

Biological Assessment of

Goodbread Mobile Home Park WWTF

Nassau County

NPDES #FL0032662

Sampled February 2, 2004

July 2004

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: Goodbread MHP WWTF
County: Nassau
NPDES Number: FL0032662
Permit Expiration: October 24, 2004

Toxics Sampling Inspection **(XSI)**

Date Sampled: February 2, 2004

Results: Aluminum, copper, iron, and zinc were detected in the effluent at levels that complied with Class III Water Quality Criteria (FAC 62-302). The metals cadmium, lead, and silver were found in the effluent at levels above the method detection limit and below the practical quantitation limit. No organic pollutants were detected in the effluent.

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: February 2, 2004

Results: The effluent sample was acutely toxic to the fish, *Cyprinella leedsi,* and to the water flea, *Ceriodaphnia dubia,* during the 48-hour acute bioassays, a violation of Class III Water Quality Criteria 62-302.200 F.A.C.

Water Quality Inspection **(WQI)**

Date Sampled: February 2, 2004

Results: Fecal and total coliforms were detected in the effluent and the receiving water at levels that did not exceed Class III Water Quality Criteria or facility permit limits. Nutrient levels at the Test and Control Sites were similar, however the facility was not discharging to the unnamed tributary when the samples were collected. The effluent total nitrogen concentration was 5.2 mg/L. Effluent levels of total phosphorus (1.6 mg/L), ortho-phosphate (1.2 mg/L), TKN (3.8 mg/L), and nitrate+nitrite (1.4 mg/L) ranged from 6 to 155 times the levels measured at the Test Site. It is presumed that effluent concentrations would raise concentrations of these nutrients at the Test Site when the facility is discharging to the unnamed tributary of Lofton Creek.

Impact Bioassessment Inspection **(IBI)**

Date Sampled: February 2, 2004

Results: The periphyton Shannon-Weaver Diversity score was reduced by 22% at the Test Site compared to the Control Site. However, these reductions may or may not be a result of the facility's discharge since it was not known how long the facility had not been discharging to the tributary. Periphyton chlorophyll-*a* concentration at the Control Site was 0.66 µg/L and was not detected at the Test Site. Quantitative measures of benthic macroinvertebrate assemblages from Hester-Dendy samplers showed a 35% reduction in the total number of taxa and a 55% reduction in the number of individuals at the Test Site compared to the Control Site. Qualitative sampling also resulted in fewer individuals at the Test Site, however both sites still scored 23 SCI points, placing them both in the "Good" category. It cannot be determined if the lower number of organisms in the benthic samples at the Test Site is facility related.

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 Goodbread Mobile Home Park Wastewater Treatment Facility is located in Nassau County, Florida (Appendix 1). This facility is an extended-aeration, domestic wastewater plant. The effluent is chlorinated, dechlorinated using sodium sulfate, and then discharged into an on-site pond at discharge point D-001 (see Facility Summary in Appendix 2). Periodically, the pond overflows into a ditch that flows directly into an unnamed tributary of the Class III fresh waters of Lofton Creek. The ditch has a steep slope and runs about 20 meters before merging into the unnamed tributary. The tributary runs for approximately one mile before entering Lofton Creek. The design flow of the wastewater system is 0.005 million gallons per day (MGD). The actual mean flow from October 2002 through September 2003 was 0.0038 MGD (Facility Summary in Appendix 2). The average flow for February 2004 was 0.004 MGD (personal communication from Chuck Ziegmont).

Surface Water Quality Criteria and facility permit limits are listed in Table 1. According to the facility's monthly discharge monitoring reports, the plant has had no permit exceedances from January 1, 2003 through November 30, 2003 (Appendix 2).

Methods

The purpose of this investigation was to determine the potential effects of the facility's effluent on the biota of the receiving waters. Chemical and biological comparisons were made between a control site (located in an unnamed tributary of Lofton Creek approximately 50 meters upstream of the ditch) and a test site (located in the same unnamed tributary of Lofton Creek approximately 10 meters downstream of the ditch). Effluent samples were collected by FDEP personnel at monitoring location D-001 (after dechlorination prior to discharging to the pond). The pond was flowing into the ditch on January 5, 2003, but was no longer flowing on February 2, 2003. It is not known how long the pond discharged into the ditch and unnamed tributary between these dates (Gloria Berges, Northeast District). All field and laboratory methods followed FDEP Standard Operating Procedures and met FDEP quality assurance/quality control standards (see <http://www.floridadep.org/labs/sop/index.htm> for details). Detailed methods and their relationship to Florida Administrative Code are given in Appendix 3.

The following were involved in this investigation: Patrick O'Connor and Tom Kallemeyn (FDEP Northeast District), and DEP 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 are reported in Table 1 and a complete list of chemical analytes can be reviewed in Appendix 4. Aluminum, copper, iron, and zinc were detected in the effluent at levels that complied with Class III Water Quality Criteria (FAC 62-302). The metals cadmium, lead, and silver were found in the effluent at levels above the method detection limit and below the practical quantitation limit. No organic pollutants were detected in the effluent.
- Effluent conductivity, pH and dissolved oxygen complied with Class III Water Quality Criteria (62-302 F.A.C.) and facility permit limits. Dissolved oxygen, pH and conductivity at the Test and Control Sites complied with Class III Water Quality Criteria (Table 1, 62-302.530 F.A.C.).
- The concentration of total residual chlorine measured in the effluent (1.08 mg/L), as determined in the FDEP toxicology laboratory, exceeded the Class III Water Quality Criterion (62-302.530(19) F.A.C.) and the facility permit limit (= 0.01 mg/L). Measurements in the field did not detect any total residual chlorine. FDEP personnel commented that the flow of the effluent increased during sampling. This could be the reason for the significantly different values for residual chlorine.
- The effluent sample was acutely toxic to the fish, *Cyprinella leedsi,* and to the water flea, *Ceriodaphnia dubia,* during 48-hour acute screening bioassays (See Table 1 for percent mortality and Appendix 6 for bioassay bench sheets). This constitutes an exceedance of 62-302.200 F.A.C. Bioassay tests were performed using the effluent as it was received (with 1.08 mg/L total residual chlorine). Additional aliquots were dechlorinated and analyzed in conjunction with the chlorinated tests. The dechlorinated tests were not acutely toxic to the fish or invertebrate test organisms during the 48-hour dechlorinated bioassay.
- Fecal and total coliforms were detected in the effluent and receiving waters at levels that did not exceed Class III Water Quality Criteria or facility permit limits (See Table 1 for results and Appendix 6 for laboratory worksheets).
- The effluent total nitrogen concentration was 5.2 mg/L (Table 1). Effluent total phosphorus (1.6 mg/L), ortho-phosphate (1.2 mg/L), and

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

Goodbread MHP WWTF	Class III Stds	Effluent Limits	Effluent	Control Site	Test Site
Organic Constituents (µg/L)					
None Detected	-	-	-	-	-
Metals (µg/L unless otherwise noted)					
Aluminum	-	-	294	-	-
Arsenic	≤50	-	6 U	-	-
Cadmium	≤2.2 b	-	0.081 I	-	-
Calcium (mg/L)	-	-	83.2	-	-
Chromium-III	≤169.7 b	-	3 U	-	-
Copper	≤18.9 b	-	8.5	-	-
Iron	≤1000	-	296	-	-
Lead	≤9.1 b	-	0.36 I	-	-
Magnesium (mg/L)	-	-	5.1	-	-
Nickel	≤105 b	-	3 U	-	-
Selenium	≤5	-	1 U	-	-
Silver	≤0.07	-	0.024 I	-	-
Zinc	≤241.5 b	-	67	-	-
Nutrients (mg/L)					
Ortho-phosphate	-	Report	1.2	0.044	0.038
Total Phosphorus	-	Report	1.6 A	0.069	0.056 I
Ammonia	-	Report	0.17 A	0.013 I	0.012 I
Unionized Ammonia	≤0.02	≤0.02 ^s	≤0.02 c	≤0.02 c	≤0.02 c
Nitrate+Nitrite	-	Report	1.4 J	0.016	0.009 I
Total Kjeldahl Nitrogen	-	-	3.8 A	0.63	0.61
Organic Nitrogen	-	Report	3.63 c	0.62 c	0.6 c
Total Nitrogen	-	Report	5.2 c	0.65 c	0.62 c
General Physical and Chemical Parameters					
Habitat Assessment	-	-	-	104	97
Dissolved Oxygen (mg/L)	≥5.0	≥5.0 ^s	5.6	8.0	8.0
pH (S.U.)	6.0 - 8.5	6.0 - 8.5 ^s	7.4	7.1	7.2
Conductivity (umhos/cm)	≤1275	-	783	352	353
Temperature (C)	-	-	15.5	11	10.4
Chlorophyll a (µg/L)	-	-	-	0.85 U	0.85 U
BOD (mg/L)	-	-	-	2 K	2 K
CBOD (mg/L)	-	60 ^s	10	-	-
Color (PCU)	-	-	-	150	150 Q
Turbidity (NTU)	35.8	-	20	6.8	6.3 Q
Flow (million gallons/day)	-	0.005	-	-	-
Hardness (mg/L)	-	-	228.8 c	-	-
Total Suspended Solids (mg/L)	-	60 ^s	33	3	2 K
Total Residual Chlorine (mg/L)	≤0.01	≤0.01 ^s	1.08 *	-	-
Microbiology (# counts/100ml)					
Fecal Coliforms-Membrane Filter	≤800	≤800	3 U	300	450
Total Coliforms-Membrane Filter	≤2400	-	170	1367	967
Toxicity (48-hour acute, screening bioassay, percent mortality in 100% effluent)					
Fish	-	-	100%	-	-
Fish - dechlorinated	-	-	0%	-	-
Water flea	-	-	100%	-	-
Water flea - dechlorinated	-	-	0%	-	-

Value exceeds the Class III Water Quality Criteria

b - Value is calculated based on hardness

c - Value is calculated

s - Single sample

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

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

J - Estimated value

K - Actual value is known to be less than value given

Q - Sample held beyond normal holding time

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

* - This value is reported from concentrations measured in the bioassay sample

^ - Monitoring location is EFD-1

Table 2. Measured and predicted algal growth potential (AGP) for total soluble nitrogen (TSIN)

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Inorganic N:P ratio
Effluent	34.7	59.66 ± 11.932	1.31
Control Site	1.99	1.1 ± 0.22	0.66
Test Site	2.98	0.8 ± 0.16	0.55

total ammonia concentrations (0.17 mg/L, Table 1) do not appear to have contributed to levels at the Test Site, however the facility was not discharging to the tributary when the samples were collected. Test Site levels were below the 30th percentile when compared with levels typical of Florida streams (Appendix 5). Concentrations of nutrients at the Control Site ranked below the 40th percentile of typical values for Florida streams. Effluent levels of total phosphorus, ortho-phosphate, TKN, and nitrate+nitrite ranged from 6 times to 155 times the levels measured at the Test Site. It is presumed that effluent concentrations would raise concentrations of these nutrients at the Test Site when the facility is discharging to the unnamed tributary of Lofton Creek.

- Algal growth potential (AGP) is a measure of nutrients available for algal growth (Miller *et al.* 1978). Raschke and Shultz (1987) found that AGP above 5.0 mg dry wt/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The effluent AGP value was 34.7 mg dry wt/L. The AGP values at the upstream Control Site (1.99 mg dry wt/L, Table 2) and the downstream Test Site (2.98 mg dry wt/L) were not above this threshold. This indicates there was not nutrient enrichment related to the Goodbread MHP discharge in this portion of the tributary during this sampling event; however, the facility was not discharging to the tributary at the time of sampling.

- Chlorophyll-*a* was not detected in water samples from the Control or Test Sites (Table 1).

- There were differences between Test and Control Sites in algal community composition (Table 3, Appendix 8). The Control Site had 57 taxa, while the Test Site had 40 taxa. The Shannon-Weaver Diversity score was reduced by 22% at the Test Site compared to the Control Site. However, these reductions may or may not be a result of the facility's discharge since it was not known how long the facility had been discharging to the creek. Periphyton chlorophyll-*a* concentration at the Control Site was 0.66 µg/L and was not detected at the Test Site (Table 3).

