamine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosodiethylamine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosodimethylamine	1.9	ug/L	UJ	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosomorpholine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosopiperidine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Naphthalene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Nitrobenzene	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Nitroquinoline-1-oxide	19	ug/L	UJ	19	76
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pentachlorobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pentachloroethane	48	ug/L	U	48	190
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pentachloronitrobenzene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pentachlorophenol	2.9	ug/L	U	2.9	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Phenacetin	3.8	ug/L	U	3.8	11
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Phenanthrene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Phenol	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pyrene	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Pyridine	3.8	ug/L	U	3.8	15
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	Safrole	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	alpha-BHC	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	beta-BHC	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	delta-BHC	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	gamma-BHC	1.4	ug/L	U	1.4	5.7
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	m,p-Cresols	1.9	ug/L	U	1.9	7.6
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	o-Cresol	1.9	ug/L	U	1.9	7.6

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	EFFLUENT	BNA-Water	W-SURF-FRH	o-Toluidine	0.95	ug/L	U	0.95	3.8
2/20/03	EFFLUENT	Bio-AGP/LimNut	W-SURF-FRH	Algal Growth Potential	258	mg DryWt/L	A	0.1	0.3
2/20/03	EFFLUENT	Bio-BOD	W-SURF-FRH	Biochemical Oxygen Demand-5 Day,N-Inhib	2.1	mg/L			
2/20/03	EFFLUENT	Bio-Toxicology	W-SURF-FRH	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
2/20/03	EFFLUENT	Bio-Toxicology	W-SURF-FRH	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Alachlor	0.58	ug/L	U	0.58	2.32
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Ametryn	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Atrazine	0.18	ug/L	I	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Bromacil	0.19	ug/L	U	0.19	0.76
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Butylate	0.19	ug/L	U	0.19	0.76
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Diazinon	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Ethion	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Ethoprop	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Fonofos	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Hexazinone	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Malathion	0.14	ug/L	U	0.14	0.56
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Metolachlor	0.48	ug/L	U	0.48	1.92
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Metribuzin	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Mevinphos	0.19	ug/L	UJ	0.19	0.76
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Naled	0.77	ug/L	U	0.77	3.08
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Norflurazon	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Parathion Methyl	0.096	ug/L	U	0.096	0.384
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Phorate	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Prometryn	0.14	ug/L	U	0.14	0.56
2/20/03	EFFLUENT	GC-Water	W-SURF-FRH	Simazine	0.048	ug/L	U	0.048	0.192
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Aluminum	14	ug/L	I	10	40
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Arsenic	3	ug/L	U	3	12
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Cadmium	0.025	ug/L	U	0.025	0.1
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Calcium	71.8	mg/L		0.05	0.2
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Chromium	2	ug/L	U	2	8
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Copper	1.8	ug/L	I	0.75	3
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Iron	98	ug/L		7	28
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Lead	0.47	ug/L		0.1	0.4
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Magnesium	24.7	mg/L		0.01	0.04
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Nickel	2	ug/L	U	2	8
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Selenium	1	ug/L	U	1	4
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Silver	0.24	ug/L		0.02	0.08
2/20/03	EFFLUENT	Metals-Water	W-SURF-FRH	Zinc	13	ug/L	I	4	16
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	Ammonia-N	1.6	mg N/L		0.1	0.2
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	NO2NO3-N	5.5	mg N/L		0.08	0.2
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	N_KJEL_TOT	3.1	mg N/L		0.06	0.2
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	O-Phosphate-P	1.2	mg P/L		0.04	0.1
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	TSS	4	mg/L	U	4	16
2/20/03	EFFLUENT	Nutrients-Liquid	W-SURF-FRH	Total-P	1.4	mg P/L		0.075	0.2
2/20/03	EFFLUENT	Overflow	W-SURF-FRH	Oil and Grease	0.55	mg/l	U		
2/20/03	SITE 1	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	310	ug/kg	U	310	1200

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 1	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	3100	ug/kg	U	3100	12000
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	620	ug/kg	U	620	2500
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2-Chloronaphthalene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2-Chlorophenol	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	100	ug/kg	UJ	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	2-Nitrophenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	6200	ug/kg	UJ	6200	25000
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4,4'-DDD	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4,4'-DDE	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4,4'-DDT	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	4-Nitrophenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Acenaphthene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Acenaphthylene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Aldrin	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Anthracene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzidine	2300	ug/kg	UJ	2300	9000
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzo(a)anthracene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzo(a)pyrene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	120	ug/kg	I	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	620	ug/kg	U	620	2500
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Chrysene	110	ug/kg	I	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	620	ug/kg	U	620	2500
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Dieldrin	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Diethyl phthalate	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Dimethyl phthalate	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Endosulfan I	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Endosulfan II	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Endosulfan sulfate	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Endrin	100	ug/kg	UJ	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Endrin aldehyde	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Fluoranthene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Fluorene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Heptachlor	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Heptachlor epoxide	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Hexachlorobenzene	100	ug/kg	U	100	420

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Hexachlorobutadiene	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Hexachloroethane	310	ug/kg	U	310	1200
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Isophorone	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	620	ug/kg	U	620	2500
2/20/03	SITE 1	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Naphthalene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Nitrobenzene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Pentachlorophenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Phenanthrene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Phenol	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	Pyrene	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	alpha-BHC	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	beta-BHC	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	delta-BHC	100	ug/kg	U	100	420
2/20/03	SITE 1	BNA-Waste	S-MARINESD	gamma-BHC	100	ug/kg	U	100	420
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	4.1	% dry wt			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	20.7	% vol <2mm			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	23	% vol <2mm			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	6.72	% vol <2mm			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	7.56	% vol <2mm			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	42	% vol <2mm			
2/20/03	SITE 1	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	0.07	%tot drywt			
2/20/03	SITE 1	GC-Soil	S-MARINESD	Alachlor	34	ug/kg	U	34	136
2/20/03	SITE 1	GC-Soil	S-MARINESD	Aldrin	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Alpha-BHC	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Ametryn	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Atrazine	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Azinphos Methyl	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Beta-BHC	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Bromacil	23	ug/kg	UJ	23	92
2/20/03	SITE 1	GC-Soil	S-MARINESD	Chlordane	8.6	ug/Kg	U	8.6	34.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	5.7	ug/kg	U	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	DDD-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	DDE-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	DDT-p,p'	1.7	ug/Kg	U	1.7	6.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	Delta-BHC	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Diazinon	5.7	ug/kg	UJ	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	Dieldrin	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Endosulfan I	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Endosulfan II	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Endosulfan Sulfate	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Endrin	2.3	ug/Kg	U	2.3	9.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Endrin Aldehyde	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Ethion	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Ethoprop	5.7	ug/kg	U	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	Fenamiphos	23	ug/kg	U	23	92
2/20/03	SITE 1	GC-Soil	S-MARINESD	Fonofos	5.7	ug/kg	U	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	Gamma-BHC	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Heptachlor	0.57	ug/Kg	U	0.57	2.28

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 1	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.57	ug/Kg	U	0.57	2.28
2/20/03	SITE 1	GC-Soil	S-MARINESD	Hexazinone	11	ug/kg	U	11	44
2/20/03	SITE 1	GC-Soil	S-MARINESD	Malathion	8.6	ug/kg	U	8.6	34.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Methamidophos	28	ug/kg	U	28	112
2/20/03	SITE 1	GC-Soil	S-MARINESD	Methoxychlor	2.8	ug/Kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Metolachlor	28	ug/kg	UJ	28	112
2/20/03	SITE 1	GC-Soil	S-MARINESD	Metribuzin	5.7	ug/kg	U	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	Mevinphos	11	ug/kg	U	11	44
2/20/03	SITE 1	GC-Soil	S-MARINESD	Monocrotophos	57	ug/kg	UJ	57	228
2/20/03	SITE 1	GC-Soil	S-MARINESD	Naled	46	ug/kg	U	46	184
2/20/03	SITE 1	GC-Soil	S-MARINESD	Norflurazon	5.7	ug/kg	U	5.7	22.8
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1016	17	ug/Kg	U	17	68
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1221	12	ug/Kg	U	12	48
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1232	26	ug/Kg	U	26	104
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1242	17	ug/Kg	U	17	68
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1248	12	ug/Kg	U	12	48
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1254	12	ug/Kg	U	12	48
2/20/03	SITE 1	GC-Soil	S-MARINESD	PCB-1260	17	ug/Kg	U	17	68
2/20/03	SITE 1	GC-Soil	S-MARINESD	Parathion Ethyl	8.6	ug/kg	U	8.6	34.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Parathion Methyl	8.6	ug/kg	U	8.6	34.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Phorate	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Prometryn	8.6	ug/kg	U	8.6	34.4
2/20/03	SITE 1	GC-Soil	S-MARINESD	Simazine	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 1	GC-Soil	S-MARINESD	Toxaphene	43	ug/Kg	U	43	172
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Cadmium	0.092	mg/Kg		0.012	0.048
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Chromium	16	mg/Kg		0.19	0.77
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Copper	5.6	mg/Kg		0.48	1.9
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Lead	8.9	mg/Kg		0.12	0.48
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Nickel	3.44	mg/Kg		0.19	0.77
2/20/03	SITE 1	Metals-Waste	S-MARINESD	Silver	0.061	mg/Kg		0.014	0.058
2/20/03	SITE 1	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	0.964	mg DryWt/L		0.1	0.3
2/20/03	SITE 1	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
2/20/03	SITE 1	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.031	mg N/L		0.01	0.02
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.012	mg N/L		0.004	0.01
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.36	mg N/L		0.06	0.2
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.012	mg P/L		0.004	0.01
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	TSS	40	mg/L		4	16
2/20/03	SITE 1	Nutrients-Liquid	W-SURF-SLT	Total-P	0.055	mg P/L	I	0.015	0.08
2/20/03	SITE 1 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	21	# Taxa			
2/20/03	SITE 1 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	33	# Taxa			
2/20/03	SITE 1 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	27	# Taxa			
2/20/03	SITE 1 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	38	# Taxa			
2/20/03	SITE 1 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	31	# Taxa			
2/20/03	SITE 2	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	3000	ug/kg	U	3000	12000
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	610	ug/kg	U	610	2400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	100	ug/kg	U	100	400

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2-Chloronaphthalene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2-Chlorophenol	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	100	ug/kg	UJ	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	2-Nitrophenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	6100	ug/kg	UJ	6100	24000
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4,4'-DDD	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4,4'-DDE	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4,4'-DDT	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	4-Nitrophenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Acenaphthene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Acenaphthylene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Aldrin	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Anthracene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzidine	2200	ug/kg	UJ	2200	8800
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzo(a)anthracene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzo(a)pyrene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	610	ug/kg	U	610	2400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Chrysene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	610	ug/kg	U	610	2400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Dieldrin	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Diethyl phthalate	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Dimethyl phthalate	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Endosulfan I	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Endosulfan II	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Endosulfan sulfate	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Endrin	100	ug/kg	UJ	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Endrin aldehyde	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Fluoranthene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Fluorene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Heptachlor	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Heptachlor epoxide	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Hexachlorobenzene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Hexachlorobutadiene	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Hexachloroethane	300	ug/kg	U	300	1200
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Isophorone	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	610	ug/kg	U	610	2400

