

Assessment of

Ocean Maisonettes Wastewater Treatment Facility

Palm Beach County

NPDES #FL0028380

Sampled October 20, 2003

December 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

Third Year Inspection Summary

Discharger:	Ocean Maisonettes Waste Water Treatment Facility
County:	Palm Beach
NPDES Number:	FL0028380
Permit Expiration:	August 10, 2004

Toxics Sampling Inspection **(XSI)**

Date Sampled: October 20, 2003

Results: Copper (22.4 μg/L) and iron (748 μg/L) were detected in the effluent at levels that exceeded the Class III Marine Water Quality Criteria (62-302.530 (24) and (39) F.A.C.). Aluminum, cadmium, lead, silver and zinc were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria (FAC 62-302). No organic constituents were detected in the effluent.

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: October 20, 2003

Results: The effluent sample was not acutely toxic to the fish, *Pimephales promelas,* or to the water flea, *Ceriodaphnia dubia,* during the 48-hour acute bioassay.

Water Quality Inspection **(WQI)**

Date Sampled: October 20, 2003

Results: Dissolved oxygen (mg/L) failed to comply with Class III Marine Water Quality Criteria (4.0 mg/L) in bottom water at the Control Site (0.24 mg/L) and at Test Site 3 (3.6 mg/L). Total nitrogen (6.5 mg/L) and total phosphorus (1.6 mg/L) were elevated in the effluent and may have contributed to slightly elevated nutrient levels at the Test Sites as compared with the Control Site. Algal Growth Potential was elevated in the effluent (149 mg dry weight/L), but levels at the three test sites were not above the 10 mg dry weight/L suggested "problem" threshold. Chlorophyll *a* was not detected in the effluent, Test Site, or Control Site water samples.

Introduction

The Ocean Maisonettes Wastewater Treatment Facility is located in Palm Beach County, Florida (Appendix 1). This facility is an extended-aeration wastewater treatment facility consisting of two 5,000-gallon aeration tanks, one 2,500-gallon clarifier, one 750-gallon chlorine contact tank and one 300-gallon dechlorination tank. The 0.01 MGD design facility serves a privately owned cottage community of 32 units and discharges continuously into the Class III marine waters of the Spanish River. The Spanish River is a tributary to the Intracoastal Waterway that discharges into the Lake Worth Lagoon. The actual mean flow during this survey was not recorded (per Terry Davis, FDEP Southeast District).

State Surface Water Quality Criteria and facility permit limits are listed in Table 1. Class III Marine Water Quality Criteria follow Florida Administrative Code (FAC) 62-302. The plant has failed to file Discharge Monitoring Reports ten times between December 2001 and June 2003 (Appendix 2).

Methods

The purpose of this investigation was to test the facility's effluent for toxicity and the presence of NPDES Priority Pollutants. In addition, samples of the effluent and receiving water were tested for nutrient levels, chlorophyll *a,* and algal growth potential. Detailed methods are given in Appendix 3.

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

The following personnel were involved in this investigation: Mark Thompson and Terry Davis (FDEP Southeast District), and FDEP Central Laboratory in Tallahassee.

Results and Discussion

- Specific chemical results are reported in Table 1 and a complete list of chemical analytes may be reviewed in Appendix 4. Copper (22.4 μg/L) and iron (748 μg/L) were detected in the effluent at levels that exceeded the Class III Marine Water Quality Criteria by factors of six and two, respectively (62-302.530 (24) and (39) F.A.C.). Aluminum, cadmium, lead, silver, and zinc were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria (FAC 62-302); cadmium was the only metal detected in the effluent at levels below the practical quantitation limit. No organic pollutants were detected in the effluent.

- Effluent pH (Standard Units) complied with Class III Marine Water Quality Criteria (FAC 62-302). The pH at the Test and Control Sites also complied with Class III Marine Water Quality Criteria (Table 1).
- Dissolved oxygen (mg/L) complied with Class III Marine Water Quality Criteria at Test Sites 1 and 2, but was below the 4.0 mg/L criterion (62-302.530 (31) F.A.C.) in bottom readings from Test Site 3 (3.6 mg/L) and the Control Site (0.24 mg/L, Table 1, Appendix 6).
- The effluent sample was not acutely toxic to the fish, *Pimephales promelas,* or to the water flea, *Ceriodaphnia dubia,* during 48-hour acute screening bioassays (Table 1, Appendix 6).
- Fecal and total coliforms were not tested during this inspection.
- Effluent total nitrogen concentration was 6.5 mg/L and total phosphorus concentration was 1.6 mg/L (Table 1). Approximately 50% of the total phosphorus was in the form of orthophosphate while 75% of the total nitrogen was nitrate + nitrite. Effluent nutrient concentrations may have contributed to slightly elevated levels at all Test Sites compared to the Control Site; however, there was numerous additional potential sources of nutrient inputs near the outfall and outfall discharge was minimal, leading to uncertainty as to whether the facility's discharge was causing the elevated levels observed. Nitrate + nitrite levels at each of the three Test Sites were higher than the 80^{th} percentile of typical Florida estuaries, while levels at the Control Site were in the 70^{th} percentile (Appendix 5). Other nutrients at all sites were in the 50^{th} percentile or lower of typical Florida estuaries.
- At a flow rate of 1,600 gallons/day (Appendix 2), the facility would release 31.7 pounds of total nitrogen, 23.9 pounds of nitrate plus nitrite, 4.0 pounds of orthophosphate and 7.8 pounds of total phosphate each year based on the data in Table 1.
- Chlorophyll *a* was not detected in the effluent or at any receiving water station (Table 1). We note that nutrients in the water column may or may not fuel algal production immediately, depending upon the sum of environmental conditions that limit algal growth at the site (e.g. pH, shading, turbidity). Thus it is not necessarily contradictory for ambient nutrient levels to be high and for no chlorophyll to be detected in water samples.
- 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 values of the Test Site samples bracketing the discharge ranged from 6.54 to 7.68 mg dry weight/L and were not above this threshold (Table 1). Effluent AGP was elevated (149 mg dry weight/L) and there was no evidence of growth inhibition (Table 1).