- Habitat assessment scores were 104 at the Control Site and 97 at the Test Site (Table 1, data sheets in Appendix 7) placing them both in the "suboptimal" category. The Test Site received lower scores for artificial channelization and bank stability compared to the Control Site. Lofton Creek is approximately 3-4 meters wide and the stream velocity on 2/2/04 was 0.07 m/s.

- Quantitative measures of benthic macroinvertebrate assemblages from Hester-Dendy samplers showed little change at the Test Site compared to the Control Site (Table 4, Appendix 9). Although the Shannon-Weaver Diversity score was slightly higher at the Test Site (3.39) compared to the Control Site (3.14), the number of individuals at the Test Site (151) was considerably less than at the Control Site (339). It cannot be determined if this difference is related to the discharge. The decrease in the number of individuals could be due to the greater degree of channelization noted at the Test Site.

Table 3a. Periphyton composition

Goodbread MHP WWTF	Control Site	Test Site
Number of Taxa	57	40
Shannon-Weaver Diversity	4.34	3.39
Chlorophyll a (mg/m²)	0.66	0.11 U
Phaeophytin (mg/m²)	0	0.11 U
Algal Density (number/cm²)	65,178	107,425
Percent Dominant Taxon	25.3	32
Dominant Taxon (name)	*Schizothrix*	*Schizothrix*
Number of Algal Units Identified	316	312
Percentage Composition		
Blue-green algae	44.9	65.7
Diatoms	38.9	25.3
Green algae	10.4	8.3
Yellow-green Algae	4.4	0
Euglenoids	1.4	0.7

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

Channelization causes the flow during rain events to increase rapidly, causing scouring of the habitats.

- Qualitative measures of benthic macroinvertebrate assemblages from dipnet samples are summarized in Tables 5 and 6 and in Appendix 10. The Control Site SCI score of 23 and the Test Site SCI score of 23 placed them both in the "Good" category. There were a few shifts in the macroinvertebrate communities between the two sites. The mayflies (Ephemeroptera) and clams (Bivalvia), both pollution-sensitive groups, were significantly reduced at the Test Site compared to the Control Site (Appendix 10b). A larger portion of the SCI sample (17%) from the Test Site was sorted and only yielded 83 individuals, while a smaller (8%) portion of SCI sample from the Control Site yielded 110 individuals. This could be due to impacts from the facility's discharge, but cannot be determined from this inspection.

Table 4. Macroinvertebrate Hester-Dendy Samples - Quantitative

Goodbread MHP WWTF	Control Site	Test Site
Summary Statisics		
Shannon-Weaver Diversity	3.14	3.39
Number of Taxa	20	13
Florida Index	2	1
Number of EPT Taxa	1	1
Percent Dominant Taxon	38.9	15.8
Dominant Taxon (name)	*Tanytarsus sp. T Epler*	*Caenis sp.*
Dominant Taxon (group)	*Diptera*	*Ephemeroptera*
Total Number of Individuals (counted)	128	57
Total Number of Individuals (#/m2)	339	151
Community Composition: Percent of total		
Coleoptera	4.7	5.3
Collembola	3.1	1.8
Diptera	56.2	45.6
Ephemeroptera	12.5	15.8
Gastropoda	4.7	17.5
Isopoda	3.9	3.5
Oligochaeta	14.1	10.5
Other	0.8	0
Functional Feeding Groups: Percent of total		
Burrowing Deposit Feeders	14.1	10.5
Predators	3.1	1.8
Surface Deposit Feeders	38	39.5
Suspension Feeders	24.4	12.3
Scrapers	10.9	25.4
Shredders	2.4	3.5
Unknown	7.1	3.5

Summary

Effluent data from this inspection indicated an exceedance of the Class III Water Quality Criterion and facility permit limit for total residual chlorine. The concentration of total residual chlorine measured in the effluent was 1.08 mg/L. The effluent also exceeded the Class III Water Quality Criterion for acute toxicity. Both total effluent and dechlorinated effluent samples were analyzed for acute toxicity. The dechlorinated aliquot was not toxic; therefore it is suspected that the level of chlorine in the effluent is the cause of the toxicity; however, the sodium thiosulfate used to remove the chlorine from the sample is capable of removing other toxicants, so other unidentified constituents in the sample cannot be ruled out as having contributed to the observed toxicity. The facility was not discharging to the unnamed tributary at the time of inspection. The actual time the facility discharged to the unnamed tributary between January 5 and February 2 is not known. Under these circumstances, it is difficult to assess the biological impacts of the facility's discharge in this portion of the unnamed tributary of Lofton Creek. The effluent complied with all metal and organic components criteria and consisted of elevated nutrient concentrations.

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Table 5. Macroinvertebrate Dipnet Samples - Qualitative

Goodbread MHP WWTF	Control Site	Test Site
Stream Condition Index (value)	23	23
Stream Condition Index (word)	Good	Good
Stream Condition Index Metrics		
Number of Taxa	21	28
Florida Index	2	4
Number of EPT Taxa	2	2
Number of Chironomid Taxa	6	7
Percent Diptera	17.27	18.07
Percent Suspension Feeders and Filterers	20.91	1.81
Percent Dominant Taxon	17.3	36.1
Dominant Taxon (name)	*Caenis sp.*	*Caecidotea sp.*
Dominant Taxon (group)	*Ephemeroptera*	*Isopoda*
Total Number of Individuals (counted)	110	83
Community Composition: Percent of total		
Amphipoda	4.5	4.8
Bivalvia	16.4	0
Coleoptera	3.6	12
Decapoda	0	1.2
Diptera	17.2	18.1
Ephemeroptera	17.3	1.2
Gastropoda	5.5	7.2
Isopoda	15.5	36.1
Odonata	0	3.7
Oligochaeta	19.1	14.5
Plecoptera	0	1.2
Trichoptera	0.9	0
Functional Feeding Groups: Percent of total		
Burrowing Deposit Feeders	19.1	14.5
Predators	5	13.2
Surface Deposit Feeders	18.6	18.7
Suspension Feeders and Filterers	20.9	1.8
Scrapers	14.1	1.8
Shredders	4.1	8.4
Unknown	2.7	4.8

Table 6a. Control Site Stream Condition Index Metrics: Northeast, Winter Index

Metric:	Value	5	3	1	Score
Total Number of Taxa	21	≥18	17-9	<9	5
Number of EPT Taxa	2	-	≥3	<3	1
Number of Chironomid Taxa	6	≥4	3-2	<2	5
Percent Contribution of Dominant Taxon	17.27	≤37	38-69	>69	5
Percent Diptera	17.27	-	≤67	>67	3
Florida Index	2	≥6	5-3	<3	1
Percent Suspension Feeders and Filterers	20.91	≥25	25-13	<13	3
Total Score		**Good**			**23**
Interpretation of Scores		Excellent			26-31
		Good			20-25
		Poor			14-19
		Very Poor			7-13

Table 6b. Test Site Stream Condition Index Metrics: Northeast, Winter Index

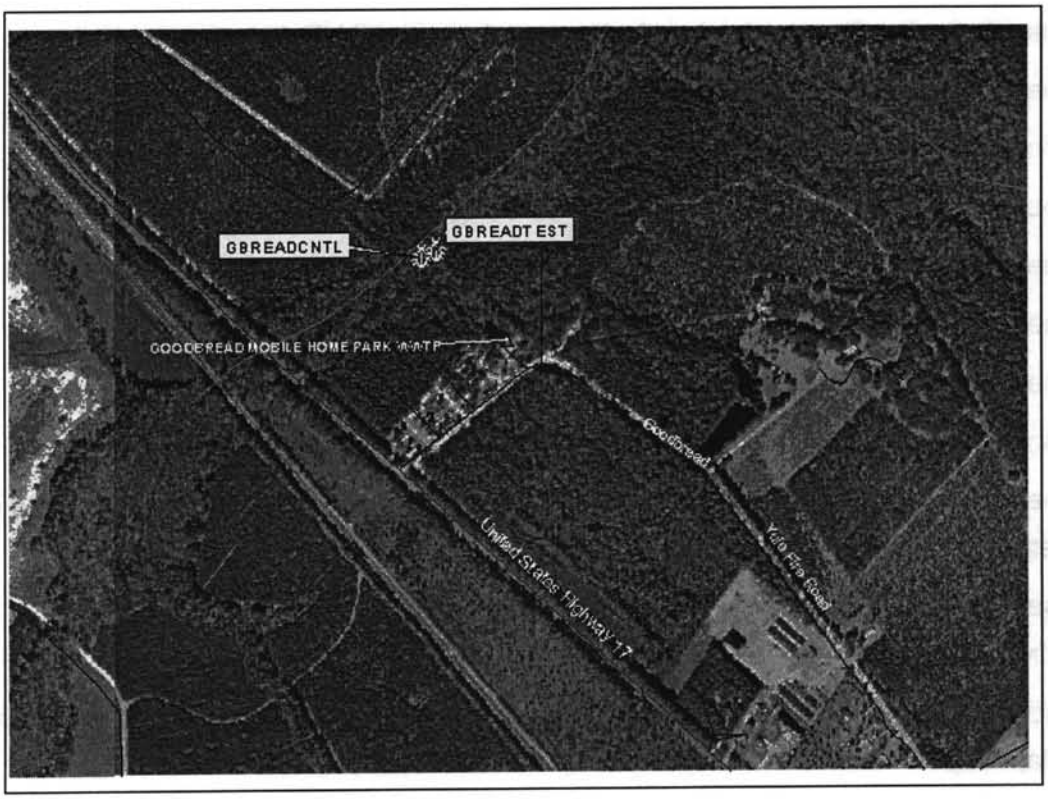
Metric:	Value	5	3	1	Score
Total Number of Taxa	28	≥18	17-9	<9	5
Number of EPT Taxa	2	-	≥3	<3	1
Number of Chironomid Taxa	7	≥4	3-2	<2	5
Percent Contribution of Dominant Taxon	36.14	≤37	38-69	>69	5
Percent Diptera	18.07	-	≤67	>67	3
Florida Index	4	≥6	5-3	<3	3
Percent Suspension Feeders and Filterers	1.81	≥25	25-13	<13	1
Total Score		**Good**			**23**
Interpretation of Scores		Excellent			26-31
		Good			20-25
		Poor			14-19
		Very Poor			7-13

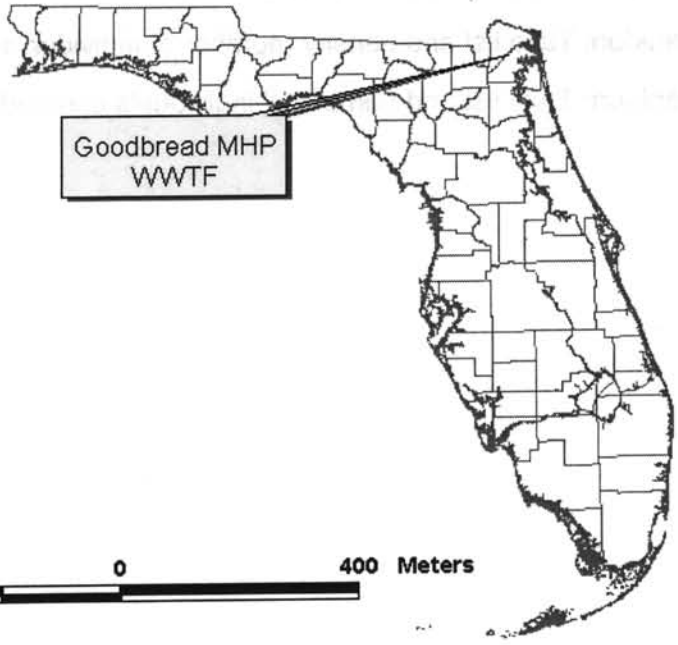
Appendices

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- Appendix 2. Facility introduction, facility summary and DMR Summary
- Appendix 3. Explanation of measurements
- Appendix 4. Chemical analyses of effluent and receiving water.
- Appendix 5. Typical values for selected parameters in Florida waters
- Appendix 6. Additional physical, chemical, toxicological and microbiological results
- Appendix 7. Habitat Assessment field sheets
- Appendix 8a. Periphyton: Taxa list and density (number of individuals per cm^2)
- Appendix 8b. Periphyton: Taxa list and number of individuals counted
- Appendix 9a. Hester-Dendy multi-plate samplers: Taxa list and macroinvertebrate density (average number of individuals per m^2)
- Appendix 9b. Hester-Dendy multi-plate samplers: Taxa list and total number of macroinvertebrates counted
- Appendix 10a. Dipnet samples: Taxa list and number of macroinvertebrates counted (collapsed)
- Appendix 10b. Dipnet samples: Taxa list and number of macroinvertebrates counted
- Appendix 11a. Phytoplankton: Taxa list and density (number of individuals per mL)
- Appendix 11b. Phytoplankton: Taxa list and number of individuals counted

Appendix 1

Goodbread MHP WWTF





Firm Year Inspection Program
FDEP- Bureau of Laboratories
Created on: June 15,2004
Created by: Julie Espy

Appendix 2

State of Florida

Department of Environmental Protection

Facility Introduction

Goodbread MHP WWTF – FL0032662 – Nassau County

Type of facility: The facility is permitted as a 0.005 MGD wastewater treatment facility consisting of an extended aeration domestic wastewater plant. The effluent is chlorinated, dechlorinated using sodium sulfate and discharged into a pond. The pond overflows into an unnamed ditch, which flows into Lofton Creek at D-001.

