

Biological Assessment of

Pilgrim's Pride Processing Plant

(formerly known as Gold Kist Inc. – Live Oak Processing)

Suwannee County

NPDES #FL0001465

Sampled June 11, 2007

April 2008

Biology Section

Bureau of Laboratories

Division of Environmental Assessment and Restoration

Quality Manual No. 870346G

NELAC Certification No. E31780

Florida Department of Environmental Protection

Fifth Year Inspection Summary

Discharger:	Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc. – Live Oak Processing)
Physical Address:	US Highway 90 West, Live Oak, FL 32060
County:	Suwannee
NPDES Number:	FL0001465
Permit Expiration:	April 20, 2008

Toxics Sampling Inspection **(XSI)**

Date Sampled: June 11, 2007

Results: Nickel was detected in the effluent at a level that complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Arsenic, copper, iron and zinc were found in the effluent at levels above the method detection limit (MDL) and below the practical quantitation limit (PQL) which complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Organic pollutants were not detected in the effluent.

At the Control and Test Sites, copper and iron were detected at levels that complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Arsenic at the Control and Test Sites and nickel at the Test Site were found at levels above the method detection limit (MDL) and below the practical quantitation limit (PQL).

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: June 11, 13, and 15, 2007

Results: The effluent sample was not toxic to the water flea, *Ceriodaphnia dubia,* during the chronic definitive bioassay, and therefore, complied with effluent permit requirements. No Result is reported for the fish, *Pimephales promelas*, because the mortality pattern observed during the chronic definitive bioassay resembled the pattern associated with pathogen interference.

Water Quality Inspection **(WQI)**

Date Sampled: June 11, 2007

Results: Effluent conductivity values exceeded Class III Water Quality Criteria (≤ 1275 µmhos/cm; 62-302.530(22), F.A.C.) on June 11 (1333 (µmhos)/cm) and on June 13 (1350 µmhos/cm) and marginally complied with Class III Water Quality Criteria on June 15 (1235 µmhos/cm). Effluent total residual chlorine was measured in the laboratory (0.04 to 0.06 mg/L) at levels that exceed Class III Water Quality Criteria (≤ 0.01 mg/L; 62-302.530(18), F.A.C.). Elevated levels of total nitrogen (18.2 mg/L), nitrate-nitrite (17 mg/L), ortho-phosphate (9 mg/L) and total phosphorus (9.6 mg/L) in the effluent contributed to the higher nutrient levels at the Test Site compared to the Control Site. Effluent algal growth potential (AGP) was 443 mg dry wt/L, which is 89 times the "problem threshold" value for

freshwater systems (5 mg dry wt/L). AGP at the Test Site (88.9 mg dry wt/L) was 3.6 times that at the Control Site (24.6 mg dry wt/L) which indicates nutrient enrichment associated with the effluent. Nutrient enrichment effects from the effluent appear to be moderated by dilution from the Suwannee River. Water samples for fecal coliform and biological oxygen demand (BOD) analysis, each with permitted effluent limits, were not collected in the effluent or the receiving water.

Impact Bioassessment Inspection **(IBI)**

Date Sampled: June 11, 2007

Results: Similar Habitat Assessment scores place both the Control Site (110) and Test Site (113) in the "suboptimal" category. Quantitative measures of benthic macroinvertebrate assemblages collected with Hester Dendy multi-plate samplers showed differences between the Control and Tests Sites, but results may be confounded by differences in water depth and light penetration between study sites. Similar Stream Condition Index scores at the Control Site (47) and the Test Site (54) indicate no adverse effect on the biological community in the receiving water as a result of the discharge.

Biological assessments are prepared by FDEP staff to provide information for review of NPDES permit renewal applications. Biological assessments, in conjunction with other information concerning the subject facility and its receiving-water body, are used to determine appropriate permit conditions

Introduction

The Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc. Live Oak Processing) is located in Suwannee County, Florida on highway 90 near the City of Live Oak (Appendix A). This facility is a poultry processing and rendering facility. Wastewater is generated from poultry processing, by-products processing, the hatchery, sanitary wastewater, water treatment plant filtrate, sanitation, and storm water (see Facility Summary in Appendix 2). The effluent is discharged at Outfall D-001 into the Suwannee River, a freshwater Class III Outstanding Florida Surface Water. The design daily maximum discharge to the River is 1.7 million gallons per day (MGD) and monthly average discharge is 1.5 MGD. The annual average flow from April 2006 through March 2007 was 1.46 MGD. The average monthly flow during the time of this survey was 1.38 MGD (FL DEP Waste Water Facility Regulation website: http://appprod.dep.state.fl.us/wafr_main).

The permit incorporates the requirements of DEP/Gold Kist Inc., Memorandum of Agreement (MOA), executed on December 6, 2002. The MOA contains the schedules for achieving total nitrogen reductions. As stated in requirement 9 of the MOA, "Within fifty-four (54) months after execution of this MOA, the Facility shall limit the annual rolling average Total Nitrogen load in their wastewater discharge to 313 pounds per day as a rolling annual average." As required, the facility began reporting the new procedure in May 2007 and the annual average total nitrogen levels are in compliance.

The permit also incorporates a new monitoring requirement and compliance schedule for Specific Conductance. By no later than 24 months from the issue date of this permit the Permittee shall demonstrate compliance with respect to this parameter in accordance with Part I.A.13 and Part VI.4 of the permit. A Plan detailing steps to achieve compliance with water quality standards for specific conductance in accordance with FAC Rule 62-302.530 (22) or requesting regulatory relief through a mixing zone was sent to the Department on July 29, 2003. According to the timeline listed within the Plan, the study and any requests were to be completed by September 2004. The Department has no record of a completed Plan report or any request for a mixing zone. Discharge Monitoring Reports (DMR) include specific conductance daily maximum values in July and December 2006 and May through October 2007 and specific conductance monthly average values in December 2006 and May, August and October 2007 that exceed the Class III Water Quality Criteria (≤ 1275 µmhos/cm; 62-302.530(22), F.A.C.). On November 16, 2007, the Department issued a Request for Additional Information (RAI) regarding measured effluent specific conductance levels.