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 2	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Naphthalene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Nitrobenzene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Pentachlorophenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Phenanthrene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Phenol	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	Pyrene	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	alpha-BHC	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	beta-BHC	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	delta-BHC	100	ug/kg	U	100	400
2/20/03	SITE 2	BNA-Waste	S-MARINESD	gamma-BHC	100	ug/kg	U	100	400
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	3.5	% dry wt			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	27.1	% vol <2mm			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	31.9	% vol <2mm			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	6.46	% vol <2mm			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	0.02	% vol <2mm			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	34.5	% vol <2mm			
2/20/03	SITE 2	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	0.64	%tot drywt			
2/20/03	SITE 2	GC-Soil	S-MARINESD	Alachlor	34	ug/kg	U	34	136
2/20/03	SITE 2	GC-Soil	S-MARINESD	Aldrin	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Alpha-BHC	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Ametryn	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Atrazine	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Azinphos Methyl	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Beta-BHC	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Bromacil	22	ug/kg	UJ	22	88
2/20/03	SITE 2	GC-Soil	S-MARINESD	Chlordane	8.4	ug/Kg	U	8.4	33.6
2/20/03	SITE 2	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	5.6	ug/kg	U	5.6	22.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	DDD-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	DDE-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	DDT-p,p'	1.7	ug/Kg	U	1.7	6.8
2/20/03	SITE 2	GC-Soil	S-MARINESD	Delta-BHC	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Diazinon	5.6	ug/kg	UJ	5.6	22.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Dieldrin	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Endosulfan I	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Endosulfan II	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Endosulfan Sulfate	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Endrin	2.2	ug/Kg	U	2.2	8.8
2/20/03	SITE 2	GC-Soil	S-MARINESD	Endrin Aldehyde	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Ethion	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Ethoprop	5.6	ug/kg	U	5.6	22.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Fenamiphos	22	ug/kg	U	22	88
2/20/03	SITE 2	GC-Soil	S-MARINESD	Fonofos	5.6	ug/kg	U	5.6	22.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	Gamma-BHC	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Heptachlor	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.56	ug/Kg	U	0.56	2.24
2/20/03	SITE 2	GC-Soil	S-MARINESD	Hexazinone	11	ug/kg	U	11	44
2/20/03	SITE 2	GC-Soil	S-MARINESD	Malathion	8.4	ug/kg	U	8.4	33.6
2/20/03	SITE 2	GC-Soil	S-MARINESD	Methamidophos	28	ug/kg	U	28	112
2/20/03	SITE 2	GC-Soil	S-MARINESD	Methoxychlor	2.8	ug/Kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Metolachlor	28	ug/kg	UJ	28	112
2/20/03	SITE 2	GC-Soil	S-MARINESD	Metribuzin	5.6	ug/kg	U	5.6	22.4

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 2	GC-Soil	S-MARINESD	Mevinphos	11	ug/kg	U	11	44
2/20/03	SITE 2	GC-Soil	S-MARINESD	Monocrotophos	56	ug/kg	UJ	56	224
2/20/03	SITE 2	GC-Soil	S-MARINESD	Naled	45	ug/kg	U	45	180
2/20/03	SITE 2	GC-Soil	S-MARINESD	Norflurazon	5.6	ug/kg	U	5.6	22.4
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1016	17	ug/Kg	U	17	68
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1221	12	ug/Kg	U	12	48
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1232	25	ug/Kg	U	25	100
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1242	17	ug/Kg	U	17	68
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1248	12	ug/Kg	U	12	48
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1254	12	ug/Kg	U	12	48
2/20/03	SITE 2	GC-Soil	S-MARINESD	PCB-1260	17	ug/Kg	U	17	68
2/20/03	SITE 2	GC-Soil	S-MARINESD	Parathion Ethyl	8.4	ug/kg	U	8.4	33.6
2/20/03	SITE 2	GC-Soil	S-MARINESD	Parathion Methyl	8.4	ug/kg	U	8.4	33.6
2/20/03	SITE 2	GC-Soil	S-MARINESD	Phorate	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Prometryn	8.4	ug/kg	U	8.4	33.6
2/20/03	SITE 2	GC-Soil	S-MARINESD	Simazine	2.8	ug/kg	U	2.8	11.2
2/20/03	SITE 2	GC-Soil	S-MARINESD	Toxaphene	42	ug/Kg	U	42	168
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Cadmium	0.089	mg/Kg		0.012	0.05
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Chromium	15.6	mg/Kg		0.2	0.8
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Copper	3.6	mg/Kg		0.5	2
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Lead	7.5	mg/Kg		0.12	0.5
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Nickel	3.3	mg/Kg		0.2	0.8
2/20/03	SITE 2	Metals-Waste	S-MARINESD	Silver	0.046	mg/Kg	I	0.015	0.06
2/20/03	SITE 2	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	0.793	mg DryWt/L		0.1	0.3
2/20/03	SITE 2	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 2	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.012	mg N/L		0.004	0.01
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.35	mg N/L		0.06	0.2
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.011	mg P/L		0.004	0.01
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	TSS	35	mg/L		4	16
2/20/03	SITE 2	Nutrients-Liquid	W-SURF-SLT	Total-P	0.05	mg P/L	I	0.015	0.08
2/20/03	SITE 2 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	21	# Taxa			
2/20/03	SITE 2 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	18	# Taxa			
2/20/03	SITE 2 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	21	# Taxa			
2/20/03	SITE 2 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	21	# Taxa			
2/20/03	SITE 2 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	23	# Taxa			
2/20/03	SITE 3	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	2800	ug/kg	U	2800	11000
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	560	ug/kg	U	560	2200
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2-Chloronaphthalene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2-Chlorophenol	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	94	ug/kg	UJ	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	2-Nitrophenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	5600	ug/kg	UJ	5600	22000
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4,4'-DDD	94	ug/kg	U	94	380

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4,4'-DDE	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4,4'-DDT	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	4-Nitrophenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Acenaphthene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Acenaphthylene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Aldrin	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Anthracene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzidine	2000	ug/kg	UJ	2000	8100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzo(a)anthracene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzo(a)pyrene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	560	ug/kg	U	560	2200
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Chrysene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	560	ug/kg	U	560	2200
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Dieldrin	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Diethyl phthalate	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Dimethyl phthalate	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Endosulfan I	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Endosulfan II	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Endosulfan sulfate	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Endrin	94	ug/kg	UJ	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Endrin aldehyde	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Fluoranthene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Fluorene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Heptachlor	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Heptachlor epoxide	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Hexachlorobenzene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Hexachlorobutadiene	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Hexachloroethane	280	ug/kg	U	280	1100
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Isophorone	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	560	ug/kg	U	560	2200
2/20/03	SITE 3	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Naphthalene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Nitrobenzene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Pentachlorophenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Phenanthrene	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Phenol	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	Pyrene	94	ug/kg	U	94	380

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 3	BNA-Waste	S-MARINESD	alpha-BHC	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	beta-BHC	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	delta-BHC	94	ug/kg	U	94	380
2/20/03	SITE 3	BNA-Waste	S-MARINESD	gamma-BHC	94	ug/kg	U	94	380
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	2.7	% dry wt			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	31.4	% vol <2mm			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	34.4	% vol <2mm			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	1.95	% vol <2mm			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	0.0027	% vol <2mm			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	32.2	% vol <2mm			
2/20/03	SITE 3	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	1.7	%tot drywt			
2/20/03	SITE 3	GC-Soil	S-MARINESD	Alachlor	31	ug/kg	U	31	124
2/20/03	SITE 3	GC-Soil	S-MARINESD	Aldrin	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Alpha-BHC	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Ametryn	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Atrazine	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Azinphos Methyl	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Beta-BHC	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Bromacil	21	ug/kg	UJ	21	84
2/20/03	SITE 3	GC-Soil	S-MARINESD	Chlordane	7.7	ug/Kg	U	7.7	30.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	5.2	ug/kg	U	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	DDD-p,p'	1	ug/Kg	U	1	4
2/20/03	SITE 3	GC-Soil	S-MARINESD	DDE-p,p'	1	ug/Kg	U	1	4
2/20/03	SITE 3	GC-Soil	S-MARINESD	DDT-p,p'	1.5	ug/Kg	U	1.5	6
2/20/03	SITE 3	GC-Soil	S-MARINESD	Delta-BHC	1	ug/Kg	U	1	4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Diazinon	5.2	ug/kg	UJ	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Dieldrin	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Endosulfan I	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Endosulfan II	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Endosulfan Sulfate	1	ug/Kg	U	1	4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Endrin	2.1	ug/Kg	U	2.1	8.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Endrin Aldehyde	1	ug/Kg	U	1	4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Ethion	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Ethoprop	5.2	ug/kg	U	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Fenamiphos	21	ug/kg	U	21	84
2/20/03	SITE 3	GC-Soil	S-MARINESD	Fonofos	5.2	ug/kg	U	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Gamma-BHC	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Heptachlor	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.52	ug/Kg	U	0.52	2.08
2/20/03	SITE 3	GC-Soil	S-MARINESD	Hexazinone	10	ug/kg	U	10	40
2/20/03	SITE 3	GC-Soil	S-MARINESD	Malathion	7.7	ug/kg	U	7.7	30.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Methamidophos	26	ug/kg	U	26	104
2/20/03	SITE 3	GC-Soil	S-MARINESD	Methoxychlor	2.6	ug/Kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Metolachlor	26	ug/kg	UJ	26	104
2/20/03	SITE 3	GC-Soil	S-MARINESD	Metribuzin	5.2	ug/kg	U	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Mevinphos	10	ug/kg	U	10	40
2/20/03	SITE 3	GC-Soil	S-MARINESD	Monocrotophos	52	ug/kg	UJ	52	208
2/20/03	SITE 3	GC-Soil	S-MARINESD	Naled	42	ug/kg	U	42	168
2/20/03	SITE 3	GC-Soil	S-MARINESD	Norflurazon	5.2	ug/kg	U	5.2	20.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1016	15	ug/Kg	U	15	60
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1221	11	ug/Kg	U	11	44
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1232	23	ug/Kg	U	23	92

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1242	15	ug/Kg	U	15	60
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1248	11	ug/Kg	U	11	44
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1254	11	ug/Kg	U	11	44
2/20/03	SITE 3	GC-Soil	S-MARINESD	PCB-1260	15	ug/Kg	U	15	60
2/20/03	SITE 3	GC-Soil	S-MARINESD	Parathion Ethyl	7.7	ug/kg	U	7.7	30.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Parathion Methyl	7.7	ug/kg	U	7.7	30.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Phorate	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Prometryn	7.7	ug/kg	U	7.7	30.8
2/20/03	SITE 3	GC-Soil	S-MARINESD	Simazine	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 3	GC-Soil	S-MARINESD	Toxaphene	39	ug/Kg	U	39	156
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Cadmium	0.088	mg/Kg		0.012	0.05
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Chromium	13.9	mg/Kg		0.2	0.8
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Copper	3.7	mg/Kg		0.5	2
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Lead	6.2	mg/Kg		0.12	0.5
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Nickel	2.91	mg/Kg		0.2	0.8
2/20/03	SITE 3	Metals-Waste	S-MARINESD	Silver	0.037	mg/Kg	I	0.015	0.06
2/20/03	SITE 3	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	0.359	mg DryWt/L		0.1	0.3
2/20/03	SITE 3	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
2/20/03	SITE 3	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.042	mg N/L		0.01	0.02
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.007	mg N/L	I	0.004	0.01
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.37	mg N/L		0.06	0.2
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.009	mg P/L	I	0.004	0.01
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	TSS	29	mg/L		4	16
2/20/03	SITE 3	Nutrients-Liquid	W-SURF-SLT	Total-P	0.048	mg P/L	I	0.015	0.08
2/20/03	SITE 3 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	32	# Taxa			
2/20/03	SITE 3 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	18	# Taxa			
2/20/03	SITE 3 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	24	# Taxa			
2/20/03	SITE 3 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	27	# Taxa			
2/20/03	SITE 3 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	23	# Taxa			
2/20/03	SITE 4	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	2900	ug/kg	U	2900	12000
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	580	ug/kg	U	580	2300
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2-Chloronaphthalene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2-Chlorophenol	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	96	ug/kg	UJ	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	2-Nitrophenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	5800	ug/kg	UJ	5800	23000
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4,4'-DDD	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4,4'-DDE	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4,4'-DDT	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	4-Nitrophenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Acenaphthene	96	ug/kg	U	96	390