Design flow: 0.005 MGD WWTF

Average flow: The average flow for October 2002 through September 2003 was 0.0038 MGD.

Description of the treatment process: A 0.005 mgd annual average daily flow (AADF) extended aeration domestic wastewater treatment facility. This is an above ground facility with:

1. A 5,000-gallon aeration basin.
2. A 972-gallon secondary clarification tank.
3. A 224-gallon chlorine contact chamber.
4. A tablet feeder for dechlorination.
5. A 674 gallon aerated digestor for sludge storage.

Chlorination/dechlorination methods: Disinfection is provided using liquid chlorine. Dechlorination is provided using sodium sulfate tablets.

Receiving water and classification: There is one permitted discharge location.

1. **Surface Water Discharge:** An existing 0.005 mgd AADF permitted discharge to a pond. The pond overflows into an unnamed ditch, which flows into Lofton Creek (Class III fresh waters).

Mixing zone: Presently, there is not a mixing zone.

Sampling location: Total residual chlorine (TRC) is sampled at monitoring location EFA-1 (post disinfection, prior to dechlorination). All the other parameters taken for discharge to the Lofton Creek are sampled at monitoring location EFD-1 (after dechlorination prior to discharge to D001). Facility personnel took samples from a sample pipe that is located in the effluent line. This pipes collects dechlorinated effluent just before the effluent enters the pond.

Other information: It had been raining for the past 48 hours and was raining at the time of the sampling event. The pond was not discharging to the creek at the time of the inspection.

Facility Summary

Facility Name (as it appears on permit): Goodbread Mobile Home Park WWTF		**Former Names:**
Physical Address: US Highway 17 North Yulee, Florida 32034	**NPDES Permit No.:** FL0032662 **Expiration Date:** October 24, 2004	**Prepared By:** Gloria Berges
County: Nassau **District:** Northeast	**State Permit No.:** FL0032662 **Expiration Date:** October 24, 2004	**Facility Type:** Domestic
Function of Facility: Treats domestic wastewater to secondary standards prior to discharge to the Lofton Creek		
Sampling Location (specify lat/longs of NPDES point): 30 degrees, 38 minutes, 48 seconds N 81 degrees, 37 minutes, 00 seconds W		
Description of treatment process: A 0.005 mgd annual average daily flow (AADF) extended aeration domestic wastewater treatment facility. This is an above ground facility with a 5,000 gallon aeration basin, 972 gallon secondary clarification tank, 224 gallon chlorine contact chamber, and a tablet feeder for dechlorination. There is a 674 gallon aerated digestor for sludge storage.		
Receiving Waters: There is one permitted discharge location: **1. Surface Water Discharge**: An existing 0.005 mgd AADF permitted discharge to a pond. The pond overflows into an unnamed ditch, which flows into Lofton Creek (Class III fresh waters).		**Classification:** Class III fresh water
Temperature (C): 15:53	**Design Flow:** 0.005 MGD	
pH (SU): 7.38	**Mean Flow:** The average flow for October 2002 through September 2003 was 0.0038 MGD.	
Conductivity (umhos/cm): 783	**Flow During Survey:** n/a	
Dissolved Oxygen (mg/L): 5.62	**Total Residual Chlorine (mg/L):** 2.2 – pre dechlor 0.0 – post dechlor	
Discharge is: **Continuous** **(Intermittent)** **Seasonal** **Rainfall Dependent** **Other**		
Facility Mixing Zone Details: None		

List Effluent Limits:

Parameter and Units For Surface Discharge D001	Limit:	Describe special permit conditions and permit modifications:
Flow	Annual Average: 0.005 mgd Monthly Average: Report 3-Month Average: Report	Sample Five days per week
Flow, % Capacity	Monthly Total: Report	Calculate Monthly
$CBOD_5$	Annual Average: 20.0 mg/L Monthly Average: Report Maximum: 60.0 mg/L	Sample monthly
Total Suspended Solids	Annual Average: 20.0 mg/L Monthly Average: Report	Sample monthly

Total Suspended Solids	Annual Average: 20.0 mg/L Monthly Average: Report Maximum: 60.0 mg/L	Sample monthly
Unionized Ammonia (as N)	Maximum: 0.02 mg/L	Sample monthly
Total Ammonia (mg/L)	Maximum: Report only	Sample monthly
Dissolved Oxygen	Minimum: 5.0 mg/L	Sample two days per week
pH	Minimum: 6.0 s.u Maximum: 8.5 s.u	Sample five days per week
Fecal Coliform	Annual Average: 200 #/100L Mo. Geom. Mean: Report Maximum: 800 #/100L	Sample monthly
Total Residual Chlorine (for Disinfection)	Minimum: 0.5 mg/L	Sample five days per week
Total Residual Chlorine (for Dechlorination)	Maximum: 0.01 mg/L	Sample two days per week
Nitrogen, Total (as N)	Maximum: Report Only	Sample semiannually
Nitrogen, Organic, Total, (as N)	Maximum: Report Only	Sample semiannually
Nitrate + Nitrite Total 1 DOT (as N)	Maximum: Report Only	Sample semiannually
Total Phosphorous, (as P)	Maximum: Report Only	Sample semiannually
Phosphorus, In Total Orthophosphate	Maximum: Report Only	Sample semiannually

Description of permitted outfall: There is one permitted discharge location:

1. **Surface Water Discharge**: An existing 0.005 mgd AADF permitted discharge to a pond. The pond overflows into an unnamed ditch, which flows into Lofton Creek (Class III fresh waters).

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

None: reviewed past 12 months (October 2002 – September 2003)

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

1. None have been conducted within last 5 years.
2. No previous or current enforcement.

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

DMR Summary Results

The date range you specified is: 01/01/2003 to 11/30/2003

Permit Number: FL0032662

Facility Name: GOODBREAD MHP

Outfall Indicator: 001-1

Monitoring Location Code: 1

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 00300	OXYGEN, DISSOLVED (DO)	5	11/1/99 to 10/31/2004	MINIMUM	MG/L	5.8909	6.2	5.2
P 00400	PH	8.5	11/1/99 to 10/31/2004	MAXIMUM	SU	7.6182	7.7	7.6
P 00400	PH	6	11/1/99 to 10/31/2004	MINIMUM	SU	7.4545	7.5	7.4
P 00530	SOLIDS, TOTAL SUSPENDED	40	11/1/99 to 10/31/2004	MAXIMUM	MG/L	5.7364	8.8	2
P 00530	SOLIDS, TOTAL SUSPENDED	ADDMON	11/1/99 to 10/31/2004	MO AVG	MG/L	5.7364	8.8	2
P 00610	NITROGEN, AMMONIA TOTAL (AS N)	ADDMON	11/1/99 to 10/31/2004	MAXIMUM	MG/L	0.8173	3.7	0.019
P 00619	AMMONIA, UNIONIZED	0.3	11/1/99 to 10/31/2004	MAXIMUM	MG/L	0.0149	0.05	0.001
P 50060	CHLORINE, TOTAL RESIDUAL	0.01	11/1/99 to 10/31/2004	MAXIMUM	MG/L	0	0	0
P 74055	COLIFORM, FECAL GENERAL	800	11/1/99 to 10/31/2004	MAXIMUM	#/ 100ML	4.5	16	1
P 74055	COLIFORM, FECAL GENERAL	ADDMON	11/1/99 to 10/31/2004	MO GEOMN	#/ 100ML	4.5	16	1
P 80082	BOD, CARBONACEOUS 05 DAY, 20C	60	11/1/99 to 10/31/2004	MAXIMUM	MG/L	4.3455	19	2
P 80082	BOD, CARBONACEOUS 05 DAY, 20C	ADDMON	11/1/99 to 10/31/2004	MO AVG	MG/L	4.3455	19	2

Outfall Indicator: 001-1

Monitoring Location Code: A

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 50060	CHLORINE, TOTAL RESIDUAL	0.5	11/1/99 to 10/31/2004	MINIMUM	MG/L	0.8091	1	0.5

Outfall Indicator: 001-1

Monitoring Location Code: G

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 00530	SOLIDS, TOTAL SUSPENDED	ADDMON	11/1/99 to 10/31/2004	MO AVG	MG/L	170.3636	580	54
P 50050	FLOW	0.005	11/1/99 to 10/31/2004	ANNL AVG	MGD	0.0038	0.0039	0.0038
P 80082	BOD, CARBONACEOUS 05 DAY, 20C	ADDMON	11/1/99 to 10/31/2004	MO AVG	MG/L	226.9091	460	60

Outfall Indicator: 001-1

Monitoring Location Code: P

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 50050	FLOW	ADDMON	11/1/99 to 10/31/2004	MO AVG	MGD	0.0038	0.0042	0.0032

Outfall Indicator: 001-1

Monitoring Location Code: Y

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 00530	SOLIDS, TOTAL SUSPENDED	20	11/1/99 to 10/31/2004	ANNL AVG	MG/L	6.3082	7.11	5.67
P 74055	COLIFORM, FECAL GENERAL	200	11/1/99 to 10/31/2004	ANNL AVG	#/ 100ML	1.49	3	0.42
P 80082	BOD, CARBONACEOUS 05 DAY, 20C	20	11/1/99 to 10/31/2004	ANNL AVG	MG/L	4.8291	5.35	4.1

Outfall Indicator: 001-S

Monitoring Location Code: 1

Parameter Code	Description	Limit	Limit Effective Dates	Stat Base	Units	AVG	MAX	MIN
P 00600	NITROGEN, TOTAL (AS N)	ADDMON	1/1/2000 to 10/31/2004	MAXIMUM	MG/L	4	4	4
P 00605	NITROGEN, ORGANIC TOTAL (AS N)	ADDMON	1/1/2000 to 10/31/2004	MAXIMUM	MG/L	0.3	0.3	0.3
P 00630	NITRITE PLUS NITRATE TOTAL 1 DET (AS N)	ADDMON	1/1/2000 to 10/31/2004	MAXIMUM	MG/L	0.2	0.2	0.2
P 00665	PHOSPHORUS, TOTAL (AS P)	ADDMON	1/1/2000 to 10/31/2004	MAXIMUM	MG/L	0.66	0.66	0.66
P 70507	PHOSPHOROUS, IN TOTAL ORTHOPHOSPHATE	ADDMON	1/1/2000 to 10/31/2004	MAXIMUM	MG/L	0.25	0.25	0.25

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

(3) Toxicity Bioassays

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

(5) Habitat Assessment

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

(6) Algal Growth Potential (AGP)

The effluent and water from control and test sites are autoclaved, filtered (0.45μm), inoculated with the unicellular green alga, *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum,* USEPA 2002*),* and incubated for 14 days (FDEP SOP TA08_05). The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a "problem" threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute one line of evidence for violation of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

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

(7) Algal Phytoplankton and Periphyton Assemblages

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

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

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

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

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

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

(8) Benthic Macroinvertebrate Assemblages

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

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

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

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

The Florida Index: Some organisms become rare or absent as the intensity or duration of disturbance increases. The Florida Index assigns points to stream-dwelling macroinvertebrates based on their ranked sensitivity to pollution (Beck 1954). A site with a high Florida Index score is considered healthy (Ross 1990). Decreases in Florida Index points 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..