Surface Water Quality Criteria and facility permit limits for Pilgrim's Pride Processing Plant are listed in Tables 1 and 2. According to the facility's monthly DMRs, the plant has had several permit limit violations in the year preceding the sampling event (see Facility Summary and DMR data in Appendix B). Routine chronic toxicity tests for water flea reproduction failed in June 2006 and October 2006. There were permit limit daily maximum exceedences of oil and grease in July 2006, April 2007 and June 2007 and of BOD in October 2006. The chlorine meter was out in February 2007.

Methods

The purpose of this investigation was to determine the potential effects of the Pilgrim's Pride Processing Plant effluent on the receiving waters, the Suwannee River. Chemical and biological comparisons were made between a Control Site (located in the Suwannee River approximately 30-130 meters upstream of the discharge) and a Test Site (located in the Suwannee River approximately 10-110 meters downstream of the discharge). Detailed methods and their relationship to Florida Administrative Code are given in Appendix C.

Effluent samples for the chronic definitive toxicity tests were collected on June 11, 13 and 15, 2007. The permit requires a 24-hour flow proportioned composite for the chronic toxicity test; however, grab samples were collected for these tests.

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

The following were involved in this investigation: Tom Kallemeyn, Eesa Ali, James Lucus and Ben Piltz (FDEP Northeast District), and FDEP Central Laboratory in Tallahassee. See Appendix D for the chain of custody form (sample submittal form). The report was reviewed by District representatives and the Point Source Studies Review Committee (Michael Tanski, Jennifer Paris and Nancy Ross).

Results and Discussion

- Specific chemical results are reported in Tables 1 and 2, and a complete list of chemical analytes can be reviewed in Appendix E. Effluent conductivity values exceeded Class III Water Quality Criteria (≤ 1275 µmhos/cm; 62-302.530(22), F.A.C.) on June 11 (1333 µmhos/cm) and on June 13 (1350 µmhos/cm), and marginally complied with Class III Water Quality Criteria on June 15 (1235 µmhos/cm). Effluent dissolved oxygen, pH and temperature complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Dissolved oxygen, pH, conductivity and temperature at the

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

Pilgrim's Pride Processing Plant	Class III Criteria	Effluent Limits	Effluent 6/11/07	Control Site 6/11/07	Test Site 6/11/07	Effluent 6/13/07	Effluent 6/15/07
Organic Constituents (µg/L)							
None Detected	-	-	-	-	-	-	-
Nutrients (mg/L)							
Ortho-phosphate	-	-	9	0.19	0.67	-	-
Total Phosphorus	-	Report	9.6	0.24	0.72	-	-
Total Ammonia	-	Report	0.037	0.013 I	0.013 I	-	-
Un-ionized Ammonia	≤ 0.02 s	< 0.02	≤ 0.02 c	≤ 0.02 c	≤ 0.02 c	-	-
Nitrate and Nitrite	-	Report	17	0.33	1.2	-	-
Total Kjeldahl Nitrogen	-	< 15.0 d	1.2	0.25	0.3	-	-
Organic Nitrogen	-	-	1.163 c	0.237 c	0.287 c	-	-
Total Nitrogen	-	Report	18.2 c	0.58 c	1.5 c	-	-
General Physical and Chemical Parameters							
Habitat Assessment	-	-	-	110	113	-	-
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0	5.6	7.1	7.4	6.2	6.7
pH (SU)	6.0 - 8.5	-	7.3	7.9	7.4	6.7	7.2
Conductivity (µmhos/cm)	≤ 1,275	Report	1333	347	399	1350	1235
Temperature °C	-	Report	31.7	24.9	25.4	30.9	30.0
Sample Depth	-	-	-	0.6	0.6	-	-
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	0.04 *	-	-	0.05 *	0.06 *
Chlorophyll a (µg/L), corrected	-	-	0.55 U	3.7	3.4	-	-
Phaeophytin (µg/L)	-	-	0.42 I	1.7	1.6	-	-
Total Suspended Solids (mg/L)	-	< 46.2 d	4 U	4 I	4 I	-	-
BOD, 5 day (mg/L), N - uninhibited	-	<15.0 a p	-	-	-	-	-
Oils and Greases (mg/L)	≤ 5	≤ 5	1.7 U	-	-	-	-
Flow (MGD)	-	≤ 1.5 m	1.38 m	-	-	-	-
Hardness (mg $CaCO_3$)	-	-	540.67 c	163.27 c	179.92 c	-	-
Toxicity (Chronic definitive bioassay, No Observed Effect Concentration)							
Bioassay - Water flea *(Ceriodaphnia dubia)*	-	≥ 100% p	100%	-	-	-	-
Bioassay - Fish *(Pimephales promelas)*	-	≥ 100% p	No Result	-	-	-	-
Microbiology (Number of colony forming units/100ml)							
Fecal Coliforms	≤ 800 s	< 200	-	-	-	-	-

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
c - Value is calculated
d - daily maximum
m - Monthly average
p - 24 hour flow proportioned composite
s - Single sample
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
U - Material analyzed for but not detected; value reported is the method detection limit
NOEC - A no observed effect concentration less than 100% effluent will constitute a violation of this permit
* - Values given are laboratory measurements

Control and Test Sites complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Higher conductivity in the effluent appears to be moderated in the receiving water by dilution from the Suwannee River (Test Site 399 µmhos/cm).

- Effluent total residual chlorine was measured in the bioassay laboratory (0.04 to 0.06 mg/L) at levels that exceed both the permit limit (≤ 0.01 mg/L) and the Class III Water Quality Criteria (≤ 0.01 mg/L; 62-302.530 (18), F.A.C.).

- Effluent concentrations of total nitrogen was 18.2 mg/L, nitrate-nitrite was 17 mg/L, total phosphorus was 9.6 mg/L and ortho-phosphate was 9 mg/L (Table 1). Nutrient levels at the Test Site were 3 to 3.5 times higher for nitrate-nitrite, total phosphorus and ortho-phosphate and 2.5 times higher for total nitrogen than levels at the Control Site. The elevated nutrient levels at the Test Site compared to the Control Site can likely be attributed to the high nutrient concentrations in the effluent. Although levels of nitrate-nitrite measured during this sampling event are much lower relative to those measured during FDEP December 2001 and January 2002 sampling events (99.0 and 89.0 mg/L, respectively), nutrient concentrations downstream compared to upstream of the effluent discharge are still measurably higher.