Conclusions

Copper (22.4 μg/L) and iron (748 μg/L) were detected in the effluent at levels that exceeded the Class III Marine Water Quality Criteria (62-302.530 (24) and (39) F.A.C.). Aluminum, cadmium, lead, silver and zinc were detected in the effluent at levels that complied with Class III Marine Water Quality Criteria (FAC 62-302). No organic constituents were detected in the effluent. The effluent was not acutely toxic in the 48-hour acute screening bioassays. Effluent total nitrogen concentration was 6.5 mg/L and total phosphorus concentration was 1.6 mg/L. At a flow rate of 1,600 gallons/day and nutrient levels like those found during sampling, the facility would release 31.7 pounds of total nitrogen and 7.8 pounds of total phosphorus per year. It was not possible to determine if the effluent contributed to elevated levels of nutrients at the Test Sites because there were numerous additional sources of nutrient inputs in the area.

Dissolved oxygen (mg/L) complied with Class III Marine Water Quality Criteria at Test Sites 1 and 2, but was below the 4.0 mg/L criterion (62-302.530 (31) F.A.C.) in bottom readings from Test Site 3 and the Control Site.

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

Ocean Maisonettes WWTF	Class III Criteria	Effluent Limits	Effluent Samples	Test 1	Test 2	Test 3	Control
Organic Constituents (µg/L)							
none detected	-	-	-	-	-	-	-
Metals (µg/L unless otherwise noted, Class III Criteria are less than or equal to the value given)							
Aluminum	1500	-	517	-	-	-	-
Arsenic	50	-	6 U	-	-	-	-
Cadmium	9.3	-	0.076 I	-	-	-	-
Calcium (mg/L)	-	-	50.8	-	-	-	-
Chromium	-	-	3 U	-	-	-	-
Copper	3.7	-	22.4	-	-	-	-
Iron	300	-	748	-	-	-	-
Lead	8.5	-	2	-	-	-	-
Magnesium (mg/L)	-	-	4.2	-	-	-	-
Nickel	8.3	-	3 U	-	-	-	-
Selenium	71	-	1 U	-	-	-	-
Silver	2.3	-	0.098	-	-	-	-
Zinc	86	-	60	-	-	-	-
Nutrients (mg/L)							
Ortho-phosphate	-	-	0.83	0.016	0.016	0.014	0.008 I
Total Phosphorus	-	-	1.6	0.051 I	0.058 I	0.05 I	0.042 I
Total Ammonia	-	-	0.02 I	0.067	0.073	0.074	0.041
Un-ionized Ammonia	-	-	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate and Nitrite	-	-	4.9	0.094	0.087	0.089	0.074
Total Kjeldahl Nitrogen	-	-	1.6	0.63	0.66	0.64	0.64
Organic Nitrogen	-	-	1.58	0.563	0.587	0.566	0.599
Total Nitrogen	-	-	6.5	0.724	0.747	0.729	0.714
General Physical and Chemical Parameters							
Dissolved Oxygen (mg/L) surface	≥ 4.0 s	-	-	-	6.35	5.11	6.30
Dissolved Oxygen (mg/L) mid depth	≥ 4.0 s	-	-	-	6.34	-	5.53
Dissolved Oxygen (mg/L) bottom	≥ 4.0 s	-	-	6.16	5.45	3.6	0.24
pH (SU) surface	6.5-8.5 s	6.5-8.5 s	7.5	-	7.9	7.9	8.0
pH (SU) mid depth	6.5-8.5 s		-	-	7.9	-	7.9
pH (SU) bottom	6.5-8.5 s		-	7.9	7.9	7.8	7.9
Conductivity (µmhos/cm) surface	-	-	550	-	40,200	40,468	41,119
Conductivity (µmhos/cm) mid depth	-	-	-	-	40,200	-	43,711
Conductivity (µmhos/cm) bottom	-	-	-	41,296	47,300	47,441	44,577
Temperature (°C) surface	-	-	26.5	-	26.2	26.0	26.2
Temperature (°C) mid depth	-	-	-	-	26.0	-	26.5
Temperature (°C) bottom	-	-	-	26.1	31.1	27.6	28.7
Total Suspended Solids (mg/L)	-	60.0 s	-	-	-	-	-
Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	0.02	-	-	-	-
CBOD, 5 day (mg/L)	-	60.0 s	-	-	-	-	-
Chlorophyll *a* (µg/L)	-	-	1.3 U	0.96 U	0.85 U	0.85 U	0.85 U
Phaeophytin (µg/L)	-	-	1.3 U	0.96 U	0.85 U	0.85 U	0.85 U
Flow (MGD)	-	report	-	-	-	-	-
Toxicity (48-hour static, screening bioassay, percent mortality in 100% effluent)							
Bioassay - Water flea	-	-	0%	-	-	-	-
Bioassay - Fish	-	-	0%	-	-	-	-
Microbiology (Number of counts/100ml)							
Fecal Coliforms	800 s	800 s	-	-	-	-	-
Total Coliforms	2400 s	-	-	-	-	-	-
Algal Growth Potential (mg dry weight/L)							
AGP	-	-	149	6.54	7.68	6.9	-
Predicted AGP (TSIN:OP ratio = 5.9)	-	-	187 + 37.4	-	-	-	-