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Acenaphthylene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Aldrin	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Anthracene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzidine	2100	ug/kg	UJ	2100	8300
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzo(a)anthracene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzo(a)pyrene	150	ug/kg	I	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	160	ug/kg	I	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	580	ug/kg	U	580	2300
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Chrysene	140	ug/kg	I	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	580	ug/kg	U	580	2300
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Dieldrin	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Diethyl phthalate	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Dimethyl phthalate	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Endosulfan I	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Endosulfan II	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Endosulfan sulfate	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Endrin	96	ug/kg	UJ	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Endrin aldehyde	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Fluoranthene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Fluorene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Heptachlor	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Heptachlor epoxide	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Hexachlorobenzene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Hexachlorobutadiene	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Hexachloroethane	290	ug/kg	U	290	1200
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Isophorone	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	580	ug/kg	U	580	2300
2/20/03	SITE 4	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Naphthalene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Nitrobenzene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Pentachlorophenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Phenanthrene	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Phenol	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	Pyrene	110	ug/kg	I	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	alpha-BHC	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	beta-BHC	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	delta-BHC	96	ug/kg	U	96	390
2/20/03	SITE 4	BNA-Waste	S-MARINESD	gamma-BHC	96	ug/kg	U	96	390
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	5.4	% dry wt			
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	16.4	% vol <2mm			
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	22.5	% vol <2mm			

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	10.7	% vol <2mm			
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	15.2	% vol <2mm			
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	35.2	% vol <2mm			
2/20/03	SITE 4	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	0.95	%tot drywt			
2/20/03	SITE 4	GC-Soil	S-MARINESD	Alachlor	32	ug/kg	U	32	128
2/20/03	SITE 4	GC-Soil	S-MARINESD	Aldrin	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Alpha-BHC	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Ametryn	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Atrazine	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Azinphos Methyl	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Beta-BHC	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Bromacil	21	ug/kg	UJ	21	84
2/20/03	SITE 4	GC-Soil	S-MARINESD	Chlordane	8	ug/Kg	U	8	32
2/20/03	SITE 4	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	5.3	ug/kg	U	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	DDD-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	DDE-p,p'	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	DDT-p,p'	1.6	ug/Kg	U	1.6	6.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Delta-BHC	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Diazinon	5.3	ug/kg	UJ	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	Dieldrin	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Endosulfan I	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Endosulfan II	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Endosulfan Sulfate	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Endrin	2.1	ug/Kg	U	2.1	8.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Endrin Aldehyde	1.1	ug/Kg	U	1.1	4.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Ethion	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Ethoprop	5.3	ug/kg	U	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	Fenamiphos	21	ug/kg	U	21	84
2/20/03	SITE 4	GC-Soil	S-MARINESD	Fonofos	5.3	ug/kg	U	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	Gamma-BHC	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Heptachlor	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.53	ug/Kg	U	0.53	2.12
2/20/03	SITE 4	GC-Soil	S-MARINESD	Hexazinone	11	ug/kg	U	11	44
2/20/03	SITE 4	GC-Soil	S-MARINESD	Malathion	8	ug/kg	U	8	32
2/20/03	SITE 4	GC-Soil	S-MARINESD	Methamidophos	26	ug/kg	U	26	104
2/20/03	SITE 4	GC-Soil	S-MARINESD	Methoxychlor	2.6	ug/Kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Metolachlor	26	ug/kg	UJ	26	104
2/20/03	SITE 4	GC-Soil	S-MARINESD	Metribuzin	5.3	ug/kg	U	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	Mevinphos	11	ug/kg	U	11	44
2/20/03	SITE 4	GC-Soil	S-MARINESD	Monocrotophos	53	ug/kg	UJ	53	212
2/20/03	SITE 4	GC-Soil	S-MARINESD	Naled	43	ug/kg	U	43	172
2/20/03	SITE 4	GC-Soil	S-MARINESD	Norflurazon	5.3	ug/kg	U	5.3	21.2
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1016	16	ug/Kg	U	16	64
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1221	11	ug/Kg	U	11	44
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1232	24	ug/Kg	U	24	96
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1242	16	ug/Kg	U	16	64
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1248	11	ug/Kg	U	11	44
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1254	11	ug/Kg	U	11	44
2/20/03	SITE 4	GC-Soil	S-MARINESD	PCB-1260	16	ug/Kg	U	16	64
2/20/03	SITE 4	GC-Soil	S-MARINESD	Parathion Ethyl	8	ug/kg	U	8	32
2/20/03	SITE 4	GC-Soil	S-MARINESD	Parathion Methyl	8	ug/kg	U	8	32
2/20/03	SITE 4	GC-Soil	S-MARINESD	Phorate	2.6	ug/kg	U	2.6	10.4

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 4	GC-Soil	S-MARINESD	Prometryn	8	ug/kg	U	8	32
2/20/03	SITE 4	GC-Soil	S-MARINESD	Simazine	2.6	ug/kg	U	2.6	10.4
2/20/03	SITE 4	GC-Soil	S-MARINESD	Toxaphene	40	ug/Kg	U	40	160
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Cadmium	0.11	mg/Kg		0.012	0.049
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Chromium	14.2	mg/Kg		0.2	0.79
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Copper	3.8	mg/Kg		0.49	2
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Lead	6.3	mg/Kg		0.12	0.49
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Nickel	3.02	mg/Kg		0.2	0.79
2/20/03	SITE 4	Metals-Waste	S-MARINESD	Silver	0.049	mg/Kg	I	0.015	0.059
2/20/03	SITE 4	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	1.52	mg DryWt/L		0.1	0.3
2/20/03	SITE 4	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 4	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.36	mg N/L		0.06	0.2
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.13	mg P/L		0.012	0.03
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	TSS	26	mg/L		4	16
2/20/03	SITE 4	Nutrients-Liquid	W-SURF-SLT	Total-P	0.049	mg P/L	I	0.015	0.08
2/20/03	SITE 4 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	29	# Taxa			
2/20/03	SITE 4 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	47	# Taxa			
2/20/03	SITE 4 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	51	# Taxa			
2/20/03	SITE 4 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	38	# Taxa			
2/20/03	SITE 4 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	51	# Taxa			
2/20/03	SITE 5	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	2600	ug/kg	U	2600	11000
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	530	ug/kg	U	530	2100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2-Chloronaphthalene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2-Chlorophenol	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	88	ug/kg	UJ	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	2-Nitrophenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	5300	ug/kg	UJ	5300	21000
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4,4'-DDD	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4,4'-DDE	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4,4'-DDT	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	4-Nitrophenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Acenaphthene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Acenaphthylene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Aldrin	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Anthracene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzidine	1900	ug/kg	UJ	1900	7600
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzo(a)anthracene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzo(a)pyrene	88	ug/kg	U	88	350

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	530	ug/kg	U	530	2100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Chrysene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	530	ug/kg	U	530	2100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Dieldrin	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Diethyl phthalate	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Dimethyl phthalate	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Endosulfan I	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Endosulfan II	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Endosulfan sulfate	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Endrin	88	ug/kg	UJ	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Endrin aldehyde	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Fluoranthene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Fluorene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Heptachlor	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Heptachlor epoxide	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Hexachlorobenzene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Hexachlorobutadiene	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Hexachloroethane	260	ug/kg	U	260	1100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Isophorone	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	530	ug/kg	U	530	2100
2/20/03	SITE 5	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Naphthalene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Nitrobenzene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Pentachlorophenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Phenanthrene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Phenol	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	Pyrene	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	alpha-BHC	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	beta-BHC	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	delta-BHC	88	ug/kg	U	88	350
2/20/03	SITE 5	BNA-Waste	S-MARINESD	gamma-BHC	88	ug/kg	U	88	350
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	2.6	% dry wt	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	20	% vol <2mm	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	38.5	% vol <2mm	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	6.9	% vol <2mm	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	5.06	% vol <2mm	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	29.5	% vol <2mm	A		
2/20/03	SITE 5	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	0.032	%tot drywt	A		
2/20/03	SITE 5	GC-Soil	S-MARINESD	Alachlor	29	ug/kg	U	29	116
2/20/03	SITE 5	GC-Soil	S-MARINESD	Aldrin	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Alpha-BHC	0.48	ug/Kg	U	0.48	1.92

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 5	GC-Soil	S-MARINESD	Ametryn	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Atrazine	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Azinphos Methyl	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Beta-BHC	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Bromacil	19	ug/kg	UJ	19	76
2/20/03	SITE 5	GC-Soil	S-MARINESD	Chlordane	7.3	ug/Kg	U	7.3	29.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	4.8	ug/kg	U	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	DDD-p,p'	0.97	ug/Kg	U	0.97	3.88
2/20/03	SITE 5	GC-Soil	S-MARINESD	DDE-p,p'	0.97	ug/Kg	U	0.97	3.88
2/20/03	SITE 5	GC-Soil	S-MARINESD	DDT-p,p'	1.4	ug/Kg	U	1.4	5.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Delta-BHC	0.97	ug/Kg	U	0.97	3.88
2/20/03	SITE 5	GC-Soil	S-MARINESD	Diazinon	4.8	ug/kg	UJ	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Dieldrin	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Endosulfan I	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Endosulfan II	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Endosulfan Sulfate	0.97	ug/Kg	U	0.97	3.88
2/20/03	SITE 5	GC-Soil	S-MARINESD	Endrin	1.9	ug/Kg	U	1.9	7.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Endrin Aldehyde	0.97	ug/Kg	U	0.97	3.88
2/20/03	SITE 5	GC-Soil	S-MARINESD	Ethion	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Ethoprop	4.8	ug/kg	U	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Fenamiphos	19	ug/kg	U	19	76
2/20/03	SITE 5	GC-Soil	S-MARINESD	Fonofos	4.8	ug/kg	U	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Gamma-BHC	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Heptachlor	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.48	ug/Kg	U	0.48	1.92
2/20/03	SITE 5	GC-Soil	S-MARINESD	Hexazinone	9.7	ug/kg	U	9.7	38.8
2/20/03	SITE 5	GC-Soil	S-MARINESD	Malathion	7.3	ug/kg	U	7.3	29.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Methamidophos	24	ug/kg	U	24	96
2/20/03	SITE 5	GC-Soil	S-MARINESD	Methoxychlor	2.4	ug/Kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Metolachlor	24	ug/kg	UJ	24	96
2/20/03	SITE 5	GC-Soil	S-MARINESD	Metribuzin	4.8	ug/kg	U	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Mevinphos	9.7	ug/kg	U	9.7	38.8
2/20/03	SITE 5	GC-Soil	S-MARINESD	Monocrotophos	48	ug/kg	UJ	48	192
2/20/03	SITE 5	GC-Soil	S-MARINESD	Naled	39	ug/kg	U	39	156
2/20/03	SITE 5	GC-Soil	S-MARINESD	Norflurazon	4.8	ug/kg	U	4.8	19.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1016	14	ug/Kg	U	14	56
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1221	10	ug/Kg	U	10	40
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1232	22	ug/Kg	U	22	88
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1242	14	ug/Kg	U	14	56
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1248	10	ug/Kg	U	10	40
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1254	10	ug/Kg	U	10	40
2/20/03	SITE 5	GC-Soil	S-MARINESD	PCB-1260	14	ug/Kg	U	14	56
2/20/03	SITE 5	GC-Soil	S-MARINESD	Parathion Ethyl	7.3	ug/kg	U	7.3	29.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Parathion Methyl	7.3	ug/kg	U	7.3	29.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Phorate	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Prometryn	7.3	ug/kg	U	7.3	29.2
2/20/03	SITE 5	GC-Soil	S-MARINESD	Simazine	2.4	ug/kg	U	2.4	9.6
2/20/03	SITE 5	GC-Soil	S-MARINESD	Toxaphene	36	ug/Kg	U	36	144
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Cadmium	0.068	mg/Kg	A	0.012	0.049
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Chromium	10.2	mg/Kg	A	0.2	0.79
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Copper	2.4	mg/Kg	A	0.49	2
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Lead	4.5	mg/Kg	A	0.12	0.49