- Chlorophyll-*a* was not detected in the effluent water sample, but was detected at equally low levels in the Control (3.7 µg/L) and Test (3.4 µg/L) Site water samples (Table 1). We note that nutrients in the water column may or may not fuel algal production immediately, depending upon the sum of environmental conditions that limit algal growth at the site (e.g. pH, shading, water color, flow). Thus it is not necessarily contradictory for ambient nutrient levels to be high and for chlorophyll levels to be low in water samples.

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

Pilgrim's Pride Processing Plant	Effluent Class III Criteria	Effluent Limits	Effluent	Control Site Class III Criteria	Control Site	Test Site Class III Criteria	Test Site
Metals (µg/L unless otherwise noted)							
Aluminum	-	-	76 U	-	76 U	-	76 U
Arsenic	≤ 50	-	1.6 I	≤ 50	0.63 I	≤ 50	0.7 I
Cadmium	≤ 0.8 b	-	0.02 U	≤ 0.39 b	0.02 U	≤ 0.42 b	0.02 U
Calcium (mg/L)	-	-	58.7	-	48.4 A	-	48.8
Chromium-III	≤ 268.2 b	-	1 U	≤ 128.76 b	1 U	≤ 139.42 b	1 U
Copper	≤ 30.5 b	-	0.8 I	≤ 14.18 b	4.68 AJ	≤ 15.41 b	1.25
Iron	≤ 1,000	-	16 I	≤ 1,000	118 A	≤ 1,000	112
Lead	≤ 18.6 b	-	0.2 U	≤ 5.94 b	0.2 U	≤ 6.72 b	0.2 U
Magnesium (mg/L)	-	-	95.7	-	10.3 A	-	14.1
Nickel	≤ 168.5 b	-	1.68	≤ 78.97 b	0.25 U	≤ 85.73 b	0.3 I
Selenium	≤ 5.0	-	0.5 U	≤ 5.0	0.5 U	≤ 5.0	0.5 U
Silver	≤ 0.07	-	0.025 U	≤ 0.07	0.025 U	≤ 0.07	0.025 U
Zinc	≤ 387.8 b	-	6.3 I	≤ 181.51 b	5 U	≤ 197.08 b	5 U

b - Value is calculated based on hardness
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J - Estimated value
U - Material analyzed for but not detected; value reported is the method detection limit

- Effluent and receiving water samples were not collected for fecal coliform or biological oxygen demand (BOD, 5 day mg/L) analysis despite facility permit limits for these analytes. Therefore, compliance with Class III Water Quality Criteria and facility permit limits for these parameters was not determined.

- The effluent sample was not chronically toxic to the water flea, *Ceriodaphnia dubia,* during the chronic definitive bioassay, and therefore complied with 62-302.530, F.A.C. and the facility's permit limits (See Table 1 for percent mortality, Appendix F for bioassay bench sheets, and Appendix G for supporting standard reference toxicant data). No Result is reported for the fish, *Pimephales promelas*, because the mortality pattern observed during the chronic definitive bioassay resembled the pattern associated with pathogen interference.

- Nickel was detected in the effluent at a level that complied with Class III Water Quality Criteria (62-302.530, F.A.C.; Table 2). Arsenic, copper, iron and zinc were found in the effluent at levels above the method detection limit (MDL) and below the practical quantitation limit (PQL) which complied with Class III Water Quality Criteria (62-302.530, F.A.C.). Organic pollutants were not detected in the effluent (Table 1).

- At the Control and Test Sites, copper and iron were detected at a level that complied with Class III Water Quality Criteria (62-302.530, F.A.C.; Table 2). Arsenic at the Control and Test Sites and nickel at the Test Site were found at levels above the method detection limit (MDL) and below the practical quantitation limit (PQL) which complied with Class III Water Quality Criteria (62-302.530, F.A.C.).

- 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 represents a "problem" threshold for fresh receiving waters, implying nutrient enrichment. Effluent AGP was 443 mg dry wt/L (Table 3). The AGP values at the upstream Control Site and downstream Test Site were 24.6 and 88.9 mg dry wt/L, respectively. All three AGP values were above the "problem" threshold, but levels were elevated 361% at the Test Site compared to the Control Site. This indicates there is nutrient enrichment related to the Pilgrim's Pride Processing Plant's discharge in this portion of the Suwannee River. The analytical chemistry suggests that the effluent is nitrogen limited. There was no evidence of growth inhibition in AGP data (Table 3).

- The periphyton (attached algae) community composition was similar at the Control and Test Sites (Table 4, Appendix J). Both sites were dominated by chain-forming diatoms in the family *Fragilariaceae*. These chains are more resistant than other growth forms to high water velocity

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

Pilgrim's Pride Processing Plant												
Location	AGP (measured)		Predicted AGP (TSIN) ± 20%				Predicted AGP (TN) ± 20%				Inorganic N:P ratio	Total N:P ratio
Effluent	443.0		647.4	±	129.5		691.6	±	138.3		1.9	1.9
Control Site	24.6	A	13.0	±	2.6		22.0	±	4.4		1.8	2.4
Test Site	88.9		46.1	±	9.2		57.0	±	11.4		1.8	2.1

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

such as that observed at the Control and Test Sites (1.5 m/s and 1.2 m/s, respectively). Their dominance at both sites is more likely related to a competitive advantage in high water velocity than nutrient enrichment.