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

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

s - Single sample

Appendices

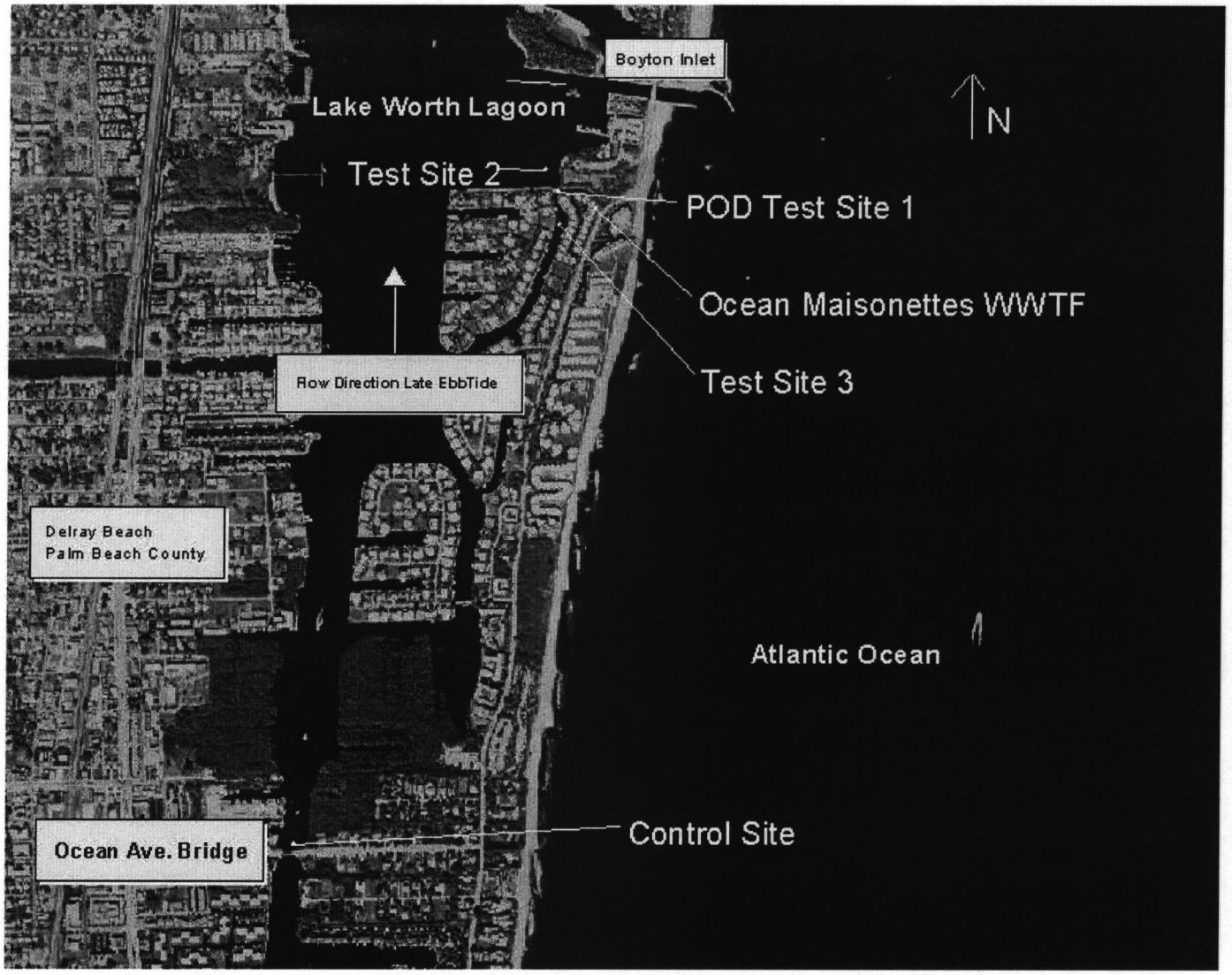
- Appendix 1. Map of facility
- Appendix 2. Facility summary
- Appendix 3. Methods
- Appendix 4. Chemical analyses of effluent and receiving water
- Appendix 5. Typical values for selected parameters in Florida waters
- Appendix 6. Additional physical and toxicological results

Appendix 1

Ocean Maisonettes WWTF

6880 N. Ocean Blvd.

Ocean Ridge FL 33435



Facility Summary

Ocean Maisonettes Wastewater Treatment Facility
NPDES Permit FL0028380
Mark Thompson, Environmental Specialist
Ambient Water Quality Section
Florida Department of Environmental Protection, SED
September 2003

Facility Contact Information

Facility Location: 6880 N. Ocean Blvd.
Ocean Ridge FL 33435
Operator Contact: 561-785-6303
26.54111/80.04575

Facility Description

Ocean Maisonettes WWTF is an extended aeration wastewater treatment facility consisting of two (2) 5,000 gallon aeration tanks; one (1) 2,500 gallon clarifier; one (1) 750 gallon chlorine contact tank; and one (1) 300 gallon dechlorination tank. The 0.01 MGD design facility serves a privately owned cottage community of 32 units and discharges continuously into the Spanish River (Class III Waters), which is a tributary to the Intracoastal Waterway and the Lake Worth Lagoon. No mixing zone is permitted.

The Point of Discharge (POD) (identified in the permit as 001) (Figure 1) is located several hundred feet westward of the wastewater treatment facility (Figure 1) at the community's seawall about two feet below mean low water. Approximate coordinates for the POD are 26.543 latitude and 80.0461 longitude. The monthly average daily discharge was 1,600 gallons/day for August 2001 through August 2002 (2003 data not reported). Flow data can be found in the attached spreadsheet (Ocean Maisonettes data.xls). The routine monitoring locations for the discharge monitoring report are the dechlorination tank (EFD-01) and the chlorine contact chamber (EFA-01). Total residual chlorine monitoring results were not available in the PCS system at this time.

The compliance report shows five instances of non-compliance since December 2001. The latest instance was May 2003. All non-compliance episodes are attributable to failure of report submittal. Monitoring data (for TSS and CBOD) from January 2000 to present is available at the following website:
http://oaspub.epa.gov/enviro/pcs_det_reports.pcs_tst?npdesid=FL0028380&npvalue=1&npvalue=2&npvalue=3&npvalue=4&npvalue=5&npvalue=6&rvalue=13&npvalue=7&npvalue=8&npvalue=10&npvalue=11&npvalue=12.

Part I.A.1 of the NPDES discharge permit requires Ocean Maisonettes to report monthly averages of daily grab samples taken at peak hydraulic flow for CBOD, TSS, Residual Chlorine at dechlorination station and fecal coliform. The facility is also required to report continuous pH and flow data. Records of pH, fecal coliform and residual chlorine data required by the NPDES permit were not found in the PCS system.