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Nickel	2.18	mg/Kg	A	0.2	0.79
2/20/03	SITE 5	Metals-Waste	S-MARINESD	Silver	0.039	mg/Kg	I	0.015	0.059
2/20/03	SITE 5	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	0.594	mg DryWt/L		0.1	0.3
2/20/03	SITE 5	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 5	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.034	mg N/L		0.01	0.02
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.036	mg N/L		0.004	0.01
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.35	mg N/L		0.06	0.2
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.012	mg P/L		0.004	0.01
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	TSS	25	mg/L		4	16
2/20/03	SITE 5	Nutrients-Liquid	W-SURF-SLT	Total-P	0.05	mg P/L	I	0.015	0.08
2/20/03	SITE 5 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	33	# Taxa			
2/20/03	SITE 5 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	55	# Taxa			
2/20/03	SITE 5 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	26	# Taxa			
2/20/03	SITE 5 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	27	# Taxa			
2/20/03	SITE 5 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	22	# Taxa			
2/20/03	SITE 6	BNA-Waste	S-MARINESD	1,2,4-Trichlorobenzene	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	1,2-Dichlorobenzene	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	1,3-Dichlorobenzene	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	1,4-Dichlorobenzene	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,4,6-Trichlorophenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,4-Dichlorophenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,4-Dimethylphenol	2600	ug/kg	U	2600	10000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,4-Dinitrophenol	510	ug/kg	U	510	2000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,4-Dinitrotoluene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2,6-Dinitrotoluene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2-Chloronaphthalene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2-Chlorophenol	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2-Methyl-4,6-dinitrophenol	85	ug/kg	UJ	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	2-Nitrophenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	3,3'-Dichlorobenzidine	5100	ug/kg	UJ	5100	20000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4,4'-DDD	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4,4'-DDE	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4,4'-DDT	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4-Bromophenyl phenyl ether	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4-Chloro-3-methylphenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4-Chlorophenyl phenyl ether	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	4-Nitrophenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Acenaphthene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Acenaphthylene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Aldrin	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Anthracene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Azobenzene/1,2-Diphenylhydrazine	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzidine	1800	ug/kg	UJ	1800	7400
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzo(a)anthracene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzo(a)pyrene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzo(b)fluoranthene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzo(g,h,i)perylene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Benzo(k)fluoranthene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Bis(2-chloroethoxy)methane	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Bis(2-chloroethyl)ether	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Bis(2-chloroisopropyl)ether	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Bis(2-ethylhexyl)phthalate	510	ug/kg	U	510	2000

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Butyl benzyl phthalate	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Chrysene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Di-n-butyl phthalate	510	ug/kg	U	510	2000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Di-n-octyl phthalate	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Dibenzo(a,h)anthracene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Dieldrin	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Diethyl phthalate	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Dimethyl phthalate	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Endosulfan I	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Endosulfan II	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Endosulfan sulfate	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Endrin	85	ug/kg	UJ	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Endrin aldehyde	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Fluoranthene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Fluorene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Heptachlor	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Heptachlor epoxide	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Hexachlorobenzene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Hexachlorobutadiene	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Hexachlorocyclopentadiene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Hexachloroethane	260	ug/kg	U	260	1000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Indeno(1,2,3-cd)pyrene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Isophorone	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	N-Nitrosodi-n-propylamine	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	N-Nitrosodimethylamine	510	ug/kg	U	510	2000
2/20/03	SITE 6	BNA-Waste	S-MARINESD	N-Nitrosodiphenylamine	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Naphthalene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Nitrobenzene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Pentachlorophenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Phenanthrene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Phenol	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	Pyrene	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	alpha-BHC	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	beta-BHC	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	delta-BHC	85	ug/kg	U	85	340
2/20/03	SITE 6	BNA-Waste	S-MARINESD	gamma-BHC	85	ug/kg	U	85	340
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment % Organic	2.5	% dry wt			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.063-0.125mm	24.2	% vol <2mm			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.125-0.25 mm	43.5	% vol <2mm			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.25-0.5 mm	4.47	% vol <2mm			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, 0.5-2.0 mm	2.49	% vol <2mm			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, <0.063 mm	25.3	% vol <2mm			
2/20/03	SITE 6	Bio-SedPrtSz/AFDW	S-MARINESD	Sediment Particle Size, %, >2.0 mm	0.031	%tot drywt			
2/20/03	SITE 6	GC-Soil	S-MARINESD	Alachlor	28	ug/kg	U	28	112
2/20/03	SITE 6	GC-Soil	S-MARINESD	Aldrin	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Alpha-BHC	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Ametryn	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Atrazine	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Azinphos Methyl	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Beta-BHC	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Bromacil	19	ug/kg	UJ	19	76
2/20/03	SITE 6	GC-Soil	S-MARINESD	Chlordane	7	ug/Kg	U	7	28
2/20/03	SITE 6	GC-Soil	S-MARINESD	Chlorpyrifos Ethyl	2.3	ug/kg	U	2.3	9.2

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 6	GC-Soil	S-MARINESD	Chlorpyrifos Methyl	4.7	ug/kg	U	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	DDD-p,p'	0.94	ug/Kg	U	0.94	3.76
2/20/03	SITE 6	GC-Soil	S-MARINESD	DDE-p,p'	0.94	ug/Kg	U	0.94	3.76
2/20/03	SITE 6	GC-Soil	S-MARINESD	DDT-p,p'	1.4	ug/Kg	U	1.4	5.6
2/20/03	SITE 6	GC-Soil	S-MARINESD	Delta-BHC	0.94	ug/Kg	U	0.94	3.76
2/20/03	SITE 6	GC-Soil	S-MARINESD	Diazinon	4.7	ug/kg	UJ	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	Dieldrin	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Endosulfan I	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Endosulfan II	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Endosulfan Sulfate	0.94	ug/Kg	U	0.94	3.76
2/20/03	SITE 6	GC-Soil	S-MARINESD	Endrin	1.9	ug/Kg	U	1.9	7.6
2/20/03	SITE 6	GC-Soil	S-MARINESD	Endrin Aldehyde	0.94	ug/Kg	U	0.94	3.76
2/20/03	SITE 6	GC-Soil	S-MARINESD	Ethion	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Ethoprop	4.7	ug/kg	U	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	Fenamiphos	19	ug/kg	U	19	76
2/20/03	SITE 6	GC-Soil	S-MARINESD	Fonofos	4.7	ug/kg	U	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	Gamma-BHC	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Heptachlor	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Heptachlor Epoxide	0.47	ug/Kg	U	0.47	1.88
2/20/03	SITE 6	GC-Soil	S-MARINESD	Hexazinone	9.4	ug/kg	U	9.4	37.6
2/20/03	SITE 6	GC-Soil	S-MARINESD	Malathion	7	ug/kg	U	7	28
2/20/03	SITE 6	GC-Soil	S-MARINESD	Methamidophos	23	ug/kg	U	23	92
2/20/03	SITE 6	GC-Soil	S-MARINESD	Methoxychlor	2.3	ug/Kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Metolachlor	23	ug/kg	UJ	23	92
2/20/03	SITE 6	GC-Soil	S-MARINESD	Metribuzin	4.7	ug/kg	U	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	Mevinphos	9.4	ug/kg	U	9.4	37.6
2/20/03	SITE 6	GC-Soil	S-MARINESD	Monocrotophos	47	ug/kg	UJ	47	188
2/20/03	SITE 6	GC-Soil	S-MARINESD	Naled	38	ug/kg	U	38	152
2/20/03	SITE 6	GC-Soil	S-MARINESD	Norflurazon	4.7	ug/kg	U	4.7	18.8
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1016	14	ug/Kg	U	14	56
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1221	9.8	ug/Kg	U	9.8	39.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1232	21	ug/Kg	U	21	84
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1242	14	ug/Kg	U	14	56
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1248	9.8	ug/Kg	U	9.8	39.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1254	9.8	ug/Kg	U	9.8	39.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	PCB-1260	14	ug/Kg	U	14	56
2/20/03	SITE 6	GC-Soil	S-MARINESD	Parathion Ethyl	7	ug/kg	U	7	28
2/20/03	SITE 6	GC-Soil	S-MARINESD	Parathion Methyl	7	ug/kg	U	7	28
2/20/03	SITE 6	GC-Soil	S-MARINESD	Phorate	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Prometryn	7	ug/kg	U	7	28
2/20/03	SITE 6	GC-Soil	S-MARINESD	Simazine	2.3	ug/kg	U	2.3	9.2
2/20/03	SITE 6	GC-Soil	S-MARINESD	Toxaphene	35	ug/Kg	U	35	140
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Cadmium	0.07	mg/Kg		0.012	0.049
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Chromium	7.35	mg/Kg		0.2	0.79
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Copper	1.6	mg/Kg	I	0.49	2
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Lead	3.6	mg/Kg		0.12	0.49
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Nickel	1.33	mg/Kg		0.2	0.79
2/20/03	SITE 6	Metals-Waste	S-MARINESD	Silver	0.025	mg/Kg	I	0.015	0.059
2/20/03	SITE 6	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	0.344	mg DryWt/L		0.1	0.3
2/20/03	SITE 6	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 6	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.015	mg N/L	I	0.01	0.02
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.007	mg N/L	I	0.004	0.01

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.33	mg N/L		0.06	0.2
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.007	mg P/L	I	0.004	0.01
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	TSS	32	mg/L		4	16
2/20/03	SITE 6	Nutrients-Liquid	W-SURF-SLT	Total-P	0.046	mg P/L	I	0.015	0.08
2/20/03	SITE 6 - REP. 1	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	27	# Taxa			
2/20/03	SITE 6 - REP. 2	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	30	# Taxa			
2/20/03	SITE 6 - REP. 3	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	32	# Taxa			
2/20/03	SITE 6 - REP. 4	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	38	# Taxa			
2/20/03	SITE 6 - REP. 5	Bio-Invertebrates	W-SURF-SLT	Macroinvert-Marine-Quan-NatSubstr-# Taxa	31	# Taxa			