Ephemeroptera/Plecoptera/Trichoptera (EPT) Taxa: This value is the number of EPT taxa present. More EPT taxa are usually present in unpolluted waters (Plafkin *et al.*, 1989, Wallace *et al.*, 1996). Decreases in the number of EPT taxa 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..

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

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

The Stream Condition Index (SCI): The SCI is a composite macroinvertebrate metric developed for Florida. Using data from qualitative dipnet samples, the SCI assigns points to seven parameters, depending on how closely each parameter approaches an expected reference condition (QA Rule SOP LT 7200). Points are summed to yield a final SCI score (range 7-33, depending on region and index period). Included in the calculation of SCI are taxa richness, number of EPT taxa, number of Chironomid taxa, percent contribution of the dominant taxon, the Florida Index, percent contribution of Diptera, and the percent contribution of suspension and filter feeders. Scores are broken into four ordinal groups: Excellent, Good, Poor and Very Poor. A decrease in ordinal SCI score from the Control to the Test site may be evidence of degradation related to a facility's effluent. An SCI score of "Poor" or "Very Poor" related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

(9) Statistical Comparisons

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

Appendix 4

Chemical analysis of effluent and receiving water

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 7:00	BLANK	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	1,3,5-Trinitrobenzene	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	1,4-Naphthoquinone	19	ug/L	U	19	77
2/2/2004 7:00	BLANK	BNA-Water	1-Naphthylamine	9.6	ug/L	U	9.6	38
2/2/2004 7:00	BLANK	BNA-Water	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	2,4,5-Trichlorophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
2/2/2004 7:00	BLANK	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
2/2/2004 7:00	BLANK	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2,6-Dichlorophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Acetylaminofluorene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	2-Methylnaphthalene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Naphthylamine	9.6	ug/L	U	9.6	38
2/2/2004 7:00	BLANK	BNA-Water	2-Nitroaniline	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	2-Picoline	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
2/2/2004 7:00	BLANK	BNA-Water	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	77
2/2/2004 7:00	BLANK	BNA-Water	3-Methylcholanthrene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	3-Nitroaniline	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	4-Aminobiphenyl	3.8	ug/L	UJ	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	4-Chloroaniline	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	4-Nitroaniline	0.96	ug/L	UJ	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
2/2/2004 7:00	BLANK	BNA-Water	5-Nitro-o-toluidine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Acetophenone	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 7:00	BLANK	BNA-Water	Aniline	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzidine	96	ug/L	U	96	380
2/2/2004 7:00	BLANK	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Benzyl alcohol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
2/2/2004 7:00	BLANK	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
2/2/2004 7:00	BLANK	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
2/2/2004 7:00	BLANK	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Dibenzofuran	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
2/2/2004 7:00	BLANK	BNA-Water	Dimethylaminoazobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Dinoseb	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Ethyl methanesulfonate	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Hexachloropropene	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Isosafrole	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Methapyrilene	3.8	ug/L	UJ	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Methyl methanesulfonate	0.96	ug/L	UJ	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosodi-n-butylamine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosodiethylamine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosomorpholine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosopiperidine	0.96	ug/L	U	0.96	3.8

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 7:00	BLANK	BNA-Water	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	Nitroquinoline-1-oxide	19	ug/L	U	19	77
2/2/2004 7:00	BLANK	BNA-Water	Pentachlorobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Pentachloroethane	48	ug/L	U	48	190
2/2/2004 7:00	BLANK	BNA-Water	Pentachloronitrobenzene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/2/2004 7:00	BLANK	BNA-Water	Phenacetin	3.8	ug/L	U	3.8	12
2/2/2004 7:00	BLANK	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	Pyridine	3.8	ug/L	U	3.8	15
2/2/2004 7:00	BLANK	BNA-Water	Safrole	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
2/2/2004 7:00	BLANK	BNA-Water	m,p-Cresols	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	o-Cresol	1.9	ug/L	U	1.9	7.7
2/2/2004 7:00	BLANK	BNA-Water	o-Toluidine	0.96	ug/L	U	0.96	3.8
2/2/2004 7:00	BLANK	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.32
2/2/2004 7:00	BLANK	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
2/2/2004 7:00	BLANK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
2/2/2004 7:00	BLANK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/2/2004 7:00	BLANK	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
2/2/2004 7:00	BLANK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
2/2/2004 7:00	BLANK	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
2/2/2004 7:00	BLANK	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
2/2/2004 7:00	BLANK	GC-Water	Naled	0.77	ug/L	U	0.77	3.08
2/2/2004 7:00	BLANK	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Parathion Ethyl	0.14	ug/L	UJ	0.14	0.56
2/2/2004 7:00	BLANK	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.384
2/2/2004 7:00	BLANK	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
2/2/2004 7:00	BLANK	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
2/2/2004 7:00	BLANK	Metals-Water	Aluminum	7	ug/L	U	7	28
2/2/2004 7:00	BLANK	Metals-Water	Arsenic	6	ug/L	U	6	24
2/2/2004 7:00	BLANK	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
2/2/2004 7:00	BLANK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
2/2/2004 7:00	BLANK	Metals-Water	Chromium	3	ug/L	U	3	12
2/2/2004 7:00	BLANK	Metals-Water	Copper	1	ug/L	U	1	4
2/2/2004 7:00	BLANK	Metals-Water	Iron	15	ug/L	U	15	60

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 7:00	BLANK	Metals-Water	Lead	0.05	ug/L	U	0.05	0.2
2/2/2004 7:00	BLANK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
2/2/2004 7:00	BLANK	Metals-Water	Nickel	3	ug/L	U	3	12
2/2/2004 7:00	BLANK	Metals-Water	Selenium	1	ug/L	U	1	4
2/2/2004 7:00	BLANK	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
2/2/2004 7:00	BLANK	Metals-Water	Zinc	4	ug/L	U	4	16
2/2/2004 7:00	BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/2/2004 7:00	BLANK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/2/2004 7:00	BLANK	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
2/2/2004 7:00	BLANK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
2/2/2004 7:00	BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-AGP/LimNut	Algal Growth Potential	2.98	mg DryWt/L	A	0.1	0.3
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Chl-a	Chlorophyll-A, Monochromatic, Periphyton	0.11	mg/m2	U	0.11	0.34
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Chl-a	Phaeophytin-A, Monochromatic, Periphyton	0.11	mg/m2	U	0.11	0.34
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Invertebrates	Macroinvert-FW-Qual-Dipnetx20-# Taxa	28	# Taxa			
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Peri/Phyto	Periphyton-Quantitative-# Diatom Taxa	30	#Taxa			
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Bio-Peri/Phyto	Periphyton-Quantitative-# Wet Taxa	10	#Taxa			
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Nutrients-Liquid	Ammonia-N	0.012	mg N/L	I	0.01	0.02
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Nutrients-Liquid	NO2NO3-N	0.009	mg N/L	I	0.004	0.01
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Nutrients-Liquid	N_KJEL_TOT	0.61	mg N/L		0.06	0.2
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Nutrients-Liquid	O-Phosphate-P	0.038	mg P/L		0.004	0.01
2/2/2004 9:35	10-110M BELOW GOODBREAD WWTP POD	Nutrients-Liquid	Total-P	0.056	mg P/L	I	0.02	0.06
2/2/2004 9:35	TEST SITE REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	7	# Taxa			
2/2/2004 9:35	TEST SITE REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	5	# Taxa			
2/2/2004 9:35	TEST SITE REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	10	# Taxa			
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1,4-Naphthoquinone	19	ug/L	U	19	78
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	1-Naphthylamine	9.7	ug/L	UJ	9.7	39
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Naphthylamine	9.7	ug/L	U	9.7	39
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	2-Picoline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Nitroaniline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Acetophenone	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Aniline	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzidine	97	ug/L	U	97	390
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Benzyl alcohol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dibenzofuran	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Dinoseb	3.9	ug/L	U	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Endrin aldehyde	3.9	ug/L	UJ	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Hexachloropropene	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Isosafrole	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Methapyrilene	3.9	ug/L	UJ	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Nitroquinoline-1-oxide	19	ug/L	U	19	78
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pentachloroethane	49	ug/L	U	49	190
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Phenacetin	3.9	ug/L	U	3.9	12
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Pyridine	3.9	ug/L	UJ	3.9	16
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	Safrole	0.97	ug/L	U	0.97	3.9
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	m,p-Cresols	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	o-Cresol	1.9	ug/L	U	1.9	7.8
2/2/2004 11:06	FINAL EFFLUENT	BNA-Water	o-Toluidine	0.97	ug/L	U	0.97	3.9

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 11:06	FINAL EFFLUENT	Bio-AGP/LimNut	Algal Growth Potential	34.7	mg DryWt/L		0.1	0.3
2/2/2004 11:06	FINAL EFFLUENT	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	2.1	ug/L	U	2.1	6.4
2/2/2004 11:06	FINAL EFFLUENT	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	2.1	ug/L	U	2.1	6.4
2/2/2004 11:06	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	K		
2/2/2004 11:06	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	K		
2/2/2004 11:06	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Scrn-FW-Fish,LC50-dechlr	100	LC50	L		
2/2/2004 11:06	FINAL EFFLUENT	Bio-Toxicology	Bioassy-Acute-Scrn-FW-Cdubia,LC50-dechlr	100	LC50	L		
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.32
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Butylate	0.34	ug/L	U	0.19	0.76
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Naled	0.77	ug/L	U	0.77	3.08
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Parathion Ethyl	0.14	ug/L	UJ	0.14	0.56
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.384
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
2/2/2004 11:06	FINAL EFFLUENT	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Aluminum	294	ug/L		7	28
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Arsenic	6	ug/L	U	6	24
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Cadmium	0.081	ug/L	I	0.025	0.1
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Calcium	83.2	mg/L		0.05	0.2
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Chromium	3	ug/L	U	3	12
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Copper	8.5	ug/L		1	4
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Iron	296	ug/L		15	60
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Lead	0.36	ug/L	I	0.05	0.2
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Magnesium	5.1	mg/L		0.02	0.08
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Nickel	3	ug/L	U	3	12
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Selenium	1	ug/L	U	1	4
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Silver	0.024	ug/L	I	0.02	0.08
2/2/2004 11:06	FINAL EFFLUENT	Metals-Water	Zinc	67	ug/L		4	16
2/2/2004 11:06	FINAL EFFLUENT	Nutrients-Liquid	Ammonia-N	0.17	mg N/L	A	0.01	0.02
2/2/2004 11:06	FINAL EFFLUENT	Nutrients-Liquid	NO2NO3-N	1.4	mg N/L	J	0.04	0.1
2/2/2004 11:06	FINAL EFFLUENT	Nutrients-Liquid	N_KJEL_TOT	3.8	mg N/L	A	0.12	0.4
2/2/2004 11:06	FINAL EFFLUENT	Nutrients-Liquid	O-Phosphate-P	1.2	mg P/L		0.08	0.2
2/2/2004 11:06	FINAL EFFLUENT	Nutrients-Liquid	Total-P	1.6	mg P/L	A	0.1	0.3
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-AGP/LimNut	Algal Growth Potential	1.99	mg DryWt/L		0.1	0.3

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Chl-a	Chlorophyll-A, Monochromatic, Periphyton	0.66	mg/m2		0.11	0.34
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Chl-a	Phaeophytin-A, Monochromatic, Periphyton	0	mg/m2		0.11	0.34
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Invertebrates	Macroinvert-FW-Qual-Dipnetx20-# Taxa	22	# Taxa			
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Peri/Phyto	Periphyton-Quantitative-# Diatom Taxa	41	#Taxa			
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Bio-Peri/Phyto	Periphyton-Quantitative-# Wet Taxa	18	#Taxa			
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Nutrients-Liquid	Ammonia-N	0.013	mg N/L	I	0.01	0.02
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Nutrients-Liquid	NO2NO3-N	0.016	mg N/L		0.004	0.01
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Nutrients-Liquid	N_KJEL_TOT	0.63	mg N/L		0.06	0.2
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Nutrients-Liquid	O-Phosphate-P	0.044	mg P/L		0.004	0.01
2/2/2004 11:30	ABOVE GOODBREAD WWTP POD	Nutrients-Liquid	Total-P	0.069	mg P/L		0.02	0.06
2/2/2004 11:30	CONTROL SITE REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	10	# Taxa			
2/2/2004 11:30	CONTROL SITE REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	12	# Taxa			
2/2/2004 11:30	CONTROL SITE REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-ArtSubstr-# Taxa	12	# Taxa			