Florida Department of Environmental Protection Administrative Order AO 99-001DW 50 SED (attached to Permit # FL0028380) proclaims Ocean Maisonettes wastewater treatment facility is considered a possible contributor to high levels of nutrient loading to the Lake Worth Lagoon as described in the Lake Worth Lagoon Surface Water Improvement and Management (SWIM) Plan. The administrative order states the Lake Worth Lagoon is facing water quality problems due to nutrient loading and the Ocean Maisonettes Wastewater Treatment facility provides minimal nutrient removal. The permit applicant for this wastewater treatment facility has agreed to voluntarily connect to a centralized wastewater collection and treatment facility within 150 days of its availability. No plans currently exist for such a centralized facility.

With no plans for a centralized wastewater facility becoming available in the near future, the Ocean Maisonettes Treatment Facility will continue to be a possible source of nutrient enrichment in a waterbody that has become the focus of special concern. There is currently no requirement in the permit for nutrient or chlorophyll monitoring at the facility or in the receiving waterbody even though nutrient loadings are a major concern for this waterbody. The FYI currently scheduled should include nutrient (NH3, NO2+3, TKN, TP, OrthoP) and chlorophyll-a sampling at the sites shown on the attached map (Figure 1). Three test sites are proposed and one control site. The control site (lat 26.5272, long 80.0538) is located upstream on an ebb tide and has a significant amount of water quality data associated with it (STORET # 28010771). Test site1 (lat 26.543, long 80.0461) is located within 10 meters of the POD. Test Site 2 (lat 26.5435, long 80.0463) and 3 (lat 26.5423, long 80.0460) are located about 34 meters north and 34 meters south (respectively) of the POD. Since this is a tidally influenced waterbody located near an ocean inlet, sampling should be planned in accordance to tidal stage. The samples will be taken at late ebb tide to minimize the influence of dilution due to ocean water inflow through Boynton Inlet.

A habitat assessment will not be performed at this site and monitoring will be limited to chemical pollutants during the FYI inspection scheduled for October 20, 2003. It is suggested that we recommend periodic monitoring for nutrients (at dechlorination station and at test sites) as a condition of the new permit for this facility.

Ocean Maisonettes Monitoring Data

Year	Month	Average Daily Flow (gallons)
2003	June	No report
2003	May	No report
2003	April	No report
2003	March	No report
2003	February	No report
2003	January	No report
2002	December	No report
2002	November	No report
2002	October	No report
2002	September	No report
2002	August	400
2002	July	300
2002	June	800
2002	May	1100
2002	April	1,900
2002	March	2300
2002	February	2000
2002	January	2100
2001	December	1900
2001	November	2700
2001	October	2300
2001	September	No report
2001	August	1400
2001	July	2000
2001	June	2800
2001	May	4000
2001	April	3900
2001	March	3300
2001	February	2000
2001	January	2100
2000	December	1300
2000	November	1400
2000	October	3000
2000	September	No report
2000	August	500
2000	July	500
2000	June	1100
2000	May	2000
2000	April	2500
2000	March	2900
2000	February	2000
2000	January	2100

Appendix 3

Explanation of Measurements

(1) Quality Assurance and Quality Control

FDEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (FDEP SOPs). Methods for all analyses are on file at the FDEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.floridadep.org/labs/sop/index.htm and/or http://www.floridadep.org/labs/qa/index.htm .

(2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following FDEP SOPs. A list of the analytes tested for, results, data qualifiers, the minimum detection 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, *Pimephales promelas* 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) 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.*

Literature Cited:

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

USEPA 2002. Methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms. 5th edition. EPA-821-R-02-012. U. S. EPA, Washington, D.C. 216 pp.

Appendix 4
Chemical Analyses of Effluent and Receiving Water

Site Key	Field ID	Location
	1321	Test 2
	1322	Test 1
	1323	Test 3
	1324	Control

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	13821	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	7.68	mg DryWt/L		0.1	0.3
10/20/03	13821	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13821	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13821	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.073	mg N/L		0.01	0.02
10/20/03	13821	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.087	mg N/L		0.004	0.01
10/20/03	13821	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.66	mg N/L		0.12	0.4
10/20/03	13821	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.016	mg P/L		0.004	0.01
10/20/03	13821	Nutrients-Liquid	W-SURF-SLT	Total-P	0.058	mg P/L	I	0.02	0.06
10/20/03	13822	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	6.54	mg DryWt/L		0.1	0.3
10/20/03	13822	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
10/20/03	13822	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.96	ug/L	U	0.96	2.9
10/20/03	13822	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.067	mg N/L		0.01	0.02
10/20/03	13822	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.094	mg N/L		0.004	0.01
10/20/03	13822	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.63	mg N/L		0.12	0.4
10/20/03	13822	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.016	mg P/L		0.004	0.01
10/20/03	13822	Nutrients-Liquid	W-SURF-SLT	Total-P	0.051	mg P/L	I	0.02	0.06
10/20/03	13823	Bio-AGP/LimNut	W-SURF-SLT	Algal Growth Potential	6.9	mg DryWt/L	A	0.1	0.3
10/20/03	13823	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13823	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13823	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.074	mg N/L		0.01	0.02
10/20/03	13823	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.089	mg N/L		0.004	0.01
10/20/03	13823	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.64	mg N/L		0.12	0.4
10/20/03	13823	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.014	mg P/L		0.004	0.01
10/20/03	13823	Nutrients-Liquid	W-SURF-SLT	Total-P	0.05	mg P/L	I	0.02	0.06
10/20/03	13824	Bio-Chl-a	W-SURF-SLT	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13824	Bio-Chl-a	W-SURF-SLT	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/20/03	13824	Nutrients-Liquid	W-SURF-SLT	Ammonia-N	0.041	mg N/L		0.01	0.02
10/20/03	13824	Nutrients-Liquid	W-SURF-SLT	NO2NO3-N	0.074	mg N/L		0.004	0.01
10/20/03	13824	Nutrients-Liquid	W-SURF-SLT	N_KJEL_TOT	0.64	mg N/L		0.12	0.4
10/20/03	13824	Nutrients-Liquid	W-SURF-SLT	O-Phosphate-P	0.008	mg P/L	I	0.004	0.01
10/20/03	13824	Nutrients-Liquid	W-SURF-SLT	Total-P	0.042	mg P/L	I	0.02	0.06
10/20/03	51-OM-1	Bio-AGP/LimNut	W-EFFLUENT	Algal Growth Potential	149	mg DryWt/L		0.1	0.3
10/20/03	51-OM-1	Bio-Chl-a	W-EFFLUENT	Chlorophyll-A, Monochromatic, Water	1.3	ug/L	U	1.3	3.9
10/20/03	51-OM-1	Bio-Chl-a	W-EFFLUENT	Phaeophytin-A, Monochromatic, Water	1.3	ug/L	U	1.3	3.9
10/20/03	51-OM-1	Bio-Toxicology	W-EFFLUENT	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
10/20/03	51-OM-1	Bio-Toxicology	W-EFFLUENT	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1,4-Naphthoquinone	19	ug/L	U	19	78
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	1-Naphthylamine	9.7	ug/L	U	9.7	39
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4-Dimethylphenol	49	ug/L	U	49	190
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4-Dinitrophenol	15	ug/L	U	15	58
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Naphthylamine	9.7	ug/L	U	9.7	39
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	2-Picoline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4,4'-DDD	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4,4'-DDE	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4,4'-DDT	1.5	ug/L	UJ	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Nitroaniline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	4-Nitrophenol	15	ug/L	U	15	58
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Acenaphthene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Acenaphthylene	0.97	ug/L	UJ	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Acetophenone	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Aldrin	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Aniline	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Anthracene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzidine	97	ug/L	U	97	390
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Benzyl alcohol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Bis(2-chloroethoxy)methane	0.97	ug/L	UJ	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Chrysene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dibenzofuran	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dieldrin	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dimethyl phthalate	49	ug/L	U	49	190
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Dinoseb	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Diphenylamine	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Endosulfan I	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Endosulfan II	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Endrin	1.5	ug/L	UJ	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Endrin aldehyde	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Fluoranthene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Fluorene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Heptachlor	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Hexachloroethane	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Hexachloropropene	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Isophorone	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Isosafrole	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Methapyrilene	3.9	ug/L	U	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Naphthalene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Nitrobenzene	1.9	ug/L	U	1.9	7.8