Appendix 5

Typical Values for Selected Parameters in Florida Waters

Percentile Distribution (690 stations)

Station 1

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
					Percentile Distribution							
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.96 U**
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	2.9	3.15	**3.59**	4.01	4.53	4.98	**3.52**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	41	62	**90**	**64**
TKN	0.26	0.34	**0.42**	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.36**
NH3+NH4	0.01	0.02	0.03	**0.04**	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.031**
NO2-NO3	0	0	0.01	0.01	0.01	**0.02**	0.03	0.05	0.08	0.17	0.23	**0.012**
Total Phosphorus	0.01	0.02	**0.06**	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.055 I**
Ortho-Phosphate	0.01	**0.02**	0.03	0.04	0.04	0.05	0.07	0.09	0.12	0.21	0.44	**0.012**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

Station 2

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
					Percentile Distribution							
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.085 U**
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	2.9	3.15	**3.59**	4.01	4.53	4.98	**3.23**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	**41**	62	90	**39**
TKN	0.26	0.34	**0.42**	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.35**
NH3+NH4	**0.01**	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.01 U**
NO2-NO3	0	0	0.01	0.01	0.01	**0.02**	0.03	0.05	0.08	0.17	0.23	**0.012**
Total Phosphorus	0.01	0.02	**0.06**	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.05 I**
Ortho-Phosphate	0.01	0.02	0.03	0.04	0.04	0.05	0.07	0.09	**0.12**	0.21	0.44	**0.11**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

Station 3

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
					Percentile Distribution							
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.096 U**
Dredge Diversity	1.34	1.53	1.91	2.28	**2.56**	2.9	3.15	3.59	4.01	4.53	4.98	**2.34**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	41	**62**	90	**49**
TKN	0.26	0.34	**0.42**	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.37**
NH3+NH4	0.01	0.02	0.03	0.04	**0.05**	0.06	0.08	0.09	0.13	0.22	0.28	**0.042**
NO2-NO3	0	0	**0.01**	0.01	0.01	0.02	0.03	0.05	0.08	0.17	0.23	**0.007 I**
Total Phosphorus	0.01	0.02	**0.06**	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.048 I**
Ortho-Phosphate	**0.01**	0.02	0.03	0.04	0.04	0.05	0.07	0.09	0.12	0.21	0.44	**0.009 I**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit

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

ND - no data

Station 4

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.085 U**
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	**2.9**	3.15	3.59	4.01	4.53	4.98	**2.74**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	41	62	**90**	**81**
TKN	0.26	0.34	**0.42**	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.36**
NH3+NH4	**0.01**	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.01 U**
NO2-NO3	**0**	0	0.01	0.01	0.01	0.02	0.03	0.05	0.08	0.17	0.23	**0.004 U**
Total Phosphorus	0.01	**0.02**	0.06	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.019 I**
Ortho-Phosphate	0.01	0.02	0.03	0.04	0.04	0.05	0.07	0.09	**0.12**	0.21	0.44	**0.13**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

Station 5

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.85 U**
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	2.9	3.15	**3.59**	4.01	4.53	4.98	**3.27**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	41	62	**90**	**71**
TKN	0.26	0.34	**0.42**	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.35**
NH3+NH4	0.01	0.02	0.03	**0.04**	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.034**
NO2-NO3	0	0	0.01	0.01	0.01	0.02	0.03	**0.05**	0.08	0.17	0.23	**0.036**
Total Phosphorus	0.01	0.02	**0.06**	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.05 I**
Ortho-Phosphate	0.01	**0.02**	0.03	0.04	0.04	0.05	0.07	0.09	0.12	0.21	0.44	**0.012**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

Station 6

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
ESTUARIES (690 stations)												
Phytoplankton Chlorophyll *a*	**2.14**	3.28	4.49	5.13	6	6.93	7.94	9.6	12.4	17.6	22.2	**0.85 U**
Dredge Diversity	1.34	1.53	1.91	2.28	2.56	2.9	3.15	**3.59**	4.01	4.53	4.98	**3.42**
Dredge Taxa Richness	4	6	9	11	15	18.5	25	35	41	**62**	90	**61**
TKN	0.26	**0.34**	0.42	0.5	0.59	0.69	0.76	0.82	0.95	1.3	1.49	**0.33**
NH3+NH4	0.01	**0.02**	0.03	0.04	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.015 I**
NO2-NO3	0	0	**0.01**	0.01	0.01	0.02	0.03	0.05	0.08	0.17	0.23	**0.007 I**
Total Phosphorus	0.01	0.02	**0.06**	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.046 I**
Ortho-Phosphate	**0.01**	0.02	0.03	0.04	0.04	0.05	0.07	0.09	0.12	0.21	0.44	**0.007 I**
Turbidity	3.5	4	4.5	5.05	5.4	5.6	6.3	6.8	8	11.4	11.75	**ND**

I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit

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

ND - no data

Appendix 6

Additional physical, chemical, toxicological and microbiological results

Table 1. Data recorded during the 48-hour acute screening bioassays of a sample of effluent from the St. Augustine #1 WWTP, 501 Riberia Street, St. Augustine, St. John's County, Florida, NPDES# FL0021938, performed from 21 to 23 February 2003.

Facility:	St. Augustine #1 WWTP		NPDES #:	FL0021938	Facility Type: WWTP	Analysts:	Jacquelyn Brynda
Location:	501 Riberia Street, St. Augustine		Contact/District:	Jackson/NE			Joshua Ayres
County:	St. John's		Test type:	static acute screen			James Daniels
Sample Collection Date:	2/20/2003	Time: 1030	# tests:	2	Receiving Water: Matanzas River		Marshall Faircloth
Test Beginning Date:	2/21/2003	Time: 1600	Chlorination Type:	dechlorinated			
Test Ending Date:	2/23/2003	Time: 1600	FDEP SOP#:	TA07_01 / 02	Page 1 of 1	Reviewer:	Rob Buda

Organism: ***Ceriodaphnia dubia*** Life stage: <24 hours [B]Feeding: YCT/Algae

Chamber size: 30mL Food Batch #: 5 / 10

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[A]			Dissolved Oxygen			Conductivity Uncorrected µmhos/cm	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/20	5	5	5	8.0	-	8.1	25.1	-	24.3	8.4	-	7.9	190	210
Control B	0/20	5	5	5	-	-	8.1	-	-	24.2	-	-	7.9	-	200
Control C	0/20	5	5	5	-	-	8.1	-	-	24.1	-	-	7.9	-	200
Control D	0/20	5	5	5	-	-	8.1	-	-	24.1	-	-	7.9	-	200
100% A	20/0	5	5	5	7.4	-	8.3	25.5	-	24.2	8.4	-	7.8	1109	1500
100% B	20/0	5	5	5	-	-	8.3	-	-	24.1	-	-	7.8	-	1490
100% C	20/0	5	5	5	-	-	8.3	-	-	24.0	-	-	7.8	-	1540
100% D	20/0	5	5	5	-	-	8.3	-	-	24.1	-	-	7.8	-	1505

[A] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 24.0-25.0°C.
Incubator #3 temperature range for the test period was 29.5-31.0°C.
[B] Organisms fed prior to testing.

Organism: ***Pimephales promelas*** Life stage: 11 days [D]Feeding: artemia

Chamber size: 1L Food Batch #: 01940425G

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[C]			Dissolved Oxygen			Conductivity Uncorrected µmhos/cm	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/500	5	5	5	8.3	7.9	7.9	25.0	26.0	26.4	7.2	7.4	7.4	353	885
Control B	0/500	5	5	5	8.4	7.9	7.9	25.0	25.8	26.0	7.4	7.4	7.3	321	970
Control C	0/500	5	5	5	8.4	7.9	7.9	25.0	27.0	25.8	7.4	7.2	7.2	317	710
Control D	0/500	5	5	5	8.4	7.9	7.9	25.0	26.1	25.1	7.5	7.3	7.1	313	930
100% A	500/0	5	5	5	7.4	7.7	7.9	25.3	25.8	27.0	8.3	7.1	2.0	1146	1680
100% B	500/0	5	5	5	7.4	7.7	7.7	25.4	26.7	26.5	8.1	7.1	4.7	1251	1830
100 % C	500/0	5	5	5	7.4	7.7	7.5	25.4	26.8	25.9	8.2	7.1	2.6	1282	1990
100% D	500/0	5	5	5	7.4	7.7	7.5	25.4	25.6	25.2	8.3	7.1	2.1	1255	1965

[C] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 24.0-25.0°C.
Incubator #3 temperature range for the test period was 29.5-31.0°C.
[D] Organisms fed prior to testing.

LIMS	
Job number:	TLH-2003-02-21-20
sample number:	655639

Data Transcription Verification	
date:	4/29/2003
by:	Cathy Oaks
	Brad Richardson

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	<0.03	Hach

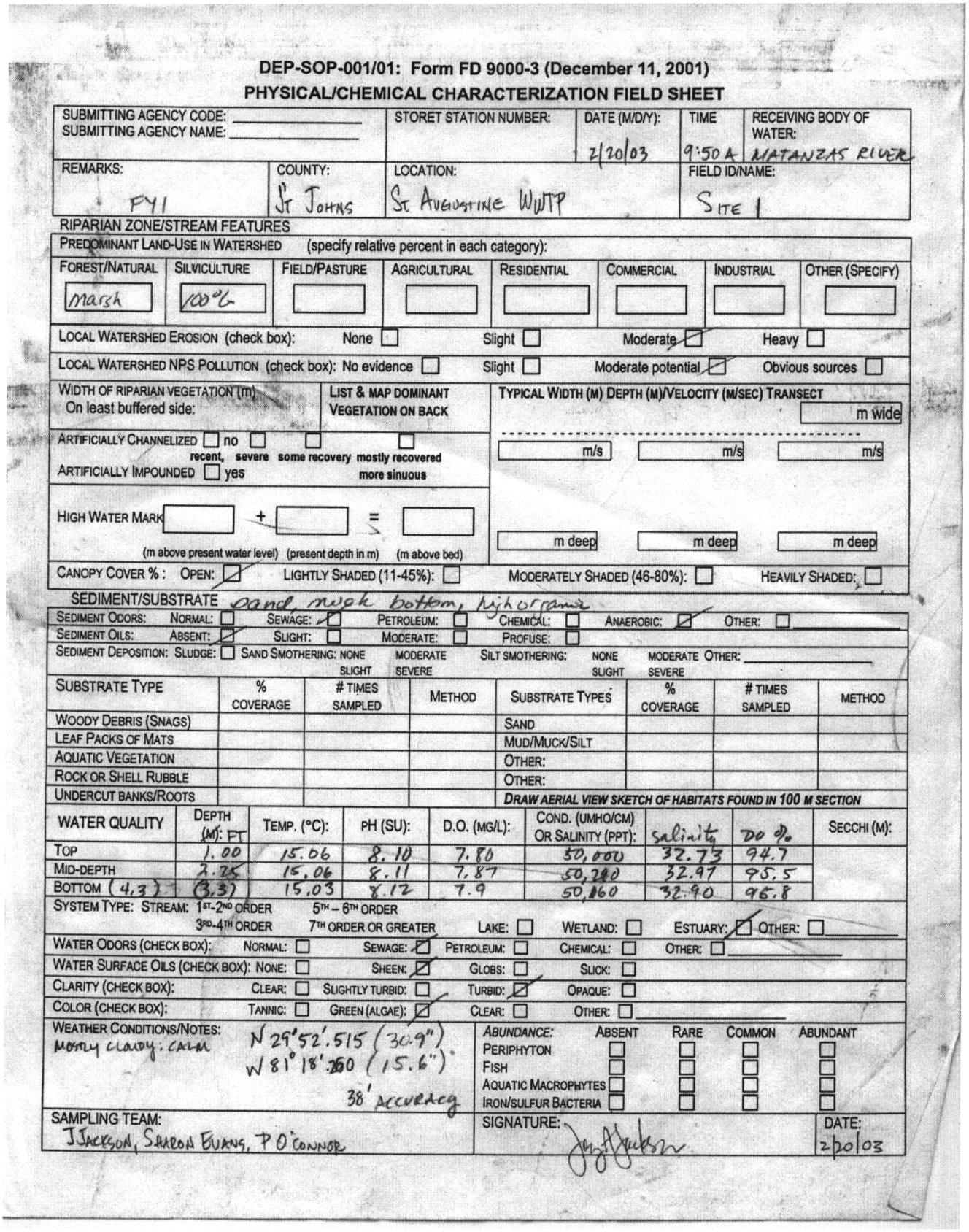
Ammonia	Total (mg/L)	Unionized (mg/L)
Control water (fish):	<0.017	<0.017
Control water (water flea):	<0.017	<0.017
100% Sample:	1.61	0.028

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water (fish):	76	84
Control water (water flea):	84	79
100% Sample:	119	273

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Appendix 7

Habitat Assessment Field Sheets.