Appendix 5

Typical Values for Selected Parameters in Florida Waters

Percentile Distribution (1617 stations)

CONTROL SITE

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Periphyton Chlorophyll *a* (mg/m^2)	0.31	**0.43**	0.77	1.04	2.16	2.94	6.45	10.51	17.00	39.51	60.85	**0.66**
Hester-Dendy Diversity	0.84	2.12	2.48	2.74	2.88	**3.09**	3.25	3.40	3.52	3.76	3.90	**3.14**
Hester-Dendy Taxa Richness	6	6.5	9	11.5	13	15	**17**	21.5	26	29	32	**20**
Total Kjeldahl Nitrogen	0.30	0.39	**0.56**	0.73	0.87	1.00	1.11	1.26	1.49	1.93	2.80	**0.63**
Total Ammonia	0.02	0.02	0.04	0.05	0.06	0.08	**0.11**	0.14	0.20	0.34	0.60	**0.13 I**
Nitrate plus Nitrite	0.01	**0.01**	0.03	0.05	0.07	0.10	0.14	0.20	0.32	0.64	1.05	**0.016**
Total Phosphorus	0.02	0.03	0.05	**0.06**	0.10	0.13	0.18	0.25	0.39	0.74	1.51	**0.069**
Orthophosphate	0.01	0.01	0.03	**0.04**	0.05	0.08	0.11	0.17	0.27	0.59	1.37	**0.044**
Turbidity (NTU)	0.60	0.90	1.20	1.45	2.10	2.80	3.60	4.50	**6.65**	10.45	16.30	**6.8**

TEST SITE

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Periphyton Chlorophyll *a* (mg/m^2)	0.31	0.43	0.77	1.04	2.16	2.94	6.45	10.51	17.00	39.51	60.85	**0.11 U**
Hester-Dendy Diversity	0.84	2.12	2.48	2.74	2.88	3.09	**3.25**	3.40	3.52	3.76	3.90	**3.39**
Hester-Dendy Taxa Richness	6	6.5	9	11.5	**13**	15	17	21.5	26	29	32	**13**
Total Kjeldahl Nitrogen	0.30	0.39	**0.56**	0.73	0.87	1.00	1.11	1.26	1.49	1.93	2.80	**0.61**
Total Ammonia	0.02	0.02	0.04	0.05	0.06	0.08	0.11	0.14	0.20	0.34	0.60	**0.12 I**
Nitrate plus Nitrite	0.01	0.01	0.03	0.05	0.07	0.10	0.14	0.20	0.32	0.64	1.05	**0.009 I**
Total Phosphorus	0.02	0.03	**0.05**	0.06	0.10	0.13	0.18	0.25	0.39	0.74	1.51	**0.056 I**
Orthophosphate	0.01	0.01	**0.03**	0.04	0.05	0.08	0.11	0.17	0.27	0.59	1.37	**0.038**
Turbidity (NTU)	0.60	0.90	1.20	1.45	2.10	2.80	3.60	**4.50**	6.65	10.45	16.30	**6.3 Q**

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

Appendix 6

Additional physical, chemical, toxicological and microbiological result

STATE OF FLORIDA
DEPT. OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT

Division of Water Facilities
Surface Water Section

MICROBIOLOGICAL ANALYSIS REPORT

S.M. 9222B/S.M. 9222D — Comp.QAP#880236

NAME OF SURVEY			COLLECTOR
Goodbread WWTP			O'Connor
DATE: COLLECTED	**RECEIVED**	**PROCESS START**	**COMPLETED**
2/02/04	13:25 2/02/04	13:55 2/02/04	15:30 2/03/04
SURVEY TYPE	**SAMPLE TYPE**	**COUNTY**	**ANALYTICAL METHOD**
5th Year	Effluent, Surface Water	Nassau	Membrane Filter
ANALYST	**COMMENTS**		
Parrish			

LAB NO.	STORET NO.	SITE LOCATION	COLL TIME	SET UP TIME	TOTAL COLIFORM #/100ML	TOTAL COLIFORM CODE	FECAL COLIFORM #/100ML	FECAL COLIFORM CODE
040090		Goodbread downstream	0955	16:50	967		450	
040091		Goodbread upstream	1110	16:50	1367		300	
040092		Goodbread effluent	1106	16:50	170		3	U

Results for NELAP accredited tests contained in this report meet the requirements for the National Environmental Accreditation Program. Nelap# E32890

RESULTS APPROVED BY:	DATE
Jeremy Parrish	2/4/04

PAGE 1

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY, SUIT B-200 **DOH Accreditation # E32890**
JACKSONVILLE, FL 32256-7577

SAMPLE ID : 040092c STATION : DATE: 02/02/04 TIME: 11:06
SAMPLE SOURCE Good Bread MHP SAMPLER: O'Connor/Kallemeyn/Berges/JW
STATION LOCATION: Good Bread wwtp final effluent
PROGRAM MOD.: DW COMPLIANCE: ☒ ENFORCEMENT: ☐
FIELD MEASUREMENTS

Tot. Depth:		Sample Depth:		W.Temp. °C:	15:53
Conductivity: µmoh/cm (EPA 120.1) :	783	Diss. Oxygen (EPA 360.1)	5.62	EPA 170.1	
Stream Velocity:		Salinity:	0.39	T.R.C.:	
pH:(EPA 150.1)	7.38	Secchi:		EPA 330.5	

WEATHER CONDITIONS: Rain previous 48 hours. Creek up from previous(30days). 3" - 4 "

LABORATORY MEASUREMENTS

		Unit	Analysis Date/Time	Analyst	Remarks
Turbidity (NTU) : EPA 180.1	20.0	NTU	02/04/04 - 10:15	BA	
Color (PtCo): EPA 110.2		PCU			
B.O.D : SM 5210-B		Mg/L			
C.B.O.D : SM 5210-B	10	Mg/L	02/04/04 - 08:40	BA	
Tot. S.S : EPA 160.2	33	Mg/L	02/06/04 - 08:00	BA	
Vol. S.S: EPA 160.4	27	Mg/L	02/06/04 - 08:00	BA	
Fix S.S:	6	Mg/L	02/06/04 - 08:00	BA	

COMMENTS:

Sample Custody
Sample Released to: Bipin Adhyaru Date: 02/02/04

Preservation: Ice Time: 16:00

Reported by: Bipin Adhyaru ext. 3224 Date:: 02/09/2004

K = Actual value is known to be less than the value given.
A = Value is the mean of two or more determinations.
O = Sampled, but analysis lost or not performed.
Q = Sample held beyond the accepted holding time.
T = Value reported is less than the laboratory method detection limit.
U = Indicates that the compound was analyzed for but not detected.
Y = The laboratory analysis was from an unpreserved or improperly preserved sample.
REJ = Data is rejected and should not be used.
L = Off - scale high. Actual value is known to be greater than value given
J = Estimated value; value not accurate.
PQL = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
Results for NELAP accredited tests contained in this report meet the requirement specified for the National Environmental Accreditation Program.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY, SUIT B-200 **DOH Accreditation # E32890**
JACKSONVILLE, FL 32256-7577

SAMPLE ID : 040090c STATION : DATE: 02/02/04 TIME: 09:35
SAMPLE SOURCE Good Bread MHP SAMPLER: O'Connor/Kallemeyn/Berges/JW
STATION Good Bread Test Downstream POD
LOCATION:
PROGRAM MOD.: DW COMPLIANCE: ☒ ENFORCEMENT: ☐
FIELD MEASUREMENTS

Tot. Depth:	2.0	Sample Depth:	1.0	W.Temp. °C:	10.44
Conductivity: µmoh/cm (EPA 120.1) :	353	Diss. Oxygen (EPA 360.1)	7.97	EPA 170.1	
Stream Velocity:	0.2	Salinity:	0.17	T.R.C.:	
pH:(EPA 150.1)	7.2	Secchi:	0.6 L	EPA 330.5	

WEATHER CONDITIONS: Rain previous 48 hours. Creek up from previous(30days). 3" - 4 "

LABORATORY MEASUREMENTS

		Unit	Analysis Date/Time	Analyst	Remarks
Turbidity (NTU) : EPA 180.1	6.3 Q	NTU	02/04/04 - 10:15	BA	
Color (PtCo): EPA 110.2	150 Q	PCU	02/04/04 - 09:50	BA	
B.O.D : SM 5210-B	2 K	Mg/L	02/04/04 - 0840	BA	
C.B.O.D : SM 5210-B		Mg/L			
Tot. S.S : EPA 160.2	2 K	Mg/L	02/06/04 - 08:00	BA	
Vol. S.S: EPA 160.4	2 K	Mg/L	02/06/04 - 08:00	BA	
Fix S.S:	2 K	Mg/L	02/06/04 - 08:00	BA	

COMMENTS:

Sample Custody
Sample Released to: Bipin Adhyaru Date: 02/02/04

Preservation: Ice Time: 16:00

Reported by: Bipin Adhyaru ext. 3224 Date:: 02/09/2004

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A = Value is the mean of two or more determinations.
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L = Off - scale high. Actual value is known to be greater than value given
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Results for NELAP accredited tests contained in this report meet the requirement specified for the National Environmental Accreditation Program.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHEAST DISTRICT
7825 BAYMEADOWS WAY, SUIT B-200 **DOH Accreditation # E32890**
JACKSONVILLE, FL 32256-7577

SAMPLE ID : 040091c STATION : DATE: 02/02/04 TIME: 11:30
SAMPLE SOURCE Good Bread MHP SAMPLER: O'Connor/Kallemeyn/Berges/JW
STATION Good Bread control upstream of POD
LOCATION:
PROGRAM MOD.: DW COMPLIANCE: ☒ ENFORCEMENT: ☐
FIELD MEASUREMENTS

Tot. Depth:	1.2	Sample Depth:	0.6	W.Temp. °C:	10.96
Conductivity: µmoh/cm (EPA 120.1) :	352	Diss. Oxygen (EPA 360.1)	8.04	EPA 170.1	
Stream Velocity:	0.2	Salinity:	0.17	T.R.C.:	
pH:(EPA 150.1)	7.12	Secchi:	0.6	EPA 330.5	

WEATHER CONDITIONS: Rain previous 48 hours. Creek up from previous(30days). 3" - 4 "

LABORATORY MEASUREMENTS

		Unit	Analysis Date/Time	Analyst	Remarks
Turbidity (NTU) : EPA 180.1	6.8	NTU	02/04/04 - 10:15	BA	
Color (PtCo): EPA 110.2	150	PCU	02/04/04 - 09:50	BA	
B.O.D : SM 5210-B	2 K	Mg/L	02/04/04 - 0840	BA	
C.B.O.D : SM 5210-B		Mg/L			
Tot. S.S : EPA 160.2	3	Mg/L	02/06/04 - 08:00	BA	
Vol. S.S: EPA 160.4	2 K	Mg/L	02/06/04 - 08:00	BA	
Fix S.S:	2	Mg/L	02/06/04 - 08:00	BA	

COMMENTS:

Sample Custody
Sample Released to: Bipin Adhyaru Date: 02/02/04

Preservation: Ice Time: 16:00

Reported by: Bipin Adhyaru ext. 3224 Date:: 02/09/2004

K = Actual value is known to be less than the value given.
A = Value is the mean of two or more determinations.
O = Sampled, but analysis lost or not performed.
Q = Sample held beyond the accepted holding time.
T = Value reported is less than the laboratory method detection limit.
U = Indicates that the compound was analyzed for but not detected.
Y = The laboratory analysis was from an unpreserved or improperly preserved sample.
REJ = Data is rejected and should not be used.
L = Off - scale high. Actual value is known to be greater than value given
J = Estimated value; value not accurate.
PQL = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
Results for NELAP accredited tests contained in this report meet the requirement specified for the National Environmental Accreditation Program.