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Nitroquinoline-1-oxide	19	ug/L	UJ	19	78
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pentachloroethane	49	ug/L	U	49	190
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pentachlorophenol	2.9	ug/L	U	2.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Phenacetin	3.9	ug/L	U	3.9	12
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Phenanthrene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Phenol	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pyrene	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Pyridine	3.9	ug/L	UJ	3.9	16
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	Safrole	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	alpha-BHC	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	beta-BHC	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	delta-BHC	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	gamma-BHC	1.5	ug/L	U	1.5	5.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	m,p-Cresols	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	o-Cresol	1.9	ug/L	U	1.9	7.8
10/20/03	51-OM-1	BNA-Water	W-EFFLUENT	o-Toluidine	0.97	ug/L	U	0.97	3.9
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Alachlor	0.59	ug/L	U	0.59	2.36
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Ametryn	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Atrazine	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Azinphos Methyl	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Bromacil	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Butylate	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Chlorpyrifos Methyl	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Diazinon	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Ethion	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Ethoprop	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Fenamiphos	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Fonofos	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Hexazinone	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Malathion	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Metalaxyl	0.24	ug/L	U	0.24	0.96
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Metolachlor	0.49	ug/L	U	0.49	1.96
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Metribuzin	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Mevinphos	0.2	ug/L	UJ	0.2	0.8
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Naled	0.78	ug/L	U	0.78	3.12
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Norflurazon	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Parathion Methyl	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Phorate	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Prometryn	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-1	GC-Water	W-EFFLUENT	Simazine	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Aluminum	517	ug/L		7	28
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Arsenic	6	ug/L	U	6	24
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Cadmium	0.076	ug/L	I	0.025	0.1
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Calcium	50.8	mg/L		0.05	0.2
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Chromium	3	ug/L	U	3	12
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Copper	22.4	ug/L		1	4
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Iron	748	ug/L		15	60
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Lead	2	ug/L		0.05	0.2
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Magnesium	4.2	mg/L		0.02	0.08
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Nickel	3	ug/L	U	3	12
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Selenium	1	ug/L	U	1	4
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Silver	0.098	ug/L		0.02	0.08
10/20/03	51-OM-1	Metals-Water	W-EFFLUENT	Zinc	60	ug/L		4	16
10/20/03	51-OM-1	Nutrients-Liquid	W-EFFLUENT	Ammonia-N	0.02	mg N/L	I	0.01	0.02
10/20/03	51-OM-1	Nutrients-Liquid	W-EFFLUENT	NO2NO3-N	4.9	mg N/L		0.04	0.1
10/20/03	51-OM-1	Nutrients-Liquid	W-EFFLUENT	N_KJEL_TOT	1.6	mg N/L		0.06	0.2
10/20/03	51-OM-1	Nutrients-Liquid	W-EFFLUENT	O-Phosphate-P	0.83	mg P/L		0.08	0.2
10/20/03	51-OM-1	Nutrients-Liquid	W-EFFLUENT	Total-P	1.6	mg P/L		0.08	0.24
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,2,4,5-Tetrachlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,3,5-Trinitrobenzene	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1,4-Naphthoquinone	19	ug/L	U	19	77
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	1-Naphthylamine	9.6	ug/L	U	9.6	38
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4,5-Trichlorophenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4-Dimethylphenol	48	ug/L	U	48	190
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4-Dinitrophenol	14	ug/L	U	14	58
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,6-Dichlorophenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Acetylaminofluorene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Methylnaphthalene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Naphthylamine	9.6	ug/L	U	9.6	38
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Nitroaniline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	2-Picoline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	77
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	3-Methylcholanthrene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	3-Nitroaniline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4,4'-DDD	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4,4'-DDE	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4,4'-DDT	1.4	ug/L	UJ	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Aminobiphenyl	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Chloroaniline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Nitroaniline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	4-Nitrophenol	14	ug/L	U	14	58
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	5-Nitro-o-toluidine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	7,12-Dimethylbenz(a)anthracene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Acenaphthene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Acenaphthylene	0.96	ug/L	UJ	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Acetophenone	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Aldrin	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Aniline	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Anthracene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Azobenzene/1,2-Diphenylhydrazine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzidine	96	ug/L	U	96	380
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Benzyl alcohol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Bis(2-chloroethoxy)methane	0.96	ug/L	UJ	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Bis(2-ethylhexyl)phthalate	170	ug/L	I	72	290
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Chrysene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dibenzofuran	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dieldrin	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dimethyl phthalate	48	ug/L	U	48	190
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dimethylaminoazobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Dinoseb	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Diphenylamine	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Endosulfan I	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Endosulfan II	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Endrin	1.4	ug/L	UJ	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Endrin aldehyde	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Ethyl methanesulfonate	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Fluoranthene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Fluorene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Heptachlor	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Hexachloroethane	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Hexachloropropene	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Isophorone	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Isosafrole	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Methapyrilene	3.8	ug/L	U	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Methyl methanesulfonate	0.96	ug/L	UJ	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosodi-n-butylamine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosodiethylamine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosomorpholine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosopiperidine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Naphthalene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Nitrobenzene	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Nitroquinoline-1-oxide	19	ug/L	UJ	19	77
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pentachlorobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pentachloroethane	48	ug/L	U	48	190
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pentachloronitrobenzene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pentachlorophenol	2.9	ug/L	U	2.9	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Phenacetin	3.8	ug/L	U	3.8	12
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Phenanthrene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Phenol	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pyrene	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Pyridine	3.8	ug/L	UJ	3.8	15
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	Safrole	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	alpha-BHC	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	beta-BHC	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	delta-BHC	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	gamma-BHC	1.4	ug/L	U	1.4	5.8
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	m,p-Cresols	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	o-Cresol	1.9	ug/L	U	1.9	7.7
10/20/03	51-OM-2	BNA-Water	W-FIELD-BK	o-Toluidine	0.96	ug/L	U	0.96	3.8
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Alachlor	0.59	ug/L	U	0.59	2.36
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Ametryn	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Atrazine	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Azinphos Methyl	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Bromacil	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Butylate	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Chlorpyrifos Methyl	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Diazinon	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Ethion	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Ethoprop	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Fenamiphos	0.2	ug/L	U	0.2	0.8
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Fonofos	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Hexazinone	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Malathion	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Metalaxyl	0.24	ug/L	U	0.24	0.96
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Metolachlor	0.49	ug/L	U	0.49	1.96
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Metribuzin	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Mevinphos	0.2	ug/L	UJ	0.2	0.8
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Naled	0.78	ug/L	U	0.78	3.12
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Norflurazon	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Parathion Methyl	0.098	ug/L	U	0.098	0.392
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Phorate	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Prometryn	0.15	ug/L	U	0.15	0.6
10/20/03	51-OM-2	GC-Water	W-FIELD-BK	Simazine	0.049	ug/L	U	0.049	0.196
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Aluminum	7	ug/L	U	7	28
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Arsenic	6	ug/L	U	6	24
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Cadmium	0.025	ug/L	U	0.025	0.1
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Calcium	0.05	mg/L	U	0.05	0.2
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Chromium	3	ug/L	U	3	12
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Copper	10	ug/L	U	10	40
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Iron	15	ug/L	U	15	60
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Lead	0.05	ug/L	U	0.05	0.2
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Magnesium	0.02	mg/L	U	0.02	0.08
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Nickel	3	ug/L	U	3	12
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Selenium	1	ug/L	U	1	4
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Silver	0.02	ug/L	U	0.02	0.08