DEP-SOP-001/01: Form FD 9000-3 (December 11, 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/20/03	9:50 A	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St. Augustine WWTP	Site 1

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)
marsh	100%						

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: ____

LIST & MAP DOMINANT VEGETATION ON BACK

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

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

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

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide			
	m/s	m/s	m/s
	m deep	m deep	m deep

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

SEDIMENT/SUBSTRATE sand, mud bottom, high organics

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

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

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

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

WATER QUALITY	DEPTH (M): PT	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	salinity	DO %	SECCHI (M):
TOP	1.00	15.06	8.10	7.80	50,000	32.73	94.7	
MID-DEPTH	2.75	15.06	8.11	7.87	50,290	32.97	95.5	
BOTTOM (4.3)	(3.3)	15.03	8.12	7.9	50,160	32.90	96.8	

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: mostly cloudy; calm

N 29°52'.515 (30.9")
W 81°18'.260 (15.6")
38' accuracy

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

SAMPLING TEAM: J Jackson, Sharon Evans, P O'Connor

SIGNATURE: J. Jackson

DATE: 2/20/03

DEP-SOP-001/01: Form FD 9000-3 (December 11, 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/20/03	10:12	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St Augustine WWTP	Site 2

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)
marsh	100%						

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:

LIST & MAP DOMINANT VEGETATION ON BACK

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

ARTIFICIALLY IMPOUNDED ☐ yes

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

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide

m/s	m/s	m/s
m deep	m deep	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 SLIGHT MODERATE SEVERE SILT SMOTHERING: NONE SLIGHT MODERATE SEVERE OTHER: ____

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

WATER QUALITY	DEPTH (M/FT)	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	Salinity	% DO	SECCHI (M):
TOP	1.0	15.02	8.1	7.91	50,325	33.01	96.1	
MID-DEPTH	2.75	14.93	8.1	7.96	50,480	33.11	96.5	1.3 m
BOTTOM (5.5)	4.5	14.92	8.1	7.89	50,500	33.13	96.9	

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: DRIZZLE. CALM

N 29°52'.540 (32.4")
W 81°18'.290 (17.4")

pH of nutrients < 2 SU

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

SAMPLING TEAM: JJACKSON, POCONNOR, SHARON EVANS.

SIGNATURE: Jon Jackson

DATE: 2/20/03

DEP-SOP-001/01: Form FD 9000-3 (December 11, 2001)
PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/20/02	10:27	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St Augustine WWTP	S Site 3 (upstream)

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)
marsh	100%						

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:

LIST & MAP DOMINANT VEGETATION ON BACK

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide

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

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

m/s	m/s	m/s
m deep	m deep	m deep

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

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

SEDIMENT/SUBSTRATE

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

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

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

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

WATER QUALITY	DEPTH (M): FT	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	salinity & DO	DO	SECCHI (M):
TOP	1.0	14.87	8.1	8.07	50,675	33.25	97.9	
MID-DEPTH	1.9	14.87	8.1	8.07	50,699	33.27	97.9	
BOTTOM (3.8)	2.8	14.87	8.1	8.09	50,670	33.25	98.1	VOB

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:
Overcast; calm; low 70's
N 29° 52' .391 (23.5")
W 81° 18' .330 (19.8")
nutrients preserved to 2 SU

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

SAMPLING TEAM: J Jackson, POConnor, SEvans

SIGNATURE: Jay Jackson

DATE: 2/20/03

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:
		2/20/03	1:00 PM	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St Augustine @ WTP	Site 4

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)
marsh	100%						

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:

LIST & MAP DOMINANT VEGETATION ON BACK

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

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

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

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide

m/s	m/s	m/s
m deep	m deep	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 SLIGHT MODERATE SEVERE SILT SMOTHERING: NONE SLIGHT MODERATE SEVERE OTHER: ____

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

WATER QUALITY	DEPTH (M/FT)	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	Salinity	% DO	SECCHI (M):
TOP	1.0	15.44	8.05	8.33	50,530	33.16	102.7	2.0 m
MID-DEPTH	5.0	14.95	8.09	8.41	51,080	33.53	102.5	
BOTTOM 10.0	9.0	14.89	8.1	8.48	51,120	33.58	103.1	

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:
LIGHT BREEZE; MOSTLY CLOUDY
N 29° 52'. 533 (32.0")
W 81° 18'. 242 (14.5")

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

SAMPLING TEAM: JJACKSON, POCONNOR, SEVANS

SIGNATURE: Jay Jackson

DATE: 2/20/03

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:
		2/20/03	12:47	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St Augustine WWTP	Site 5

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)
Marsh	100%						

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:

LIST & MAP DOMINANT VEGETATION ON BACK

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

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

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

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide		
m/s	m/s	m/s
m deep	m deep	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 SLIGHT MODERATE SEVERE SILT SMOTHERING: NONE SLIGHT MODERATE SEVERE OTHER: ____

SUBSTRATE TYPE	% COVERAGE	# TIMES SAMPLED	METHOD	SUBSTRATE TYPES	% COVERAGE	# TIMES SAMPLED	METHOD
WOODY DEBRIS (SNAGS)				SAND			
LEAF PACKS OF MATS				MUD/MUCK/SILT			
AQUATIC VEGETATION				OTHER:			
ROCK OR SHELL RUBBLE				OTHER:			
UNDERCUT BANKS/ROOTS							

DRAW AERIAL VIEW SKETCH OF HABITATS FOUND IN 100 M SECTION

WATER QUALITY	DEPTH (M): FT	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	Salinity	% DO	SECCHI (M):
TOP	1.0	15.05	8.07	8.28	50,360	33.14	101.3	
MID-DEPTH	2.25	14.78	8.10	8.36	51,120	33.57	101.4	VOB
BOTTOM 4.5	3.5	14.79	8.11	8.39	51,140	33.59	101.7	

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:
LIGHT BREEZE; PARTLY CLOUDY
N 29°52', 583 (35.6")
W 81°18', 229 (13.7")
nutrients pH 2:0

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

SAMPLING TEAM: JJACKSON, POCONNOR, SEVANS

SIGNATURE: [signature]

DATE: 2/20/03

DEP-SOP-001/01: Form FD 9000-3 (December 11, 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/20/03	12:30	MATANZAS RIVER

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
FYI	St Johns	St Augustine WWTP	SITE 6

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)
marsh	100%						

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:

LIST & MAP DOMINANT VEGETATION ON BACK

TYPICAL WIDTH (M) DEPTH (M)/VELOCITY (M/SEC) TRANSECT

m wide

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

ARTIFICIALLY IMPOUNDED ☐ yes more sinuous

m/s m/s m/s

HIGH WATER MARK ____ + ____ = ____

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

m deep m deep 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 SLIGHT MODERATE SEVERE SILT SMOTHERING: NONE SLIGHT MODERATE SEVERE OTHER: ____

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

WATER QUALITY	DEPTH (M/FT)	TEMP. (°C):	PH (SU):	D.O. (MG/L):	COND. (UMHO/CM) OR SALINITY (PPT):	Salinity	% DO	SECCHI (M):
TOP	1.0	14.80	8.10	8.35	51,160	33.67	101.3	
MID-DEPTH	2.5	14.71	8.10	8.39	51,180	33.62	101.6	VOB
BOTTOM 5.0	4.0	14.73	8.11	8.44	51,175	33.62	102.2	

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:
LIGHT BREEZE; OVERCAST
N 29°52.662 (39.7")
W 81°18.215 (12.9")
nutrients preserved to 2.0 SU

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

SAMPLING TEAM: JJackson, POConnor, SEvans

SIGNATURE: Joy A Jackson

DATE: 2/20/03

Appendix 8a

Benthic macroinvertebrates collected from ponar samples from upstream and downstream of the St. Augistine #1 WWTP (2/20/03). Taxa collected and density (average number of individuals/m^2) rounded to the nearest individual (n = 5 samples/site). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Annelida						
Oligochaeta						
Tubificidae						
Tubificidae	92	8	25	225	1,275	725
Polychaeta						
Ampharetidae						
Ampharete sp.	558	349	30	925	367	317
Melinna maculata	17	17	20	0	0	8
Capitellidae						
Capitella capitata complex	8	0	0	167	100	50
Mediomastus ambiseta	1,675	2,542	7,029	18,025	7,516	5,208
Cirratulidae						
Caulleriella sp.	25	0	21	25	0	0
Cirratulidae	0	0	0	0	142	0
Cirriformia sp.	0	0	0	0	0	20
Tharyx sp.	0	0	21	0	0	238
Glyceridae						
Glycera sp.	50	33	58	92	67	158
Goniadidae						
Glycinde sp.	0	0	0	0	8	0
Goniada sp.	0	0	0	0	0	17
Goniadidae	0	0	0	8	0	0
Hesionidae						
Hesionidae	0	0	0	0	8	0
Lumbrineridae						
Lumbrineridae	33	8	0	0	0	0
Lumbrineris sp.	0	0	8	17	0	0
Lumbrineris verrilli	0	0	0	0	8	0
Magelonidae						
Magelona sp.	8	58	0	8	0	0
Maldanidae						
Axiothella sp.	0	0	0	0	8	0
Maldanidae	0	0	0	0	0	8
Nephtyidae						
Nephtyidae	8	0	8	33	8	0
Nephtys sp.	0	17	0	0	0	8
Nereididae						
Laeonereis sp.	0	0	8	0	0	0
Nereis sp.	17	0	17	0	0	0
Nereis acuminata	0	0	0	0	42	0
Nereis succinea	0	0	0	50	0	0
Onuphidae						
Diopatra sp.	8	0	33	0	0	17
Diopatra cuprea	0	0	0	150	75	0
Kinbergonuphis sp.	17	0	0	0	0	0
Opheliidae						
Armandia sp.	225	67	0	108	0	0
Armandia agilis	0	0	0	0	42	125
Armandia maculata	0	0	0	0	83	83