Facility:	**Goodbread Mobile Home Park WWTF**	**NPDES #:**	**FL0032662**	Facility Type:	**Wastewater**	**Analysts:**	Marshall Faircloth
Location:	US Highway 17 North, Yulee	Contact/District:	P. O'connor/Northeast		**Treatment Facility**		Sarah Prichard Joshua Ayres
County:	Nassau	Test type:	static acute screen				Scott Andree James Daniels
Sample Collection Date:	2/2/2004 Time: 1100	# tests:	2	Receiving Water:	unnamed ditch into London Creek		Christa Pierini
Test Beginning Date:	2/3/2004 Time: 1430	Chlorination Type:	dechlorinated		Class III freshwater		
Test Ending Date:	2/5/2004 Time: 1330	FDEP SOP#:	TA07_01 / 02		**Page 1 of 1**	**Reviewer:**	Julie Espy

100% sample filtered with 60 μm screen in order to remove detritus and large debris.
Dechlorinated aliquot of sample by the addition of 2.0 ml of 0.025N Sodium thiosulfate per liter of sample.

Organism: ***Ceriodaphnia dubia*** (water flea) Life stage: <24 hours Chamber size: 30 mL [A]Feeding: YCT/Algae Food Batch #: #4/#23

	Sample/Diluen	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]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	8.0	-	8.2	24.0	-	24.0	8.3	-	7.3	325	240
Control B	0/20	5	5	5	-	-	8.2	-	-	24.0	-	-	7.7	-	195
Control C	0/20	5	5	5	-	-	8.2	-	-	24.1	-	-	7.8	-	200
Control D	0/20	5	5	5	-	-	8.2	-	-	24.1	-	-	7.8	-	205
dechl. Ctrl A	0/20	5	5	5	8.1	-	8.2	24.1	-	24.0	8.1	-	7.8	185	195
dechl. Ctrl B	0/20	5	5	5	-	-	8.2	-	-	24.2	-	-	8.0	-	190
dechl. Ctrl C	0/20	5	5	5	-	-	8.2	-	-	24.0	-	-	8.0	-	200
dechl. Ctrl D	0/20	5	5	5	-	-	8.2	-	-	24.3	-	-	7.9	-	200
dechl. 100% A	20/0	5	5	5	8.0	-	8.7	24.0	-	24.3	8.1	-	8.0	800	910
dechl. 100% B	20/0	5	5	5	-	-	8.7	-	-	24.5	-	-	7.8	-	915
dechl. 100% C	20/0	5	5	5	-	-	8.7	-	-	24.0	-	-	8.0	-	910
dechl. 100% D	20/0	5	5	5	-	-	8.7	-	-	24.1	-	-	7.7	-	925
100% A	20/0	5	0	-	7.9	8.5	-	24.0	25.1	-	7.9	6.6	-	850	-
100% B	20/0	5	0	-	-	8.6	-	-	25.1	-	-	6.7	-	-	-
100% C	20/0	5	0	-	-	8.6	-	-	25.1	-	-	6.6	-	-	-
100% D	20/0	5	0	-	-	8.6	-	-	25.1	-	-	6.8	-	-	-

Organism: ***Pimephales promelas*** (fish) Life stage: 13 days Chamber size: 1000 mL [A]Feeding: *Artemia* Food Batch #: 0194025G

	Sample/Diluen	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]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	7.9	7.8	24.0	25.7	24.3	8.5	7.4	7.8	330	340
Control B	0/500	5	5	5	8.1	7.9	7.8	24.0	24.8	24.0	8.4	7.3	7.8	320	340
Control C	0/500	5	5	5	8.2	7.9	7.8	24.0	24.2	24.5	8.3	7.4	7.6	315	345
Control D	0/500	5	5	5	8.2	7.9	7.8	24.0	24.6	24.0	8.2	7.2	7.6	310	335
dechl. Ctrl A	0/500	5	5	5	8.2	7.9	7.9	24.0	26.0	24.0	7.7	7.0	7.8	325	350
dechl. Ctrl B	0/500	5	5	5	8.2	7.9	7.9	24.2	25.5	24.1	7.8	7.1	8.0	330	350
dechl. Ctrl C	0/500	5	5	5	8.2	7.9	7.9	24.3	24.3	24.0	7.8	7.4	7.8	320	340
dechl. Ctrl D	0/500	5	5	5	8.2	7.9	7.9	24.3	24.3	24.0	7.9	7.3	7.8	315	350
dechl. 100% A	500/0	5	5	5	8.0	8.3	8.4	24.1	24.7	24.1	7.9	7.1	8.1	800	870
dechl. 100% B	500/0	5	5	5	8.0	8.3	8.4	24.1	24.2	24.0	7.4	7.0	7.7	840	880
dechl. 100% C	500/0	5	5	5	8.0	8.3	8.4	24.1	24.3	24.5	7.5	6.8	7.6	825	905
dechl. 100% D	500/0	5	5	5	8.0	8.3	8.4	24.1	24.4	24.0	7.5	6.8	7.6	845	890
100% A	500/0	5	0	-	7.9	8.4	-	24.1	24.9	-	7.6	7.0	-	840	-
100% B	500/0	5	0	-	7.9	8.4	-	24.1	24.2	-	7.6	7.2	-	830	-
100% C	500/0	5	0	-	7.9	8.4	-	24.1	24.0	-	7.6	7.5	-	815	-
100% D	500/0	5	0	-	7.9	8.4	-	24.1	24.2	-	7.6	7.7	-	825	-

[A] Organisms fed prior to testing.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] Conductivity value is uncorrected μmhos/cm.

LIMS	
Job number:	TLH-2004-02-03-48-01
sample number:	731814

Data Transcription Verification
date: 2/12/04
by: James Daniels/Josh Ayres

Total Residual CL2	mg/L	Method
Control water (water flea):	0.02	Hach
Control water (fish):	0.01	Hach
Field 100% sample:	0.00	field meter
dechl. Lab 100% sample:	0.05	Hach
Lab 100% sample:	1.08	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

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water (water flea):	77	81
Control water (fish)	76	93
100% Sample:	248	214

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

Room Temperature range for the test period was 23.5 - 24.5°C.
Incubator #3 temperature range for the test period was 23.0 - 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.

Appendix 7

Habitat Assessment Field Sheets

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (5-10-96)

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/2/04	1200	Lofton Creek

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	NASSAU	UNAMED TRIBUTARY OF LOFTON CREEK ABOVE GODBRAND MHP WWTP POD	Control Site

RIPARIAN ZONE/INSTREAM FEATURES

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

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)
15	80			5			

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: >18

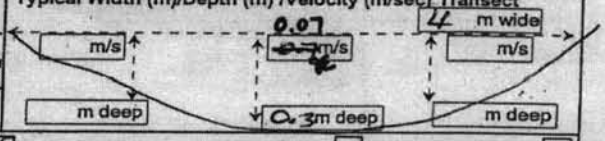
List & map dominant vegetation on back

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

Artificially Impounded ☐ yes

High Water Mark: 0.3 (m above present water level) + 0.3 (present depth in m) = 0.6 (m above bed)

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



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

SEDIMENT/SUBSTRATE

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

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

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

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)	3	5	Direct	Sand			
Leaf Packs or Mats	4.25	5	Direct	Mud/Muck/Silt	91.75	5	Direct
Aquatic Vegetation				Other:			
Rock or Shell Rubble				Other:			
Undercut banks/Roots	1.0	5	Direct	Draw aerial view sketch of habitats found in 100 m section			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):			Secchi (m):
Top								
Mid-depth	0.16	10.96	7.72	8.04	352			0.6
Bottom								

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

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

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

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

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

Weather Conditions/Notes: 3-4" RAIN OVER PREV 10 DAYS 48 HRS

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

SAMPLING TEAM: KATHERYN O'CONNOR | SIGNATURE: | DATE: 2/2/04

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

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

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
		02/02/04	Lofton Creek

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	NASSAU	UNAMED Tributary of Lofton Creek Above Goodbread MHP WWTP POD	Control Site

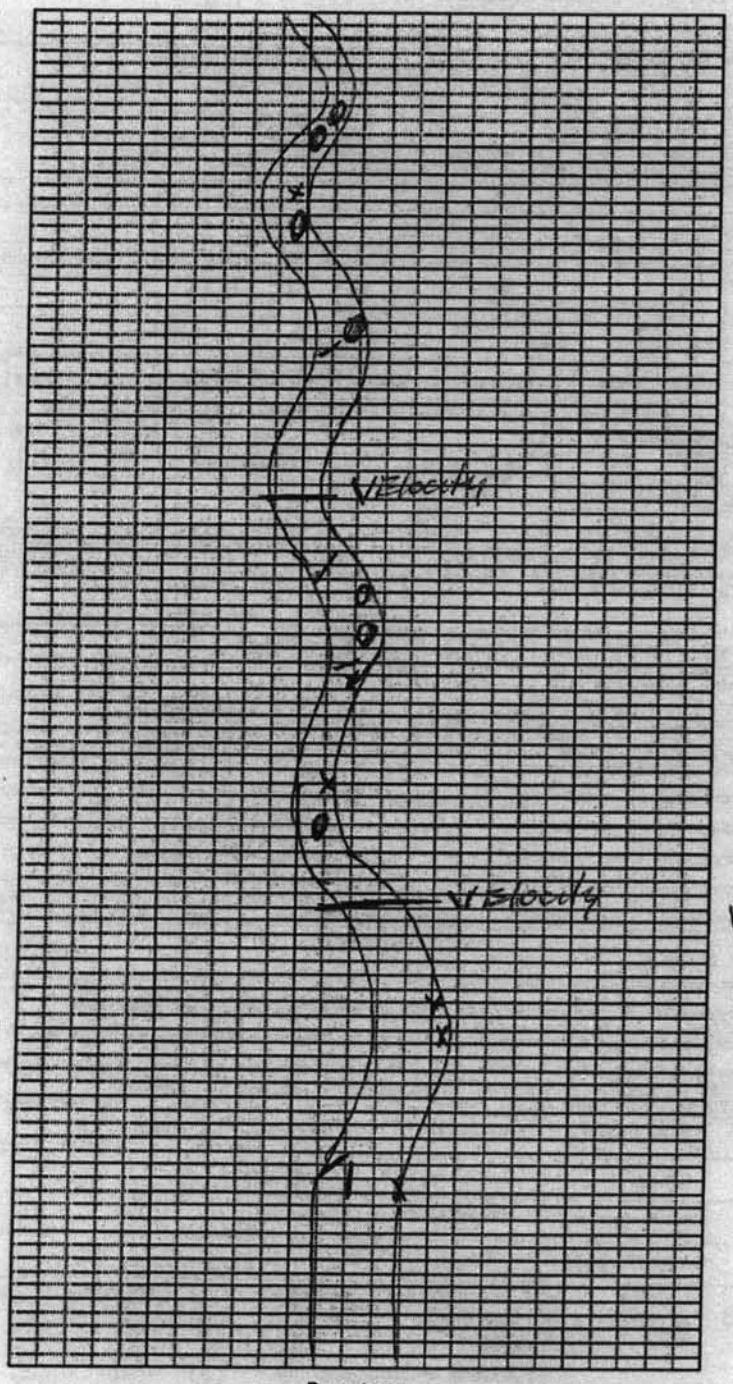
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 11	Four or more productive habitats present [snags, tree roots/undercut banks, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 7	Greater than 30% productive habitat present at site 20 19 18 17 16	16% to 30% productive habitat, by aerial extent 15 14 13 12 11	6% to 15% productive habitat 10 9 8 7 6	Less than 5% productive habitat 5 4 3 2 1
Water Velocity 8	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec 20 19 18 17 16	Max. observed at typical transect: 0.1 to 0.25 m/sec 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec 5 4 3 2 1
Habitat Smothering 6 Primary Score 32	Less than 20% of habitats affected by sand or silt accumulation 20 19 18 17 16	20%-50% of habitats affected by sand or silt accumulation 15 14 13 12 11	Smothering of 50%-80% of the habitats with sand or silt, pools shallow, frequent sediment movement 10 9 8 7 6	Smothering of >80% of habitats with sand or silt, as severe problem, pools absent 5 4 3 2 1
Secondary Habitat Components Artificial Channelization 16	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	May have been channelized in the past (>20 yrs), but mostly recovered, fairly good sinuous pattern 15 14 13 12 11	Channelized, somewhat recovered, but > 80% of area affected 10 9 8 7 6	Artificially channelized, box-cut banks, straight, instream habitat highly altered 5 4 3 2 1
Bank Stability Right Bank 8 Left Bank 8	Stable. No evidence of erosion or bank failure. Little potential for future problems. 10 9	Moderately stable. Infrequent or small areas of erosion, mostly healed over. 8 7 6	Moderately unstable. Moderate areas of erosion, high erosion potential during floods. 5 4	Unstable. Many (60%-80%) raw, eroded areas. Obvious bank sloughing. 3 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 10	Width of native vegetation (least buffered side) greater than 18 m 10 9	Width of native vegetation (least buffered side) 12 to 18 m 8 7 6	Width of native vegetation 6 to 12 m, human activities still close to system 5 4	Less than 6 m of native buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 104 ~~104~~ 90	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody macrophytes. Normal, expected plant community for given sunlight & habitat conditions 10 9	50% to 80% of riparian zone is vegetated, and/or one class of plants normally expected for the sunlight & habitat conditions is not represented. Some disruption in community evident. 8 7 6	25% to 50% of riparian zone is vegetated, and/or one or two expected classes of plants are not represented. Patches of bare soil or closely cropped vegetation, disruption obvious. 5 4	Less than 25% of stream bank surfaces are vegetated and/or poor plant community (e.g. grass monoculture or exotics) present. Vegetation removed to stubble height of 2 inches or less 3 2 1