Date Sampled	Field ID	Analysis Group	Matrix	Component	Result	Units	Remark	MDL	PQL
10/20/03	51-OM-2	Metals-Water	W-FIELD-BK	Zinc	4	ug/L	U	4	16
10/20/03	51-OM-2	Nutrients-Liquid	W-FIELD-BK	Ammonia-N	0.01	mg N/L	U	0.01	0.02
10/20/03	51-OM-2	Nutrients-Liquid	W-FIELD-BK	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
10/20/03	51-OM-2	Nutrients-Liquid	W-FIELD-BK	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
10/20/03	51-OM-2	Nutrients-Liquid	W-FIELD-BK	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
10/20/03	51-OM-2	Nutrients-Liquid	W-FIELD-BK	Total-P	0.02	mg P/L	U	0.02	0.06

Appendix 5

Typical Values for Selected Parameters in Florida Waters

Test Site 1

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	**0.96U**
TKN	0.26	0.34	0.42	0.5	**0.59**	0.69	0.76	0.82	0.95	1.3	1.49	**0.63**
NH3+NH4	0.01	0.02	0.03	0.04	0.05	**0.06**	0.08	0.09	0.13	0.22	0.28	**0.067**
NO2-NO3	0	0	0.01	0.01	0.01	0.02	0.03	0.05	**0.08**	0.17	0.23	**0.094**
Total Phosphorus	0.01	**0.02**	0.06	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.051 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	**0.016**

Test Site 2

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**
TKN	0.26	0.34	0.42	0.5	**0.59**	0.69	0.76	0.82	0.95	1.3	1.49	**0.66**
NH3+NH4	0.01	0.02	0.03	0.04	0.05	**0.06**	0.08	0.09	0.13	0.22	0.28	**0.073**
NO2-NO3	0	0	0.01	0.01	0.01	0.02	0.03	0.05	**0.08**	0.17	0.23	**0.087**
Total Phosphorus	0.01	**0.02**	0.06	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.058 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	**0.016**

Test Site 3

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**
TKN	0.26	0.34	0.42	0.5	**0.59**	0.69	0.76	0.82	0.95	1.3	1.49	**0.64**
NH3+NH4	0.01	0.02	0.03	0.04	0.05	**0.06**	0.08	0.09	0.13	0.22	0.28	**0.074**
NO2-NO3	0	0	0.01	0.01	0.01	0.02	0.03	0.05	**0.08**	0.17	0.23	**0.089**
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	**0.014**