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Orbiniidae						
Leitoscoloplos sp.	17	0	73	0	0	0
Leitoscoloplos robustus	0	0	0	0	33	83
Scoloplos sp.	0	0	0	0	8	0
Scoloplos rubra	0	0	10	0	0	0
Oweniidae						
Owenia fusiformis	192	350	208	433	450	417
Paraonidae						
Aricidea sp.	0	0	0	0	17	0
Aricidea suecica	0	0	83	0	0	0
Cirrophorus sp.	0	0	0	0	17	0
Paraonis sp.	0	0	0	0	0	208
Pectinariidae						
Pectinaria sp.	58	17	0	0	0	0
Pectinaria gouldi	0	0	484	375	192	192
Phyllodocidae						
Eteone heteropoda	117	33	50	56	66	17
Eumida sanguinea	0	0	8	0	0	0
Paranaitis sp.	0	0	0	0	9	0
Phyllodoce sp.	0	0	0	28	0	0
Pilargidae						
Sigambra tentaculata	25	33	0	17	0	17
Polynoidae						
Polynoidae	0	0	0	17	8	8
Sabellariidae						
Sabellaria sp.	0	0	0	17	0	0
Sabellidae						
Demonax sp.	8	0	0	25	25	0
Sabellidae	0	0	8	0	0	0
Sigalionidae						
Fimbriosthenelais sp.	0	0	0	10	30	0
Sthenelais sp.	0	0	0	31	20	25
Spionidae						
Dipolydora sp.	0	0	0	25	0	0
Dipolydora socialis	26	34	59	0	67	35
Paraprionospio pinnata	156	68	17	34	8	9
Polydora cornuta	0	0	0	0	0	9
Prionospio cristata	0	8	0	0	0	10
Apoprionospio dayi	0	0	0	0	0	9
Prionospio perkinsi	338	322	212	178	76	42
Prionospio pinnata	0	0	0	9	0	0
Scolelepis texana	35	68	17	42	17	17
Spiophanes bombyx	61	187	127	271	808	1,101
Spiophanes duplex	0	0	0	0	8	9
Streblospio sp.	3,609	2,196	5,421	966	3,173	1,760
Syllidae						
Exogone sp.	0	0	0	0	58	33
Grubeosyllis sp.	0	0	17	0	0	0
Sphaerosyllis sp.	17	0	17	25	0	0
Syllidae	0	33	0	0	0	0
Syllis sp.	0	0	0	25	0	0
Terebellidae						
Hauchiella sp.	0	0	25	0	0	0
Pista sp.	0	0	0	0	33	0
Pista quadrilobata	0	0	0	25	0	0
Terebellidae	8	0	0	0	0	17

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Arthropoda						
Crustacea						
Ampeliscidae						
Ampelisca sp.	0	0	0	0	0	9
Ampelisca abdita	63	118	39	147	13	0
Ampelisca holmesi	31	0	0	0	0	0
Ampelisca vadorum	0	24	0	254	128	0
Ampelisca verrilli	31	0	78	13	26	0
Apseudidae						
Apseudes sp.	8	17	0	0	0	0
Bateidae						
Batea catharinensis	0	0	0	501	0	0
Bodotriidae						
Cyclaspis unicornis	20	0	0	0	0	0
Cyclaspis varians	0	33	0	17	25	8
Caprellidae						
Caprella sp.	0	0	0	0	33	43
Caprellidae	8	0	0	216	0	0
Corophiidae						
Cerapus sp.	15	8	0	98	18	0
Corophiidae	0	0	8	0	0	0
Ericthonius brasiliensis	0	0	0	533	89	51
Monocorophium sp.	60	17	0	0	35	0
Diastylidae						
Oxyurostylis smithi	50	33	0	339	33	117
Gammaridae						
Dulichiella appendiculata	0	0	0	9	0	0
Elasmopus levis	0	0	0	17	0	0
Melita sp.	8	0	0	0	0	0
Idoteidae						
Edotea triloba	8	0	8	0	25	17
Isaeidae						
Photis sp.	0	0	0	0	8	9
Photis sp. f	0	0	0	35	0	0
Leptocheliidae						
Hargeria rapax	0	0	0	8	8	0
Leuconidae						
Leucon americanus	30	25	0	35	8	0
Liljeborgiidae						
Listriella sp.	8	0	0	0	0	0
Listriella barnardi	0	0	0	9	0	0
Munnidae						
Uromunna sp.	8	0	0	0	0	0
Oedicerotidae						
Americhelidium sp.	0	0	0	9	0	0
Ameroculodes sp.	0	0	0	0	0	43
Paguridae						
Paguridae	0	17	0	10	17	0
Pagurus sp.	47	0	0	0	0	0
Penaeidae						
Penaeidae	0	0	0	10	0	0
Phoxocephalidae						
Eobrolgus spinosus	0	0	0	0	0	59
Metharpinia floridana	0	0	0	0	8	78
Phoxocephalidae	0	0	0	9	0	0
Pinnotheridae						
Pinnixa sp.	12	0	0	0	0	0

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Podoceridae						
Podocerus brasiliensis	0	0	0	17	0	0
Sphaeromatidae						
Cassidinidea ovalis	0	0	8	0	0	0
Synopiidae						
Synopiidae	0	0	0	9	0	0
Thoracica						
Thoracica sp.	0	0	8	0	0	0
Xanthidae						
Xanthidae	0	0	0	30	0	0
Insecta						
Elmidae						
Stenelmis sp.	17	0	0	0	0	0
Pycnogonida						
Pycnogonida	0	0	0	0	8	0
Tanystylidae						
Tanystylum orbiculare	0	0	0	8	0	0
Bryozoa						
Bryozoa	8	8	0	8	8	0
Chordata						
Ascidiacea						
Ascidiacea	25	0	0	0	0	0
Cnidaria						
Anthozoa						
Actiniaria						
Actiniaria	17	0	25	0	0	44
Renillidae						
Renilla sp.	0	0	0	0	0	15
Hydrozoa						
Hydrozoa	8	0	0	17	25	0
Echinodermata						
Holothuroidea						
Holothuroidea	8	0	0	9	17	0
Stelleroidea						
Amphiuridae						
Amphiuridae	0	0	0	28	0	0
Ophiurida						
Ophiurida	17	0	0	0	0	0
Ophiuroidea						
Ophiuroidea	25	0	0	405	83	42
Echiura						
Echiura	8	0	0	0	0	0
Mollusca						
Bivalvia						
Arcidae						
Anadara sp.	0	0	0	134	0	0
Arcidae	0	0	0	0	26	0
Corbulidae						
Corbula sp.	0	0	0	0	18	0
Lucinidae						
Parvilucina multilineata	0	0	146	42	35	24
Lyonsiidae						
Lyonsia sp.	0	0	9	25	44	0
Lyonsiidae	0	0	0	0	0	12
Mactridae						
Mactridae	0	0	0	0	0	12

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Myidae						
Myidae	0	0	0	8	0	0
Nuculidae						
Nucula sp.	0	0	0	0	0	12
Nucula crenulata	0	0	0	101	0	0
Semelidae						
Semelidae	1,654	1,342	273	1,285	1,160	426
Solenidae						
Solen sp.	0	0	0	8	0	0
Tellinidae						
Tellinidae	321	192	264	1,755	1,732	473
Veneridae						
Chione sp.	0	0	0	8	0	0
Chione elevata	50	0	0	0	26	0
Gastropoda						
Calyptraeidae						
Crepidula sp.	10	0	0	9	0	0
Columbellidae						
Columbellidae	10	0	0	0	0	0
Costoanachis sp.	0	0	0	26	0	0
Cylichnidae						
Acteocina sp.	0	11	125	69	0	0
Acteocina bidentata	0	0	0	0	105	17
Haminoeidae						
Haminoea sp.	0	0	8	0	0	8
Haminoea succinea	0	0	0	52	0	0
Hydrobiidae						
Hydrobiidae	0	11	17	35	18	0
Nassariidae						
Ilyanassa sp.	0	0	25	0	0	0
Nassariidae	0	0	0	0	0	8
Nassarius sp.	0	0	0	17	0	0
Nassarius vibex	21	11	0	0	0	0
Naticidae						
Natica sp.	0	0	0	9	0	0
Pyramidellidae						
Pyramidellidae	0	0	0	0	35	0
Vitrinellidae						
Vitrinellidae	0	0	0	0	9	0
Scaphopoda						
Dentaliidae						
Dentaliidae	0	0	0	8	0	0
Opisthobranchia						
Opisthobranchia	25	0	8	0	0	25
Nemertea						
Nemertea	158	583	208	200	58	100
Phoronida						
Phoronida	58	33	0	0	0	0
Phoronidae						
Phoronis architecta	0	0	42	0	25	33
Platyhelminthes						
Turbellaria						
Polycladida						
Polycladida	125	0	17	8	17	17
Turbellaria	0	17	0	0	0	0
Sipuncula						
Sipuncula	92	0	8	67	25	8

Appendix 8b

Benthic macroinvertebrates collected in ponar samples from upstream and downstream of the St. Augustine #1 WWTP (2/20/03). Taxa collected and total number of individuals counted (n = 5 samples/site).

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Annelida						
Oligochaeta						
Tubificidae						
Tubificidae	11	1	3	27	153	87
Polychaeta						
Ampharetidae						
Ampharete sp.	67	40	3	110	39	38
Ampharetidae	0	2	1	1	5	0
Melinna maculata	2	2	2	0	0	1
Capitellidae						
Capitella capitata complex	1	0	0	20	12	6
Capitellidae	2	0	1	5	2	5
Mediomastus sp.	92	99	269	318	304	285
Mediomastus ambiseta	107	206	573	1,840	596	335
Cirratulidae						
Caulleriella sp.	2	0	1	1	0	0
Cirratulidae	1	0	3	2	17	18
Cirriformia sp.	0	0	0	0	0	1
Tharyx sp.	0	0	1	0	0	12
Glyceridae						
Glycera sp.	5	4	7	11	8	19
Glyceridae	1	0	0	0	0	0
Goniadidae						
Glycinde sp.	0	0	0	0	1	0
Goniada sp.	0	0	0	0	0	1
Goniadidae	0	0	0	1	0	1
Hesionidae						
Hesionidae	0	0	0	0	1	0
Lumbrineridae						
Lumbrineridae	4	1	0	1	0	0
Lumbrineris sp.	0	0	1	1	0	0
Lumbrineris verrilli	0	0	0	0	1	0
Magelonidae						
Magelona sp.	1	7	0	1	0	0
Maldanidae						
Axiothella sp.	0	0	0	0	1	0
Maldanidae	0	0	0	0	0	1
Nephtyidae						
Nephtyidae	1	0	1	4	1	0
Nephtys sp.	0	2	0	0	0	1
Nereididae						
Laeonereis sp.	0	0	1	0	0	0
Nereididae	1	0	0	0	3	0
Nereis sp.	1	0	2	3	1	0
Nereis acuminata	0	0	0	0	1	0
Nereis succinea	0	0	0	3	0	0
Onuphidae						
Diopatra sp.	1	0	2	16	0	1
Diopatra cuprea	0	0	0	2	8	0
Kinbergonuphis sp.	2	0	0	0	0	0
Onuphidae	0	0	2	0	1	1