104 **TOTAL SCORE**

ANALYSIS DATE:	ANALYST:	SIGNATURE:
2/2/04	O'Connor	

Goodbread 2/2/04

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (June 1, 2001)
Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Substrates: Code key, draw proportionate habitat abundance.

- / Snags
- x Roots/undercut banks
- o Leaf Packs (or mats)
- ☐ Macrophytes
- ☐ _____
- ☐ _____
- ☐ _____

Velocity:
Note where velocity measures were taken.

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

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

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

Plants observed/other notes:

Control Site
Velocity 0.07 m/s
Leaves covered silt
sloughs fairly stable
banks

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD DATA SHEET (5-10-96)

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	TIME	RECEIVING BODY OF WATER:
		2/2/04	1010	Lofton Creek

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	NASSAU	UNAMED TRIBUTARY of Lofton Creek 10-110 m below GOODBREAD MHP WWTP POD	TEST SITE

RIPARIAN ZONE/INSTREAM FEATURES

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

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industrial	Other (Specify)
15	80			5			

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: >18

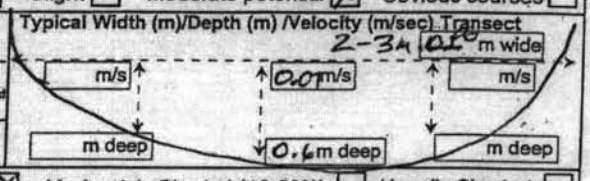
List & map dominant vegetation on back

Artificially Channelized ☐ no ☐ recent, severe ☐ some recovery ☒ mostly recovered

Artificially Impounded ☒ yes BEAVER DAM more sinuous

High Water Mark: 0.3 (m above present water level) + 0.6 (present depth in m) = 0.9 (m above bed)

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



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

SEDIMENT/SUBSTRATE

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

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

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

Substrate Types	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)	4.3			Sand			
Leaf Packs or Mats	3.3			Mud/Muck/Silt	91.4		
Aquatic Vegetation				Other:			
Rock or Shell Rubble				Other:			
Undercut banks/Roots	1.0			*Draw aerial view sketch of habitats found in 100 m section*			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):			Secchi (m):
Top								
Mid-depth	0.3	10.44	7.2	7.87	353			0.6
Bottom								

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

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

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

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

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

Weather Conditions/Notes:
RAIN FOR 48 HRS PRIOR TO INSPECTION
3-4" RAINFALL

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

SAMPLING TEAM: KALLENBERN, O'Connor | SIGNATURE: Robert O'Connor | DATE: 3/2/04

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

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

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
		02/02/04	Lofton Creek

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	NASSAU	UNAmed tributary to Lofton Creek 10-110m below Goodbread MHP POD	TEST SITE

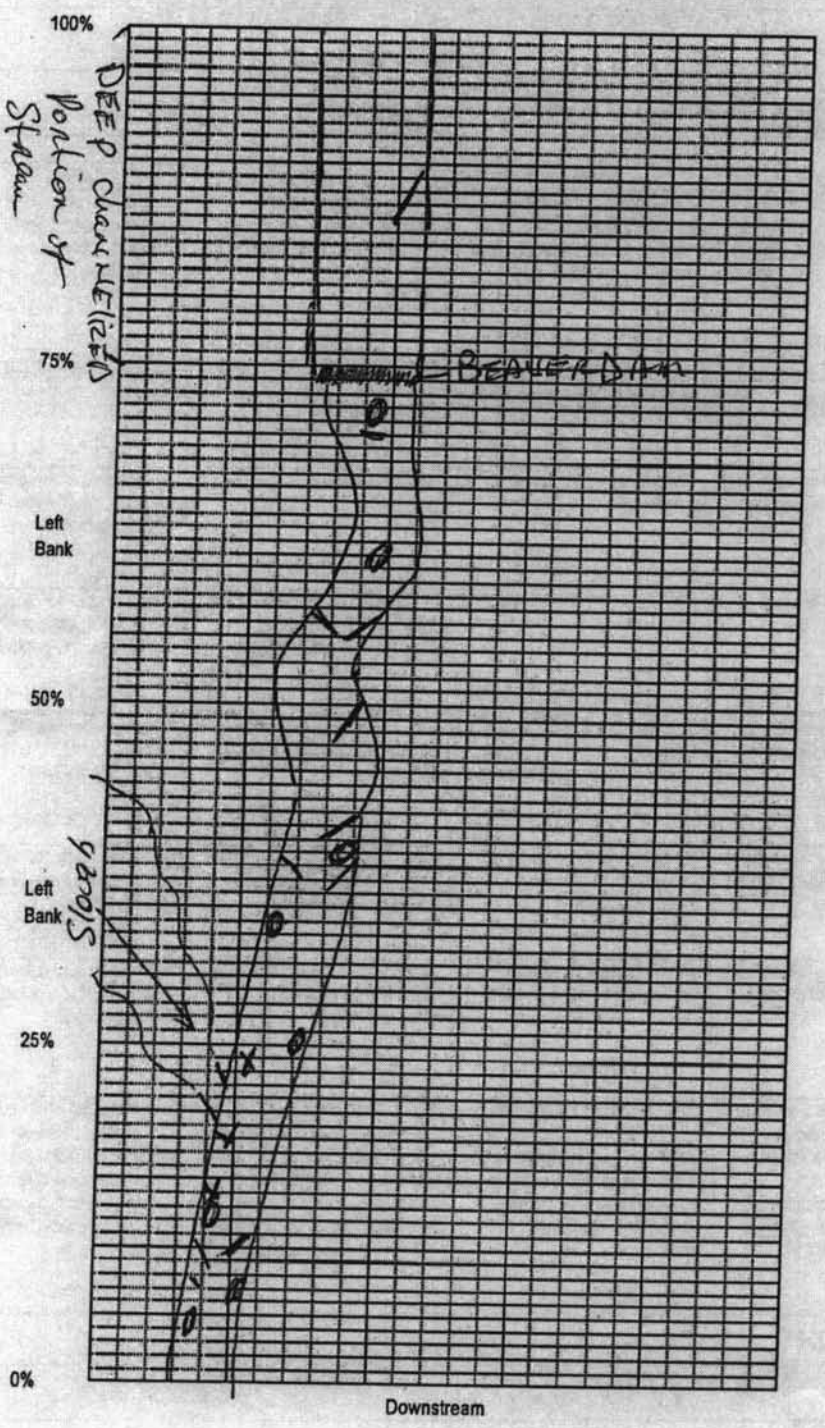
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 11	Four or more productive habitats present [snags, tree roots/undercut banks, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 8	Greater than 30% productive habitat present at site 20 19 18 17 16	16% to 30% productive habitat, by aerial extent 15 14 13 12 11	6% to 15% productive habitat 10 9 8 7 6	Less than 5% productive habitat 5 4 3 2 1
Water Velocity 7	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec 20 19 18 17 16	Max. observed at typical transect: 0.1 to 0.25 m/sec 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec 5 4 3 2 1
Habitat Smothering 6 Primary Score 32	Less than 20% of habitats affected by sand or silt accumulation 20 19 18 17 16	20%-50% of habitats affected by sand or silt accumulation 15 14 13 12 11	Smothering of 50%-80% of the habitats with sand or silt, pools shallow, frequent sediment movement 10 9 8 7 6	Smothering of >80% of habitats with sand or silt, as severe problem, pools absent 5 4 3 2 1
Secondary Habitat Components Artificial Channelization 12	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	May have been channelized in the past (>20 yrs), but mostly recovered, fairly good sinuous pattern 15 14 13 12 11	Channelized, somewhat recovered, but > 80% of area affected 10 9 8 7 6	Artificially channelized, box-cut banks, straight, instream habitat highly altered 5 4 3 2 1
Bank Stability Right Bank 7 Left Bank 7	Stable. No evidence of erosion or bank failure. Little potential for future problems. 10 9	Moderately stable. Infrequent or small areas of erosion, mostly healed over. 8 7 6	Moderately unstable. Moderate areas of erosion, high erosion potential during floods. 5 4	Unstable. Many (60%-80%) raw, eroded areas. Obvious bank sloughing. 3 2 1
Riparian Buffer Zone Width Right Bank 10 Left Bank 9	Width of native vegetation (least buffered side) greater than 18 m 10 9	Width of native vegetation (least buffered side) 12 to 18 m 8 7 6	Width of native vegetation 6 to 12 m. human activities still close to system 5 4	Less than 6 m of native buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 65	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody macrophytes. Normal, expected plant community for given sunlight & habitat conditions 10 9	50% to 80% of riparian zone is vegetated, and/or one class of plants normally expected for the sunlight & habitat conditions is not represented. Some disruption in community evident. 8 7 6	25% to 50% of riparian zone is vegetated, and/or one or two expected classes of plants are not represented. Patches of bare soil or closely cropped vegetation, disruption obvious. 5 4	Less than 25% of stream bank surfaces are vegetated and/or poor plant community (e.g. grass monoculture or exotics) present. Vegetation removed to stubble height of 2 inches or less 3 2 1

97 TOTAL SCORE

ANALYSIS DATE:	ANALYST:	SIGNATURE:
2/2/04	O'Connor	Patricia Connor

Good BREAD 2/2/04

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (June 1, 2001)
Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Substrates: Code key, draw proportionate habitat abundance.

- [/] Snags
- [X] Roots/undercut banks
- [0] Leaf Packs (or mats)
- [ ] Macrophytes
- [ ] _____
- [ ] _____
- [ ] _____

Velocity:
Note where velocity measures were taken.

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

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

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

Plants observed/other notes:

TEST SITE

Appendix 8a

Taxa list and density (number/cm^2) for periphyton collected from glass microscope slides incubated for 28 days upstream and downstream of Goodbread MHP facility discharge, February 2, 2004.