- Habitat assessment scores were 110 at the Control Site and 113 at the Test Site, placing both in the "suboptimal" category (Table 1, Appendix C(5), and data sheets in Appendix H). The slightly higher score at the Test Site was a result of a wider riparian buffer zone and better vegetation quality within that zone on the right bank of the receiving water.
- Quantitative measures of benthic macroinvertebrate assemblages from Hester-Dendy samplers are summarized in Table 5 and in Appendix J. There was a 41% reduction in Shannon Weaver Diversity values from the Control Site (3.62) to the Test Site (1.47). This reduction would normally indicate a violation of Water Quality Criteria for Biological Integrity (62-302.530(10) F.A.C); however, Hester-Dendy results may be confounded by differences in water depth and light penetration between study sites.
- The Pilgrim's Pride Processing Plant effluent plume hugs the east shore of the river, and the stream bottom within this plume is deeper than the surrounding receiving water (FDEP report October 2002: Patterns Associated with the Dilution Gradient for Effluent from GoldKist, Inc.). Confounding effects of depth associated with Hester-Dendy results were noted in the October 2002 report. For the June 2007 sampling event, floating Hester-Dendys were deployed to mitigate a depth effect along with the deployment of bottom samplers. No results were obtained from the floating samplers as the Control Site samplers were found exposed on a rock and the Test Site samplers were found exposed on the river bank. Samplers deployed on the bottom were 1.5 m deep at the Test Site and 0.9 m deep at the Control Site.
- During retrieval, it was observed that the upstream site had more sunlit hours than the downstream site because the banks are less tree-covered at the upstream site (personal communication). Invertebrate recruitment was affected at the Test Site as indicated by number of individuals, taxa richness, taxa identified and shifts in functional feeding groups. The shallower Control Site samplers had approximately 3 times more individuals and 3 times higher density of individuals than Test Site samplers. Taxa richness was greater by 13 taxa at the Control Site (50) than at the Test Site (36). Community composition was dominated by dipterans at the Control Site (58.7%), of which *Rheotanytarsus exiguous* group was the dominant taxon (33.3%) and amphipods at the Test Site (81.2%), of which *Hyalella azteca* was the dominant taxon (81.1%). Trichopterans, many of which are algal filter feeders, decreased from 26.8%

Table 4. Periphyton Composition - Qualitative.

Pilgrim's Pride Processing Plant	Control Site	Test Site
Number of Wet Taxa	9	14
Number of Wet Algal Units Identified	300	300
Percent Dominant Wet Taxon	93.7	88.3
Dominant Wet Taxon Name	Bacillariophyta (Diatoms)	Bacillariophyta (Diatoms)
Number of Diatom Taxa	27	23
Number of Diatom Algal Units Identified	502	500
Percent Dominant Diatom Taxon	59.6	59.8
Dominant Diatom Taxon Name	Fragilariaceae	Fragilariaceae
Percentage Composition for Wet Algae		
Blue-green algae	5.0	5.0
Green algae	1.3	6.7
Diatoms	93.7	88.3

of total individuals at the Control Site to 1.8% of total individuals at the Test Site. The Control Site contained mostly suspension feeders (54.3%) compared to the Test Site where shredders (40.6%) and surface deposit feeders (47.3%) more equitably comprised the feeding community. Differences at the Test Site may have resulted from lower light levels, higher conductivity influence from the effluent plume and potential vegetation in contact with the Hester-Dendys which would promote *Hyalella azteca* and discourage case building by *Rheotanytarsus exiguous* group.

- Qualitative measures of benthic macroinvertebrate assemblages from dipnet samples are summarized in Table 6 and in Appendix K. The average SCI scores at the Control Site (47) and at the Test Site (54) place both sites in Category 2. There was a slight shift in community composition with a higher percentage of oligochaetes, bivalves and dipterans, and a lower percentage of coleoptera in the Test Site sample compared to the Control Site sample. This result indicates no adverse effect of the discharge on the macroinvertebrate community in the receiving water.

Table 5. Macroinvertebrate Hester-Dendy Samples - Quantitative.

Pilgrim's Pride Processing Plant	Control Site	Test Site
Summary Statistics		
Shannon-Weaver Diversity	3.62	1.47
Number of Taxa	50	36
Florida Index	22	12
Number of EPT Taxa	14	10
Percent Dominant Taxon	33.3	81.1
Dominant Taxon Name	Rheotanytarsus exiguus grp. (Diptera)	Hyalella azteca (Amphipoda)
Total Number of Individuals (counted)	5,289	1,739
Total Number of Individuals (#/m^2)	13,993	4,602
Number of samples/site	3	3
Community Composition: Percent of total		
Amphipoda	1.3	81.2
Coleoptera	5.6	1.4
Diptera	58.7	7.6
Ephemeroptera	7.0	2.5
Gastropoda	0.3	2.4
Plecoptera	0.0	0.0
Trichoptera	26.8	1.8
Trombidiformes	0.4	3.1
Functional Feeding Groups: Percent of total		
Piercers	12.2	1.1
Predators	5.8	4.5
Scavengers	2.2	0.6
Scrapers	2.9	3.9
Shredders	1.6	40.6
Surface Deposit Feeders	16.0	47.3
Suspension Feeders	54.3	1.9
Unknown	5.1	0.2

Summary

FDEP data from the June 2007 inspection indicate effluent exceedances of the Class III Water Quality Criteria for specific conductance (≤ 1275 µmhos/cm; 62-302.530(22), F.A.C.) and exceedances of both the permit limit (≤ 0.01 mg/L) and the Class III Water Quality Criteria (≤ 0.01 mg/L; 62-302.530(18), F.A.C.) for total residual chlorine. DMR data indicate eleven daily maximum and monthly average exceedances of the water quality criteria for specific conductance (62-302.530(22) F.A.C.) between July 2006 and October 2007. On November 16, 2007, the Department issued a Request for Additional Information (RAI) regarding measured effluent specific conductance levels and compliance with the water quality standard.

Elevated values of AGP, orthophosphate, total phosphorus, nitrate-nitrite and total nitrogen at the Test Site compared to the Control Site indicate nutrient enrichment in the Suwannee River related to the effluent. The inspection conducted on June 11, 2007 does not indicate degradation to the algal or macroinvertebrate biological communities in the receiving waters; however, the inability to detect a biological signal may be explained by the relative size of the discharge compared to the volume of water in the Suwannee River. The Pilgrim's Pride Processing Plant had a monthly average flow of 1.38 MGD for June compared to a flow of 552.6 MGD in the Suwannee River measured 2 miles upstream of outfall D-001 on June 12, 2007 (USGS Site 02319500 Suwannee River at Ellaville, field measurement 855 cubic feet/second).