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Opheliidae						
Armandia sp.	27	8	0	13	6	15
Armandia agilis	0	0	0	0	3	6
Armandia maculata	0	0	0	0	6	4
Orbiniidae						
Leitoscoloplos sp.	2	0	7	0	3	3
Leitoscoloplos robustus	0	0	0	0	1	6
Orbiniidae	0	0	2	0	0	1
Scoloplos sp.	0	0	0	0	1	0
Scoloplos rubra	0	0	1	0	0	0
Oweniidae						
Owenia sp.	0	2	0	7	0	0
Owenia fusiformis	23	40	25	42	54	50
Oweniidae	0	0	0	3	0	0
Paraonidae						
Aricidea sp.	0	0	8	0	1	0
Aricidea suecica	0	0	2	0	0	0
Cirrophorus sp.	0	0	0	0	1	0
Paraonidae	0	0	0	0	2	21
Paraonis sp.	0	0	0	0	0	4
Pectinariidae						
Pectinaria sp.	5	2	25	3	10	9
Pectinaria gouldi	0	0	33	36	11	14
Pectinariidae	2	0	0	6	2	0
Phyllodocidae						
Eteone sp.	3	0	1	3	1	1
Eteone heteropoda	6	3	5	3	6	1
Eumida sanguinea	0	0	1	0	0	0
Paranaitis sp.	0	0	0	0	1	0
Phyllodoce sp.	0	0	0	3	0	0
Phyllodocidae	5	1	0	1	1	0
Pilargidae						
Sigambra sp.	0	1	0	0	0	0
Sigambra tentaculata	3	3	0	2	0	2
Polychaeta						
Polychaeta	0	0	1	0	0	0
Polynoidae						
Polynoidae	0	0	0	2	1	1
Sabellariidae						
Sabellaria sp.	0	0	0	2	0	0
Sabellidae						
Demonax sp.	1	0	0	2	3	0
Sabellidae	0	0	1	1	0	0
Sigalionidae						
Fimbriosthenelais sp.	0	0	0	1	3	0
Sigalionidae	0	0	0	1	1	0
Sthenelais sp.	0	0	0	3	2	3
Spionidae						
Dipolydora sp.	2	3	6	3	5	1
Dipolydora socialis	1	1	1	0	3	3
Paraprionospio sp.	1	0	0	0	0	0
Paraprionospio pinnata	17	8	2	4	1	1
Polydora cornuta	0	0	0	0	0	1
Prionospio sp.	8	0	5	1	2	1
Prionospio cristata	0	1	0	0	0	1
Apoprionospio dayi	0	0	0	0	0	1
Prionospio perkinsi	31	38	20	20	7	4
Prionospio pinnata	0	0	0	1	0	0
Scolelepis sp.	1	2	0	4	0	1

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Scolelepis texana	3	6	2	1	2	1
Spionidae	20	6	12	3	5	14
Spiophanes bombyx	7	22	15	32	96	127
Spiophanes duplex	0	0	0	0	1	1
Streblospio sp.	416	259	639	114	377	203
Syllidae						
Exogone sp.	0	0	0	0	2	1
Grubeosyllis sp.	0	0	1	0	0	0
Sphaerosyllis sp.	1	0	1	1	0	0
Syllidae	1	4	2	4	5	3
Syllis sp.	0	0	0	1	0	0
Terebellidae						
Hauchiella sp.	0	0	2	0	0	0
Pista sp.	0	0	0	0	2	0
Pista quadrilobata	0	0	0	2	0	0
Terebellidae	1	0	1	1	2	2
Arthropoda						
Crustacea						
Ampeliscidae						
Ampelisca sp.	7	11	5	17	7	1
Ampelisca abdita	4	5	3	11	1	0
Ampelisca holmesi	2	0	0	0	0	0
Ampelisca vadorum	0	1	0	19	10	0
Ampelisca verrilli	2	0	6	1	2	0
Amphipoda						
Amphipoda	0	0	0	8	0	1
Apseudidae						
Apseudes sp.	1	2	0	0	0	0
Bateidae						
Batea sp.	0	0	0	14	0	0
Batea catharinensis	0	0	0	44	0	0
Bodotriidae						
Cyclaspis sp.	1	1	0	0	0	0
Cyclaspis unicornis	1	0	0	0	0	0
Cyclaspis varians	0	3	0	2	3	1
Caprellidae						
Caprella sp.	0	0	0	0	4	1
Caprellidae	1	0	0	25	0	4
Corophiidae						
Cerapus sp.	1	1	0	11	2	0
Corophiidae	4	0	1	2	1	4
Ericthonius sp.	0	0	0	1	0	0
Ericthonius brasiliensis	0	0	0	59	10	2
Monocorophium sp.	4	2	0	0	4	0
Cumacea						
Cumacea	2	0	0	2	0	0
Decapoda						
Decapoda	2	1	0	1	0	0
Diastylidae						
Oxyurostylis sp.	2	0	0	7	2	3
Oxyurostylis smithi	3	4	0	32	2	11
Gammaridae						
Dulichiella appendiculata	0	0	0	1	0	0
Elasmopus levis	0	0	0	2	0	0
Melita sp.	1	0	0	0	0	0
Idoteidae						
Edotea triloba	1	0	1	0	3	2

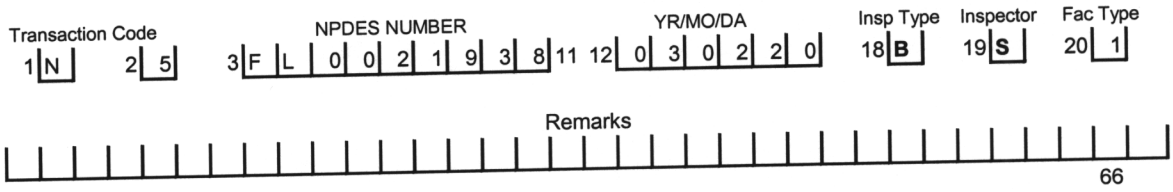
	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Isaeidae						
Photis sp.	0	0	0	2	1	1
Photis sp. f	0	0	0	2	0	0
Leptocheliidae						
Hargeria rapax	0	0	0	1	1	0
Leuconidae						
Leucon sp.	1	0	0	0	0	0
Leucon americanus	2	3	0	4	1	0
Liljeborgiidae						
Listriella sp.	1	0	0	0	0	0
Listriella barnardi	0	0	0	1	0	0
Munnidae						
Uromunna sp.	1	0	0	0	0	0
Oedicerotidae						
Americhelidium sp.	0	0	0	1	0	0
Ameroculodes sp.	0	0	0	0	0	3
Oedicerotidae	0	0	0	0	0	2
Paguridae						
Paguridae	2	1	0	1	2	0
Pagurus sp.	2	0	0	0	0	0
Penaeidae						
Penaeidae	0	0	0	1	0	0
Phoxocephalidae						
Eobrolgus spinosus	0	0	0	0	0	6
Metharpinia floridana	0	0	0	0	1	8
Phoxocephalidae	0	0	0	1	0	2
Pinnotheridae						
Pinnixa sp.	1	0	0	0	0	0
Podoceridae						
Podoceridae	0	0	0	1	0	0
Podocerus brasiliensis	0	0	0	1	0	0
Sphaeromatidae						
Cassidinidea ovalis	0	0	1	0	0	0
Synopiidae						
Synopiidae	0	0	0	1	0	0
Thoracica						
Thoracica	0	0	1	0	0	0
Xanthidae						
Xanthidae	0	0	0	3	0	0
Insecta						
Elmidae						
Stenelmis sp.	2	0	0	0	0	0
Pycnogonida						
Pycnogonida	0	0	0	0	1	0
Tanystylidae						
Tanystylum orbiculare	0	0	0	1	0	0
Bryozoa						
Bryozoa	1	1	0	1	1	0
Chordata						
Ascidiacea						
Ascidiacea	3	0	0	0	0	0
Anthozoa						
Actiniaria						
Actiniaria	2	0	2	0	0	3
Anthozoa						
Anthozoa	0	0	0	0	0	3
Renillidae						
Renilla sp.	0	0	0	0	0	1

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Cnidaria						
Cnidaria	0	0	1	0	0	0
Hydrozoa						
Hydrozoa	1	0	0	2	3	0
Echinodermata						
Echinodermata	0	0	0	5	0	0
Holothuroidea						
Holothuroidea	1	0	0	1	2	0
Stelleroidea						
Amphiuridae						
Amphiuridae	0	0	0	3	0	0
Ophiurida						
Ophiurida	2	0	0	0	0	0
Ophiuroidea						
Ophiuroidea	3	0	0	44	10	5
Echiura						
Echiura	1	0	0	0	0	0
Mollusca						
Bivalvia						
Arcidae						
Anadara sp.	0	0	0	3	0	0
Arcidae	0	0	0	13	3	0
Bivalvia						
Bivalvia	41	0	7	3	19	34
Corbulidae						
Corbula sp.	0	0	0	0	2	0
Lucinidae						
Lucinidae	0	0	2	1	0	1
Parvilucina sp.	0	0	9	0	3	0
Parvilucina multilineata	0	0	5	4	1	1
Lyonsiidae						
Lyonsia sp.	0	0	1	2	5	0
Lyonsiidae	0	0	0	1	0	1
Mactridae						
Mactridae	0	0	0	0	0	1
Myidae						
Myidae	0	0	0	1	0	0
Nuculidae						
Nucula sp.	0	0	0	10	0	1
Nucula crenulata	0	0	0	2	0	0
Semelidae						
Semelidae	165	161	30	153	132	36
Solenidae						
Solen sp.	0	0	0	1	0	0
Tellinidae						
Tellinidae	32	23	29	209	197	40
Veneridae						
Chione sp.	0	0	0	1	0	0
Chione elevata	4	0	0	0	3	0
Veneridae	1	0	0	0	0	0
Gastropoda						
Calyptraeidae						
Crepidula sp.	1	0	0	1	0	0
Columbellidae						
Columbellidae	1	0	0	2	0	0
Costoanachis sp.	0	0	0	1	0	0

	Site 1 (outfall)	Site 2	Site 3	Site 4 (outfall)	Site 5	Site 6
Cylichnidae						
Acteocina sp.	0	1	15	8	10	1
Acteocina bidentata	0	0	0	0	2	1
Gastropoda						
Gastropoda	1	1	0	1	1	0
Haminoeidae						
Haminoea sp.	0	0	1	4	0	1
Haminoea succinea	0	0	0	2	0	0
Hydrobiidae						
Hydrobiidae	0	1	2	4	2	0
Nassariidae						
Ilyanassa sp.	0	0	3	0	0	0
Nassariidae	1	0	0	0	0	1
Nassarius sp.	0	0	0	2	0	0
Nassarius vibex	1	1	0	0	0	0
Naticidae						
Natica sp.	0	0	0	1	0	0
Pyramidellidae						
Pyramidellidae	0	0	0	0	4	0
Vitrinellidae						
Vitrinellidae	0	0	0	0	1	0
Opisthobranchia						
Opisthobranchia	3	0	1	0	0	3
Scaphopoda						
Dentaliidae						
Dentaliidae	0	0	0	1	0	0
Nemertea						
Nemertea	19	70	25	24	7	12
Phoronida						
Phoronida	7	4	3	0	1	1
Phoronidae						
Phoronis architecta	0	0	2	0	2	3
Platyhelminthes						
Turbellaria						
Polycladida						
Polycladida	2	0	2	1	2	2
Turbellaria	13	2	0	0	0	0
Sipuncula						
Sipuncula	11	0	1	8	3	1

The Bioassay of St. Augustine WWTP #1 effluent sampled on February 20, 2003, NPDES #FL0021938.

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



The Priority Pollutants Analysis for Bioassay of St. Augustine WWTP #1 effluent sampled on February 20, 2003, NPDES #FL0021938.

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