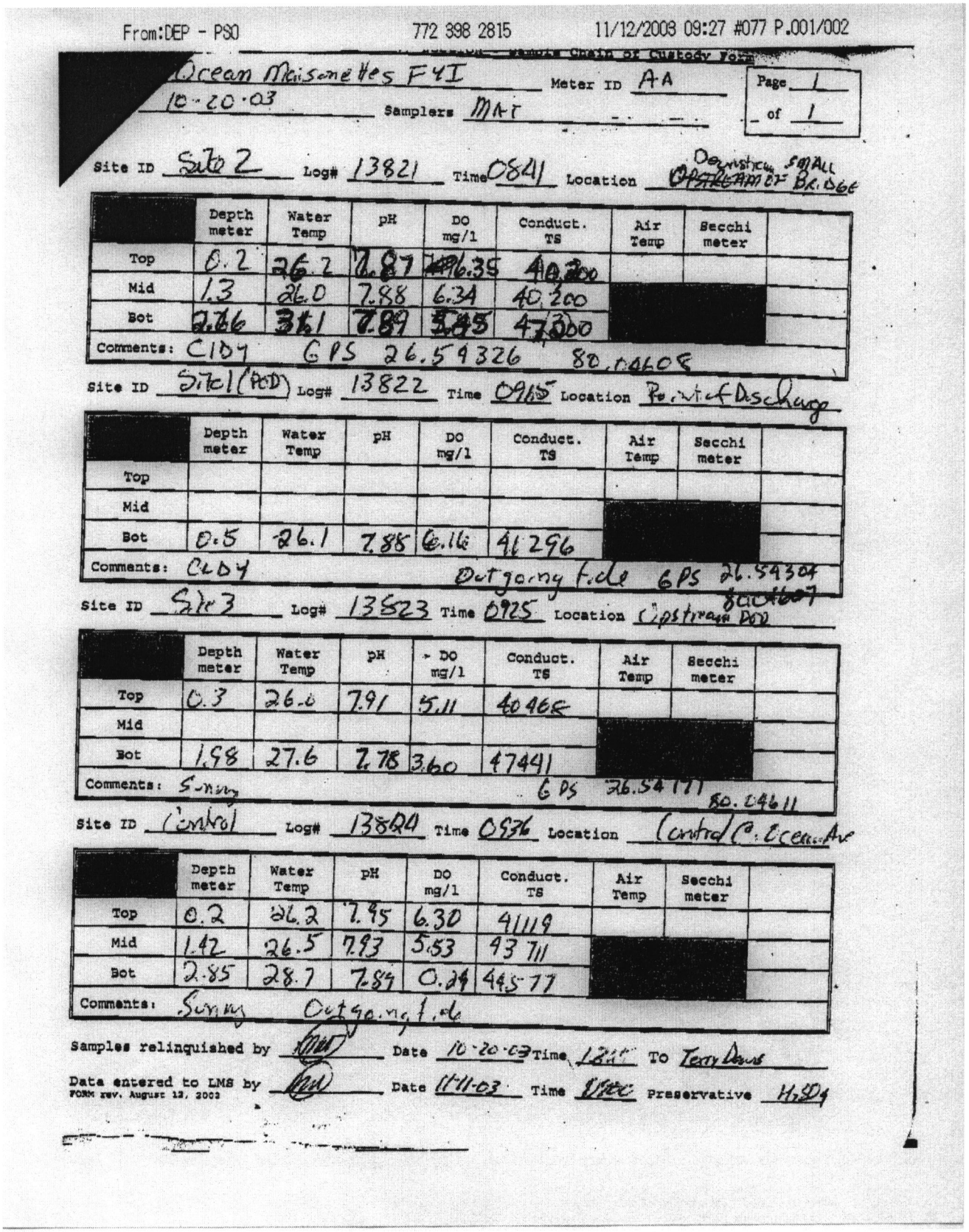
Control

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**
TKN	0.26	0.34	0.42	0.5	**0.59**	0.69	0.76	0.82	0.95	1.3	1.49	**0.64**
NH3+NH4	0.01	0.02	0.03	**0.04**	0.05	0.06	0.08	0.09	0.13	0.22	0.28	**0.041**
NO2-NO3	0	0	0.01	0.01	0.01	0.02	0.03	**0.05**	0.08	0.17	0.23	**0.074**
Total Phosphorus	0.01	**0.02**	0.06	0.07	0.1	0.11	0.14	0.17	0.23	0.43	0.59	**0.042 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	**0.008 I**

Appendix 6

Additional physical, chemical, toxicological and microbiological results



From:DEP - PSO 772 398 2815 11/12/2003 09:27 #077 P.001/002

Ocean Meisonettes F4I — Meter ID A-A — Page 1 of 1

10-20-03 — Samplers MAT

Site ID Sito 2 — Log# 13821 — Time 0841 — Location Downstream SMALL Upstream of Bridge

	Depth meter	Water Temp	pH	DO mg/l	Conduct. TS	Air Temp	Secchi meter	
Top	0.2	26.2	7.87	6.35	40200			
Mid	1.3	26.0	7.88	6.34	40200			
Bot	2.66	361	7.89	5.45	47200			

Comments: Cldy GPS 26.54326 80.04605

Site ID Site1 (POD) — Log# 13822 — Time 0915 — Location Point of Discharge

	Depth meter	Water Temp	pH	DO mg/l	Conduct. TS	Air Temp	Secchi meter	
Top								
Mid								
Bot	0.5	26.1	7.88	6.16	41296			

Comments: Cldy Outgoing tide GPS 26.54307 80.04607

Site ID Site3 — Log# 13823 — Time 0925 — Location Upstream POD

	Depth meter	Water Temp	pH	DO mg/l	Conduct. TS	Air Temp	Secchi meter	
Top	0.3	26.0	7.91	5.11	40465			
Mid								
Bot	1.98	27.6	7.78	3.60	47441			

Comments: Sunny GPS 26.54177 80.04611

Site ID Control — Log# 13824 — Time 0936 — Location Control C. Ocean Ave

	Depth meter	Water Temp	pH	DO mg/l	Conduct. TS	Air Temp	Secchi meter	
Top	0.2	26.2	7.95	6.30	41119			
Mid	1.42	26.5	7.93	5.53	43711			
Bot	2.85	28.7	7.84	0.24	44577			

Comments: Sunny Outgoing tide

Samples relinquished by [signature] Date 10-20-03 Time 1211 To Terry Davis

Data entered to LMS by [signature] Date 11-11-03 Time 0800 Preservative H_2SO_4

FORM rev. August 12, 2002

Table 1. Data recorded during the 48-hour acute screening bioassays of a sample of effluent from the Ocean Maisonettes Wastewater Treatment Facility, 6880 N. Ocean Blvd., Ocean Ridge, Palm Beach County, Florida, NPDES# FL0028380, performed from 21 to 23 October, 2003.