Despite effluent dilution and reduced total nitrogen in the effluent as agreed to in the December 2002 MOA, the high levels of nutrients in the Pilgrim's Pride effluent may produce effects far downstream. The effluent and Test Site AGPs are 18 and 3.6 times greater than the level measured in the Control Site receiving water, respectively. The effluent and Test Site nitrite-nitrate levels are 51.5 and 3.6 times greater than

Table 6. Macroinvertebrate Dipnet Samples - Qualitative.

Gold Kist Inc. - Live Oak Processing	Control Site		Test Site	
Summary Statistics				
Stream Condition Index 2007 (value)	47 A		54 A	
Stream Condition Index 2007 (category) *	Category 2		Category 2	
Stream Condition Index Metrics	Rep 1	Rep 2	Rep 1	Rep 2
Number of Total Taxa	28	27	35	30
Number of Ephemeroptera Taxa	4	4	4	6
Number of Trichoptera Taxa	3	1	2	1
Number of Clinger Taxa	5	4	5	3
Number of Long-lived Taxa	0	3	1	1
Number of Sensitive Taxa	3	3	3	3
Percent of Dominant Taxon	22.5	21.3	24.0	17.9
Percent Suspension Feeders and Filterers	11.9	6.0	16.2	23.5
Percent of Tanytarsini Individuals	13.3	6.4	22.1	24.8
Percent of Very Tolerant Individuals	1.3	2.8	1.3	4.1
Total Number of Individuals	151	141	154	145
Community Composition: Percent of total				
Dominant Taxon Name	*Pseudochironomus* sp. (Diptera)	*Pseudochironomus* sp. (Diptera)	*Pseudochironomus* sp. (Diptera)	*Hyalella azteca* (Amphipoda)
Amphipoda	5.3	6.4	8.4	17.9
Bivalvia	0.7	0.7	2.6	6.2
Coleoptera	6.6	4.3	1.3	0.0
Decapoda	0.0	0.7	0.0	0.0
Diptera	41.1	36.2	52.6	44.8
Ephemeroptera	11.3	6.4	4.6	10.3
Gastropoda	4.6	13.5	7.8	2.8
Odonata	0.7	0.0	0.0	0.0
Oligochaeta	1.3	0.0	2.6	4.1
Plecoptera	0.0	0.0	0.0	0.0
Trichoptera	6.6	4.3	3.9	2.8
Trombidiformes	21.9	25.5	15.6	11.0
Other	0.01	2.12	0.64	0.0
Functional Feeding Groups: Percent of total				
Burrowing Deposit Feeders	0.7	0.0	2.6	4.1
Piercers	4.6	4.3	0.3	2.8
Predators	23.5	28.7	17.2	11.0
Scavengers	0.0	0.7	0.0	0.0
Scrapers	9.9	16.7	12.3	5.2
Shredders	3.6	3.6	4.6	9.0
Surface Deposit Feeders	45.7	40.1	45.5	42.4
Suspension Feeders	11.9	6.0	16.2	23.5
Unknown	0.0	0.0	1.3	2.1

A - Value reported is the mean of two determinations

* SCI_2007 categories from Table LT 7200-2 of Draft DEP-SOP-002/01 as referenced in Draft Quality Assurance Rule (62-160 F.A.C.), September 17, 2007: Values 0 ≤ 34 are Category 3; Values 35 < 67 are Category 2; Values 68 ≤ 100 are Category 1

the level measured in the Control Site receiving water, respectively. The effluent and Test Site total nitrogen are 31 and 2.6 times greater than the level measured in the Control Site receiving water, respectively. Therefore, additional nutrient level reductions in the Pilgrim's Pride effluent may be warranted.

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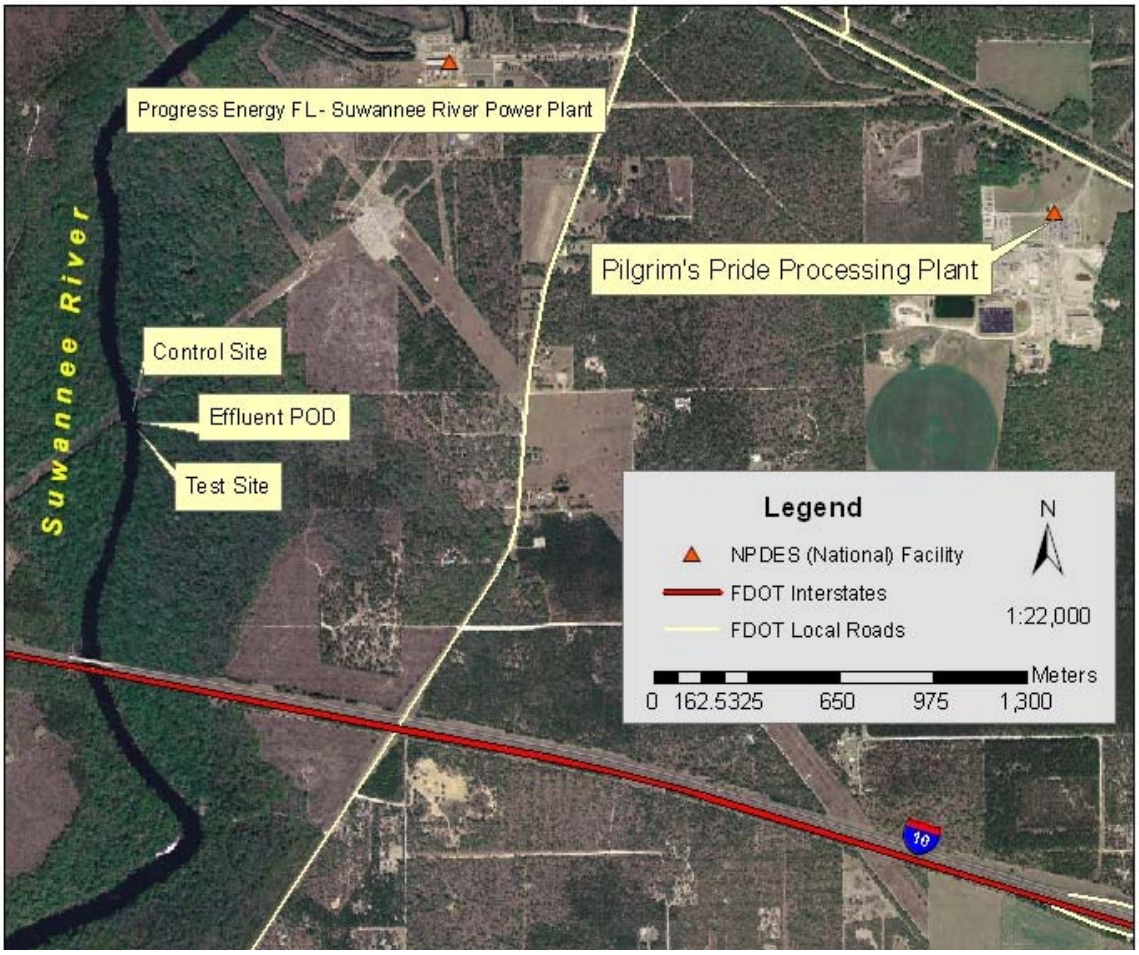
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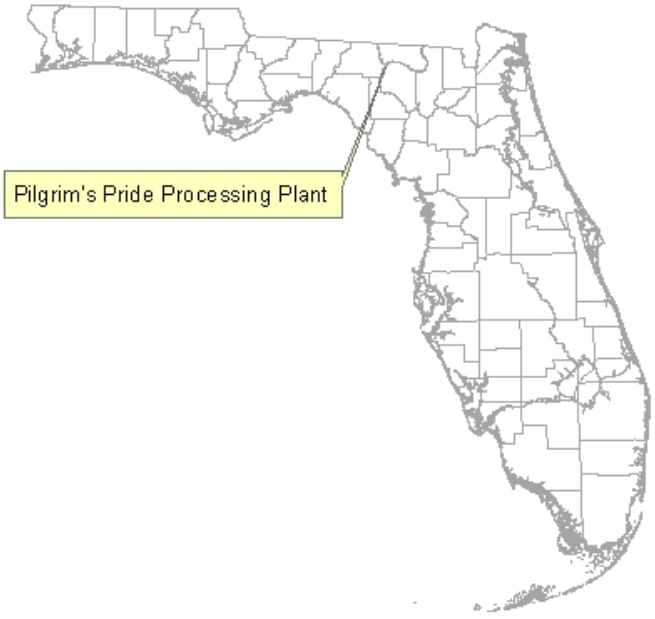
Appendices