	Control Site	Test Site
Bacillariophyta		
Achnanthes exigua	206	344
Achnanthes hungarica	206	-
Achnanthes lanceolata	206	689
Achnanthes minutissima	206	344
Achnanthes sp.	-	344
Amphora sp.	206	-
Bacillaria paxillifer	206	344
Bacillariophyceae	206	689
Brachysira vitrea	206	344
Cocconeis placentula	206	-
Coscinodiscophyceae	-	344
Cyclotella meneghiniana	2,475	-
Cyclotella sp.	1,444	1,377
Cymbellaceae	206	344
Encyonema evergladianum	206	-
Encyonema neomesianum	206	344
Encyonema silesiacum	413	344
Eunotia sp.	2,475	2,754
Fragilaria delicatissima	206	344
Fragilariaceae	1,444	689
Fragilariophyceae	-	344
Gomphonema gracile	413	344
Gomphonema parvulum	825	3,443
Gomphonema sp.	619	2,066
Gyrosigma sp.	206	-
Hippodonta sp.	413	344
Mastogloia sp.	206	-
Navicula cryptocephala	5,775	3,443
Navicula gastrum	206	-
Navicula minima	206	344
Navicula sp.	619	689
Naviculaceae	206	344
Nitzschia amphibia	206	344
Nitzschia amphibioides	206	-
Nitzschia nana	206	-
Nitzschia palea	206	-
Nitzschia sp.	2,475	4,132
Nitzschia subacicularis	206	-
Pinnularia sp.	-	344
Rhopalodia sp.	206	-
Stauroneis sp.	206	-
Surirella sp.	206	344
Synedra acus	413	-
Synedra ulna	206	689
Undetermined Bacillariophyta	-	344

Appendix 8a continued

Chlorophycota		
Stigeoclonium sp.	-	344
Ankistrodesmus falcatus	206	-
Characium sp.	619	6,198
Chlorella sp.	1,031	344
Chlorococcum sp.	1,856	-
Oocystis sp.	206	-
Oedogonium sp.	619	-
Chlamydomonas sp.	2,063	2,066
Closterium sp.	206	-
Cryptophycophyta		
Cryptomonas sp.	-	344
Microcystis sp.	206	-
Pseudanabaena sp.	1,031	344
Jaaginema sp.	7,219	25,135
Planktolyngbya sp.	4,331	10,674
Schizothrix sp.	16,501	34,431
Euglenophycota		
Euglena sp.	206	-
Trachelomonas sp.	619	344
Xanthophyta		
Ophiocytium sp.	206	-
Tribonema sp.	2,681	-

Appendix 8b

Taxa list and number of individuals counted for periphyton collected from glass microscope slides incubated for 28 days upstream and downstream of Goodbread MHP facility discharge, February 2, 2004.

	Control Site	Test Site
Bacillariophyta		
Achnanthes exigua	1	1
Achnanthes hungarica	1	-
Achnanthes lanceolata	1	2
Achnanthes minutissima	1	1
Achnanthes sp.	-	1
Amphora sp.	1	-
Bacillaria paxillifer	1	1
Bacillariophyceae	1	2
Brachysira vitrea	1	1
Cocconeis placentula	1	-
Coscinodiscophyceae	-	1
Cyclotella meneghiniana	12	-
Cyclotella sp.	7	4
Cymbellaceae	1	1
Encyonema evergladianum	1	-
Encyonema neomesianum	1	1
Encyonema silesiacum	2	1
Eunotia sp.	12	8
Fragilaria delicatissima	1	1
Fragilariaceae	7	2
Fragilariophyceae	-	1
Gomphonema gracile	2	1
Gomphonema parvulum	4	10
Gomphonema sp.	3	6
Gyrosigma sp.	1	-
Hippodonta sp.	2	1
Mastogloia sp.	1	-
Navicula cryptocephala	28	10
Navicula gastrum	1	-
Navicula minima	1	1
Navicula sp.	3	2
Naviculaceae	1	1
Nitzschia amphibia	1	1
Nitzschia amphibioides	1	-
Nitzschia nana	1	-
Nitzschia palea	1	-
Nitzschia sp.	12	12
Nitzschia subacicularis	1	-
Pinnularia sp.	-	1
Rhopalodia sp.	1	-
Stauroneis sp.	1	-
Surirella sp.	1	1
Synedra acus	2	-
Synedra ulna	1	2
Undetermined Bacillariophyta	-	1

Appendix 8b continued

Chlorophycota		
Stigeoclonium sp.	-	1
Ankistrodesmus falcatus	1	-
Characium sp.	3	18
Chlorella sp.	5	1
Chlorococcum sp.	9	-
Oocystis sp.	1	-
Oedogonium sp.	3	-
Chlamydomonas sp.	10	6
Closterium sp.	1	-
Cryptophycophyta		
Cryptomonas sp.	-	1
Microcystis sp.	1	-
Pseudanabaena sp.	5	1
Jaaginema sp.	35	73
Planktolyngbya sp.	21	31
Schizothrix sp.	80	100
Euglenophycota		
Euglena sp.	1	-
Trachelomonas sp.	3	1
Xanthophyta		
Ophiocytium sp.	1	-
Tribonema sp.	13	-

Appendix 9a

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

	Control Site	Test Site
Annelida		
Oligochaeta		
Dero digitata complex	42	16
Nais communis complex	5	-
Arthropoda		
Crustacea		
Amphipoda		
Gammarus sp.	3	-
Isopoda		
Caecidotea sp.	13	5
Insecta		
Coleoptera		
Cyphon sp.	5	5
Helocombus sp.	3	-
Neoporus sp.	8	3
Collembola		
Sminthuridae	8	3
Undetermined Collembola	3	-
Diptera		
Cecidomyiidae	3	-
Ceratopogonidae	3	-
Chironomus sp.	-	3
Dicrotendipes modestus	10	-
Dicrotendipes simpsoni	21	21
Kiefferulus sp.	11	21
Polypedilum tritum	8	8
Tanytarsus sp. L Epler	3	-
Tanytarsus sp. T Epler	132	16
Ephemeroptera		
Caenis sp.	42	24
Mollusca		
Gastropoda		
Ancylidae	3	13
Micromenetus sp.	13	13

Appendix 9b

Benthic macroinvertebrates collected from Hester-Dendy artificial substrates incubated upstream and downstream of the Goodbread MHP facility for 28 days (February 2, 2004). Taxa collected and total number of individuals counted (n = 3 samples).

	Control Site	Test site
Annelida		
Oligochaeta		
Dero sp.	3	1
Dero digitata complex	13	5
Nais communis complex	2	-
Arthropoda		
Crustacea		
Amphipoda		
Gammarus sp.	1	-
Isopoda		
Caecidotea sp.	5	2
Insecta		
Coleoptera		
Cyphon sp.	2	2
Dytiscidae	2	-
Helocombus sp.	1	-
Neoporus sp.	1	1
Collembola		
Sminthuridae	3	1
Undetermined Collembola	1	-
Diptera		
Cecidomyiidae	1	-
Ceratopogonidae	1	-
Chironomidae	4	-
Chironomus sp.	-	1
Dicrotendipes sp.	2	-
Dicrotendipes modestus	3	-
Dicrotendipes simpsoni	6	8
Kiefferulus sp.	4	8
Polypedilum sp.	-	1
Polypedilum tritum	3	2
Tanytarsus sp. L Epler	1	-
Tanytarsus sp. T Epler	47	6
Ephemeroptera		
Caenis sp.	16	9
Mollusca		
Gastropoda		
Ancylidae	1	4
Micromenetus sp.	3	4
Planorbidae	1	-
Undetermined Gastropoda	1	2

Appendix 10a

Qualitative benthic macroinvertebrate collections (n = 20 discrete dipnet sweeps) upstream and downstream of Goodbread MHP facility (February 2, 2004). Taxa list and number of individuals counted (collapsed). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site	Test Site
Annelida		
Oligochaeta		
Aulodrilus pigueti	1	-
Dero digitata complex	-	4
Dero sp.	7	-
Eclipidrilus palustris	-	2
Enchytraeidae	-	1
Haemonais waldvogeli	2	-
Ilyodrilus templetoni	6	-
Limnodrilus sp.	5	4
Nais communis complex	-	1
Arthropoda		
Crustacea		
Amphipoda		
Crangonyx sp.	1	4
Hyalella azteca	4	-
Decapoda		
Cambaridae	-	1
Isopoda		
Caecidotea sp.	17	30
Insecta		
Coleoptera		
Dytiscidae	-	2
Helocombus sp.	-	3
Hydroporus sp.	4	-
Scirtes sp.	-	4
Staphylinidae	-	1
Diptera		
Cecidomyiidae	1	2
Cryptochironomus sp.	1	-
Dicrotendipes simpsoni	6	1
Dolichopodidae	-	1
Kiefferulus sp.	1	-
Limnophyes sp.	-	1
Paratanytarsus sp.	-	1
Polypedilum illinoense grp.	1	4
Polypedilum scalaenum grp.	4	-
Polypedilum tritum	-	2
Pseudochironomus sp.	-	1
Sciaridae	1	1
Tanytarsus sp.	4	-
Tanytarsus sp. T Epler	-	1
Ephemeroptera		
Caenis sp.	19	1

Appendix 10a continued

Odonata		
Enallagma sp.	-	1
Pachydiplax longipennis	-	2
Plecoptera		
Agnetina annulipes	-	1
Trichoptera		
Ironoquia punctatissima	1	-
Mollusca		
Bivalvia		
Sphaeriidae	18	-
Gastropoda		
Ancylidae	6	-
Hydrobiidae	-	5
Physella sp.	-	1

Appendix 10b

Qualitative benthic macroinvertebrate collections (n = 20 discrete dipnet sweeps) upstream and downstream of Goodbread MHP facility (February 2, 2004). Taxa list and number of individuals counted.

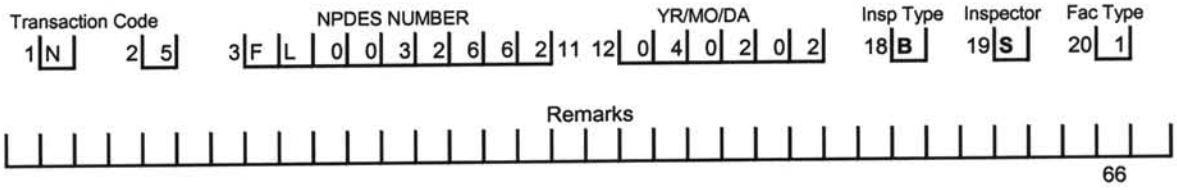
	Control Site	Test Site
Annelida		
Oligochaeta		
Aulodrilus pigueti	1	-
Dero sp.	7	-
Dero digitata complex	-	4
Eclipidrilus sp.	-	1
Eclipidrilus palustris	-	1
Enchytraeidae	-	1
Haemonais waldvogeli	2	-
Ilyodrilus templetoni	5	-
Limnodrilus sp.	4	3
Nais communis complex	-	1
Tubificidae	2	1
Arthropoda		
Crustacea		
Amphipoda		
Crangonyx sp.	1	1
Hyalella azteca	4	-
Undetermined Amphipoda	-	3
Decapoda		
Cambaridae	-	1
Isopoda		
Caecidotea sp.	17	29
Undetermined Isopoda	-	1
Insecta		
Coleoptera		
Dytiscidae	2	2
Helocombus sp.	-	3
Hydroporus sp.	2	-
Scirtes sp.	-	4
Staphylinidae	-	1
Diptera		
Cecidomyiidae	1	2
Chironomidae	1	-
Cryptochironomus sp.	1	-
Dicrotendipes simpsoni	5	1
Dolichopodidae	-	1
Kiefferulus sp.	1	-
Limnophyes sp.	-	1
Paratanytarsus sp.	-	1
Polypedilum illinoense grp.	1	4
Polypedilum scalaenum grp.	4	-
Polypedilum tritum	-	2
Pseudochironomus sp.	-	1
Sciaridae	1	1
Tanytarsus sp.	4	-
Tanytarsus sp. T Epler	-	1

Appendix 10b continued

Ephemeroptera		
Caenis sp.	17	1
Undetermined Ephemeroptera	2	-
Odonata		
Enallagma sp.	-	1
Pachydiplax longipennis	-	2
Plecoptera		
Agnetina annulipes	-	1
Trichoptera		
Ironoquia punctatissima	1	-
Mollusca		
Bivalvia		
Sphaeriidae(mollusca)	11	-
Undetermined Bivalvia	7	-
Gastropoda		
Ancylidae	5	-
Hydrobiidae	-	4
Physella sp.	-	1
Undetermined Gastropoda	1	1

The Bioassay of Goodbread Mobile Home Park WWTF effluent sampled on February 2, 2004, NPDES #FL0032662.

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



The Priority Pollutants Analysis for Bioassay of Goodbread Mobile Home Park WWTF effluent sampled on February 2, 2004, NPDES #FL0032662.

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