Facility:	**Ocean Maisonettes WWTF**		**NPDES #:**	**FL0028380**	Facility Type: **WWTF**	**Analysts:**	Christa Pierini
Location:	6880 N. Ocean Blvd.		Contact/District:	Terry Davis/SouthEast			Joshua Ayres
County:	Palm Beach		Test type:	static acute screen			James Daniels
Sample Collection Date:	10/20/2003	Time: 1045	# tests:	2	Receiving Water: Class III		Marshall Faircloth
Test Beginning Date:	10/21/2003	Time: 1530	Chlorination Type:	dechlorinated			
Test Ending Date:	10/23/2003	Time: 1500	FDEP SOP#:	TA07_01 / 02	**Page 1 of 1**	**Reviewer:**	Rob Buda

Organism: ***Ceriodaphnia dubia*** (water flea) Life stage: <24 hours Chamber size: 30 mL [A] Feeding: YCT/Algae Food Batch #: YCT 3/P. sub. 20

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature (°C)			Diss. Oxygen (mg/L)			[B] Conductivity	
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	8.1		7.9	24.0		24.3	7.4		7.9	170	195
Control B	0/20	5	5	5			8.0			24.2			7.9		195
Control C	0/20	5	5	5			8.1			24.1			8.1		195
Control D	0/20	5	5	5			8.1			24.2			7.8		190
100% A	20/0	5	5	5	7.9		8.0	24.1		24.1	7.6		7.8	510	625
100% B	20/0	5	5	5			8.0			24.0			7.8		615
100% C	20/0	5	5	5			8.0			24.0			7.7		590
100% D	20/0	5	5	5			8.0			24.0			7.8		590

[A] Organisms fed prior to testing.

Temperatures of room and test incubator were continuously recorded on a strip chart recorder.

Room Temperature range for the test period was 23.5 - 25.0°C.

Incubator #3 temperature range for the test period was 24.5 - 25.0°C.

Light Intensity during the test was 50-100 foot candles.

Photoperiod during the test was 16 hours of light : 8 hours of dark.

[B] Conductivity value is uncorrected μmhos/cm.

LIMS	
Job number:	TLH-2003-10-21-02
sample number:	710615

Data Transcription Verification
date: 11/13/03
by: Cathy Oaks/Ashleigh Jordan

Total Residual CL2	mg/L	Method
Field 100% sample:	-	-
Lab 100% sample:	0.00	Hach
Control water (water flea):	0.00	Hach
Control water: (fish):	0.01	Hach

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

Organism: ***Pimephales promelas*** (fish) Life stage: 11 days Chamber size: 1000 mL [C] Feeding: *Artemia* Food Batch #: 0194025G

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature (°C)			Diss. Oxygen (mg/L)			[D] Conductivity	
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	8.1	8.0	8.0	24.1	24.2	25.7	8.0	7.4	8.2	300	330
Control B	0/500	5	5	5	8.1	8.0	8.0	24.2	24.0	24.5	8.2	7.4	8.2	300	330
Control C	0/500	5	5	5	8.1	8.0	8.0	24.2	24.3	25.0	8.2	7.5	8.2	295	325
Control D	0/500	5	5	5	8.2	8.0	8.0	24.2	24.0	25.6	8.2	7.3	8.1	295	330
100% A	500/0	5	5	5	7.9	7.8	7.6	26.0	24.9	25.0	7.7	7.1	6.8	570	595
100% B	500/0	5	5	5	7.9	7.8	7.6	26.0	24.0	25.2	7.6	6.8	7.4	555	610
100 % C	500/0	5	5	5	7.9	7.8	7.6	26.0	25.3	24.9	7.6	6.6	7.6	550	595
100% D	500/0	5	5	5	7.9	7.8	7.6	26.0	24.2	25.2	7.7	6.7	6.4	565	600

[C] Organisms fed prior to testing.

Temperatures of room and test incubator were continuously recorded on a strip chart recorder.

Room Temperature range for the test period was 23.5 - 25.0°C.

Incubator #3 temperature range for the test period was 24.5 - 25.0°C.

Light Intensity during the test was 50-100 foot candles.

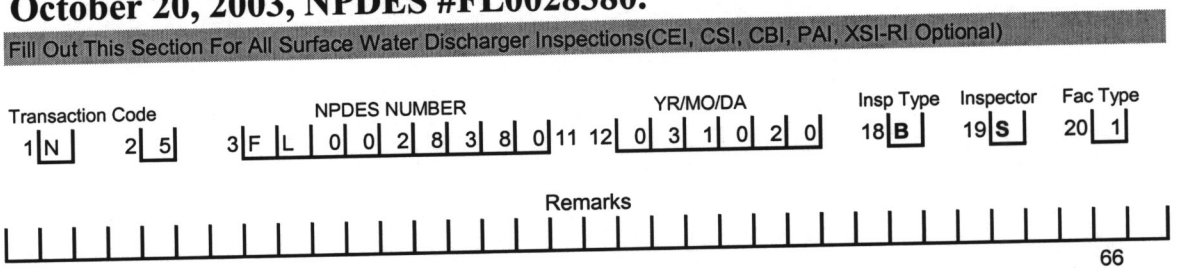
Photoperiod during the test was 16 hours of light : 8 hours of dark.

[D] Conductivity value is uncorrected μmhos/cm.

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water: (water flea):	80	81
Control water: (fish)	77	86
100% Sample:	70	131

Mortality	Percent
Control water (water flea):	0%
100% (water flea):	0%
Control water (fish):	0%
100 % (fish):	0%

The Bioassay of Ocean Maisonettes WWTF effluent sampled on October 20, 2003, NPDES #FL0028380.



The Priority Pollutants Analysis for Bioassay of Oecan Maisonettes WWTF effluent sampled on October 20, 2003, NPDES #FL0028380.