- Appendix A. Map of facility
- Appendix B. Facility summary and DMR data
- Appendix C. Explanation of measurements
- Appendix D. Chain of Custody form
- Appendix E. Chemical analyses of effluent and receiving water.
- Appendix F. Additional physical, chemical, toxicological and microbiological results
- Appendix G. Standard Reference Toxicant test data
- Appendix H. Habitat Assessment field sheets
- Appendix I-1. Periphyton: Wet Taxa list and number of individuals counted
- Appendix I-2. Periphyton: Diatom Taxa list and number of individuals counted
- Appendix J-1. Hester-Dendy multi-plate samplers: Taxa list and macroinvertebrate density (average number of individuals per m^2)
- Appendix J-2. Hester-Dendy multi-plate samplers: Taxa list and total number of macroinvertebrates counted
- Appendix K-1. Dipnet samples: Taxa list and number of macroinvertebrates counted (collapsed)
- Appendix K-2. Dipnet samples: Taxa list and number of macroinvertebrates counted

Appendix A

Map of Facility





Appendix B

Facility Summary and DMR data

State of Florida
Department of Environmental Protection
Facility Introduction & Summary
(FINAL)
Gold Kist Inc. – Live Oak Facility
FL0001465

Gold Kist is a poultry processing and rendering facility. Wastewater is generated from poultry processing, by-products processing, the hatchery, sanitary wastewater, water treatment plant filtrate, sanitation, and storm water. The industrial wastewater treatment facility consists of primary and secondary screening, chemical coagulation/flocculation, dissolved air flotation, a lined 15 MG covered anaerobic lagoon/flow equalization basin, anoxic basin, activated sludge, secondary clarification, stabilization/storage pond, pH adjustment, biological/sand filters, and chlorination/dechlorination, with aerobic digestion and land application of the digested sludge by spray irrigation. This is an existing discharge at Outfall D-001, to the Suwannee River, a Class III Outstanding Florida Surface Water. The design daily maximum discharge to the River is 1.7 MGD and monthly average discharge is 1.5 MGD. The average flow from April 2006 through March 2007 was 1.46 MGD.

The permit also authorizes operation of an on-site closed loop recycle system for washing forklifts and engines with no discharge to the wastewater treatment system or ground or surface waters of the state.

The permit incorporates the requirements of DEP/Gold Kist Inc., Memorandum of Agreement (MOA), executed on December 6, 2002. The MOA contains the schedules for achieving total nitrogen reductions

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

Facility Name (as it appears on permit): Gold Kist Inc. - Live Oak Facility		**Former Names:**
Physical Address: U.S. Highway 90 West Live Oak, FL 32060	**NPDES Permit No.:** FL0001465 **Expiration Date:** April 20, 2008	**Prepared By:** Reza Shayan
County: Suwannee	**District:** NED	**Facility Type:** IW

Function of Facility: poultry processing, by-products processing, and hatchery.

Sampling Location (actual permit designation of permitted sampling point): The effluent monitoring site is designated as EFF-1. EFF-1 is located immediately after final treatment/discharge from the dechlorination unit. The influent sample location is designated as monitoring site INF-1. The sample location shall be representative of untreated wastewater and shall not include any return process wastewater from the treatment system. The upstream sample site is located approximately 0.1 mile upstream of outfall D-001 and is designated as monitoring site SWU-1. The downstream sample site is located approximately 0.2 mile downstream of outfall D-001 and is designated as monitoring site SWD-1.

Description of permitted outfall: Wastewater is generated from poultry processing, by-products processing, the hatchery, sanitary wastewater, water treatment plant filtrate, sanitation, and storm water. Outfall D-001 is to the Suwannee River, a Class III Outstanding Florida Surface Water. The point of discharge for Outfall D-001 is located approximately at latitude: 30°21'56" N, Longitude: 83°11'30" W.

Description of treatment process (if multiple discharge points, include a map or diagram of facility):
The industrial wastewater treatment facility consists of primary and secondary screening, chemical coagulation/flocculation, dissolved air flotation, a lined 15 MG covered anaerobic lagoon/flow equalization basin, anoxic basin, activated sludge, secondary clarification, stabilization/storage pond, pH adjustment, biological/sand filters, and chlorination/dechlorination, with aerobic digestion and land application of the digested sludge by spray irrigation.

The permit also authorizes operation of an on-site closed loop recycle system for washing forklifts and engine washing with no discharge to the wastewater treatment system or ground or surface waters of the state. Waste oil and solids from the closed loop washing facility are hauled off-site for disposal in a department-approved manner.

The permit also incorporates a new monitoring requirement and compliance schedule for Specific Conductance. By no later than 24 months from the issue date of this permit the Permittee shall demonstrate compliance with respect to this parameter in accordance with Part I.A.13 and Part VI.4 of the permit.

Receiving Waters: Suwannee River	**Classification (indicate whether fresh or marine):** Fresh; a Class III Outstanding Florida Surface Water
Temperature (C): 31.74	**Design Flow:**1.7 MGD Daily Max., 1.5 MGD Monthly Ave
pH (SU): 7.3	**Mean Flow (for previous 12 months): 1.46 MGD**
Conductivity (umhos/cm): 1333	**Flow During Survey:**
Method of Chlorination	**Method of Dechlorination**
Dissolved Oxygen (mg/L): 5.64	**Total Residual Chlorine (mg/L) (after disinfection):**
Discharge is: (Continuous) **Intermittent**	**Seasonal** **Rainfall Dependent** **Other**

Toxicity Test Requirements (routine and/or additional test language test species, salinity adjustment, etc.):
As of June 6, 2006, quarterly chronic screen tests with freshwater species, *C.dubia* and *P.promelas*, are required. The compliance limit is to meet NOEC not less than 100% effluent. If NOEC < 100% in a routine test, then 3 additional, valid chronic definitive tests are required as follow-up.

Administrative or Consent Orders: The permit incorporates the requirements of the DEP/Gold Kist Inc., Memorandum of Agreement (MOA), executed on December 6, 2002. The MOA contains the schedules for achieving total nitrogen reductions.
The permit also incorporates a new monitoring requirement and compliance schedule for Specific Conductance. By no later than 24 months from the issue date of this permit the Permittee shall demonstrate compliance with respect to this parameter in accordance with Part I.A.13 and Part VI.4 of the permit.

Facility Mixing Zone Details:

List permit violations (DMR data) and plant upsets that occurred at the plant within the last year:
A06-172 (7/21/06, toxicity routine failure); A06-215 (8/18/06, oil & grease exceedance); A06-307 (11/13/06, failed reproduction on C. dubia); A06313 (11/14/06, BOD exceedance); A07-047 (2/12/07, chlorine meter out).

Describe previous impact bioassessments, WQBEL's, and previous or current enforcement actions:
The most recent DEP report, "Biological Assessment of the Suwannee River: Assoc w/the Effluent from GoldKist", details a study conducted in December 2001 and January 2002. The report recommended that effluent nutrients, particularly nitrate plus nitrite, should be reduced to current background levels in order for aquatic communities to fully recover to unimpaired conditions.

Discuss MOR trends to prior data; is trend improving or declining:
No noticeable trend.

List Effluent Limits (include additional sheets as necessary):

Parameter and Units	Limit	Describe special permit conditions and permit modifications:
Flow, (MGD)	1.5 monthly average, 1.7 daily maximum	Sampled at EFF-1, Continuous
BOD5-day, (mg/L)	Report, daily maximum	Sampled at INF-1, Monthly
BOD5-day (mg/L)	15.0 annual average 18.0 monthly average 24.3 daily maximum	Sampled at EFF-1, weekly
BOD5-day (1bs/day)	156 monthly average 211 daily maximum	Sampled at EFF-1, weekly
TSS (mg/L)	Report, daily maximum	Sampled at INF-1, Monthly
TSS (mg/day)	20.0 annual average 25.5 monthly average 46.2 daily maximum	Sampled at EFF-1, weekly
TSS (1bs/day)	221 monthly average 401 daily maximum	Sampled at EFF-1, weekly
TKN (mg/L)	10.0 monthly average 15.0 daily maximum	Sampled at EFF-1, weekly
TKN (1bs/day)	87 monthly average 130 daily maximum	Sampled at EFF-1, weekly

TKN(mg/L)	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Total Ammonia as N (mg/L)	Report, daily maximum	Sampled at EFF-1, weekly
Total Ammonia as N (mg/L)	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Temperature, Degrees C	Report, daily maximum	Sampled at EFF-1, weekly
Temperature, Degrees C	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Unionized Ammonia as NH3 (mg/L)	0.02 daily maximum	Sampled at EFF-1, weekly
Unionized Ammonia as NH3 (mg/L)	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Dissolved Oxygen (mg/L)	5.0 daily minimum 5.0 monthly average (min)	Sampled at EFF-1, weekly
Dissolved Oxygen (mg/L)	Report, daily minimum	Sampled at SWU-1 and SWD-1, monthly
Total Nitrogen as N (mg/L)	Report (See Part I.A.11 of the permit) Report, monthly average and daily maximum	Sampled at EFF-1, weekly
Total Nitrogen as N (1bs/day)	Report/313.0 annual average, (See Part I.A.11 of the permit) Report, monthly average and daily maximum	Sampled at EFF-1, weekly
Total Nitrogen as N (mg/L)	Report, See Part I.A.11 of the permit Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Nitrate+Nitrite (NO3) as N (mg/L)	Report, monthly average and daily maximum	Sampled at EFF-1, weekly
Nitrate+Nitrite (NO3) as N (mg/L)	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Total Phosphorus as P (mg/L)	Report, daily maximum	Sampled at EFF-1, monthly
Total Phosphorus as P (mg/L)	Report, daily maximum	Sampled at SWU-1 and SWD-1, monthly
Oil and Grease (mg/L)	5.0 monthly average and daily maximum	Sampled at EFF-1, weekly
Total Residual Chlorine (mg/L)	0.01 daily maximum	Sampled at EFF-1, weekly
Fecal Coliform (#/100 ml)	200 daily maximum	Sampled at EFF-1, weekly

***Specific Conductance (umho/cm)	Report, monthly average and daily maximum	Sampled at EFF-1, Every 2 Weeks *** See Part VI.4 of the permit.
pH (S.U.)	8.5 daily maximum 6.0 daily minimum 6.0 – 8.5 monthly average	Sampled at EFF-1, weekly
pH (S.U.)	Report, daily minimum, daily maximum and monthly average	Sampled at SWU-1 and SWD-1, monthly
**Biological Integrity	See Part I.A.12 of the permit	Conduct biological integrity monitoring, annually **See Part I.A.12 of the permit
Acute Whole Effluent Toxicity (%)	The LC50 shall not be less than 100% effluent (See Part I.C.2 of the permit)	Sampled at EFF-1, quarterly (Acute no longer required as of June 6, 2006. See chronic below.)
**Chronic Whole Effluent Toxicity, (%)	The NOEC shall not be less than 100% effluent (See Part I.C.2 of the permit)	Sampled at EFF-1, quarterly **Chronic toxicity and biological integrity monitoring will not be required until June 6, 2006, consistent with the schedule in Part VI.2 of the permit for nitrogen reductions. After June 6, 2006, the permittee may request discontinuation of acute whole effluent toxicity monitoring based on the chronic toxicity testing required at that time.

Pilgrim's Pride DMR Data

Facility ID	Facility Name	District	Facility Type	Major (M)	Outfall Type	Monitoring Date	Outfall Indicator	Parameter Code	Parameter Description	Monitoring Location Code	Data	Limit	Statistical Base	Units
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	6/30/2006	001-T	P TBP3B	NOEL STATRE 7DAY CHR CERIODAPHNIA	P	<100	100	MINIMUM	PER- CENT
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	7/31/2006	001-1	P 00556	OIL AND GREASE	1	5.4	5	DAILY MX	MG/L
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	10/31/2006	001-1	P 00310	BIOCHEMICAL OXYGEN DEMAND-5	1	355	211	DAILY MX	LBS/DY
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	10/31/2006	001-1	P 00310	BIOCHEMICAL OXYGEN DEMAND-5	1	43	24.3	DAILY MX	MG/L
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	10/31/2006	001-T	P TBP3B	NOEL STATRE 7DAY CHR CERIODAPHNIA	P	75	100	MINIMUM	PER- CENT
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	2/28/2007	001-1	P 50060	CHLORINE, TOTAL RESIDUAL	1	0.08	0.01	DAILY MX	MG/L
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	4/30/2007	001-1	P 00556	OIL AND GREASE	1	6.1	5	DAILY MX	MG/L
FL0001465	GOLDKIST INC	JA	I	M	EFFLUENT	6/30/2007	001-1	P 00556	OIL AND GREASE	1	11	5	DAILY MX	MG/L

Appendix C

Explanation of Measurements

(1) Quality Assurance and Quality Control

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

(2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following FDEP SOPs. A list of the analytes tested for, results, data qualifiers, the minimum detection limit and the practical quantitation limit are given in Appendix E. The results from these analyses were compared with Water Quality Criteria (62-302 F.A.C.) and facility permit limits (Tables 1 and 2, Appendix B). 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

7-day chronic definitive toxicity bioassays were performed on the effluent sample using the water flea, *Ceriodaphnia dubia,* and the fish, *Pimephales promelas,* following FDEP SOPs TA07_05 and TA07_09. Failure of toxicity testing may constitute a violation of 62-302.520(20), 62-302.530(61) and/or facility permit limits. Standard reference toxicant (SRT) tests are conducted monthly to ensure quality in toxicity testing.

(4) Bacteriological Testing

The effluent and water from control and test sites were analyzed for the presence and concentration of 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) 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(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(b) F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al*. 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of ± 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(61) F.A.C..

(7) Algal Phytoplankton and Periphyton Assemblages

Methods: Qualitative periphyton was sampled at both control and test sites by taking subsamples of algae from natural substrates throughout the sample reach (QA Rule FS7220). Phytoplankton were sampled using a 1 L grab sample (QA Rule SOP FS7100). Periphyton were subsampled and identified to the lowest practical level, usually species (FDEP SOPs AB03, AB03_1 and AB05). Wet taxa and diatoms are identified separately. In the wet taxa analysis, soft algae are identified to the lowest practical level, and diatoms are identified only to order level (diatom). In the diatom analysis, diatoms are identified to the lowest practical level.

Chlorophyll *a* Content: Chlorophyll *a* content is measured in phytoplankton 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(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(b) F.A.C..

Algal Density: Algal density is estimated as number of natural units/ml for phytoplankton 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(46) F.A.C., 62-302.530(47)(a) F.A.C., 62-302.530(47)(b) F.A.C. and/or 62-302.530(61) 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(46) F.A.C., 62-302.530(47)(a) F.A.C., 62-302.530(47)(b) F.A.C. and/or 62-302.530(61) 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(46) F.A.C., 62-302.530(47)(a) F.A.C. and/or 62-302.530(47)(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(10) 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(46) F.A.C., 62-302.530(47)(a) F.A.C., 62-302.530(47)(b) F.A.C. and/or 62-302.530(61) 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(46) F.A.C., 62-302.530(47)(a) F.A.C., 62-302.530(47)(b) F.A.C. and/or 62-302.530(61) F.A.C..

The Stream Condition Index (SCI): The SCI is a composite macroinvertebrate metric developed for Florida. This Index was revised in 2007 using data from qualitative dipnet samples. The SCI now assigns points to ten parameters; depending on how closely each parameter approaches an expected value (QA Rule SOP LT 7200). Points are assigned according to in which bioregion (Panhandle, Northeast, or Peninsula) the sampling location exists -and summed to yield a final SCI score (range 0-100). Included in the calculation of SCI are taxa richness, number of Ephemeroptera taxa, number of Trichoptera taxa, percent contribution of the dominant taxon, number of sensitive taxa, number of clinger taxa, number of long-lived taxa, percent contribution of Tanytarsini, percent contribution of very tolerant, and the percent contribution of suspension and filter feeders. Scores are broken into three categories (I, II, and III). SCI 2007 categories are from Table LT 7200-2 of

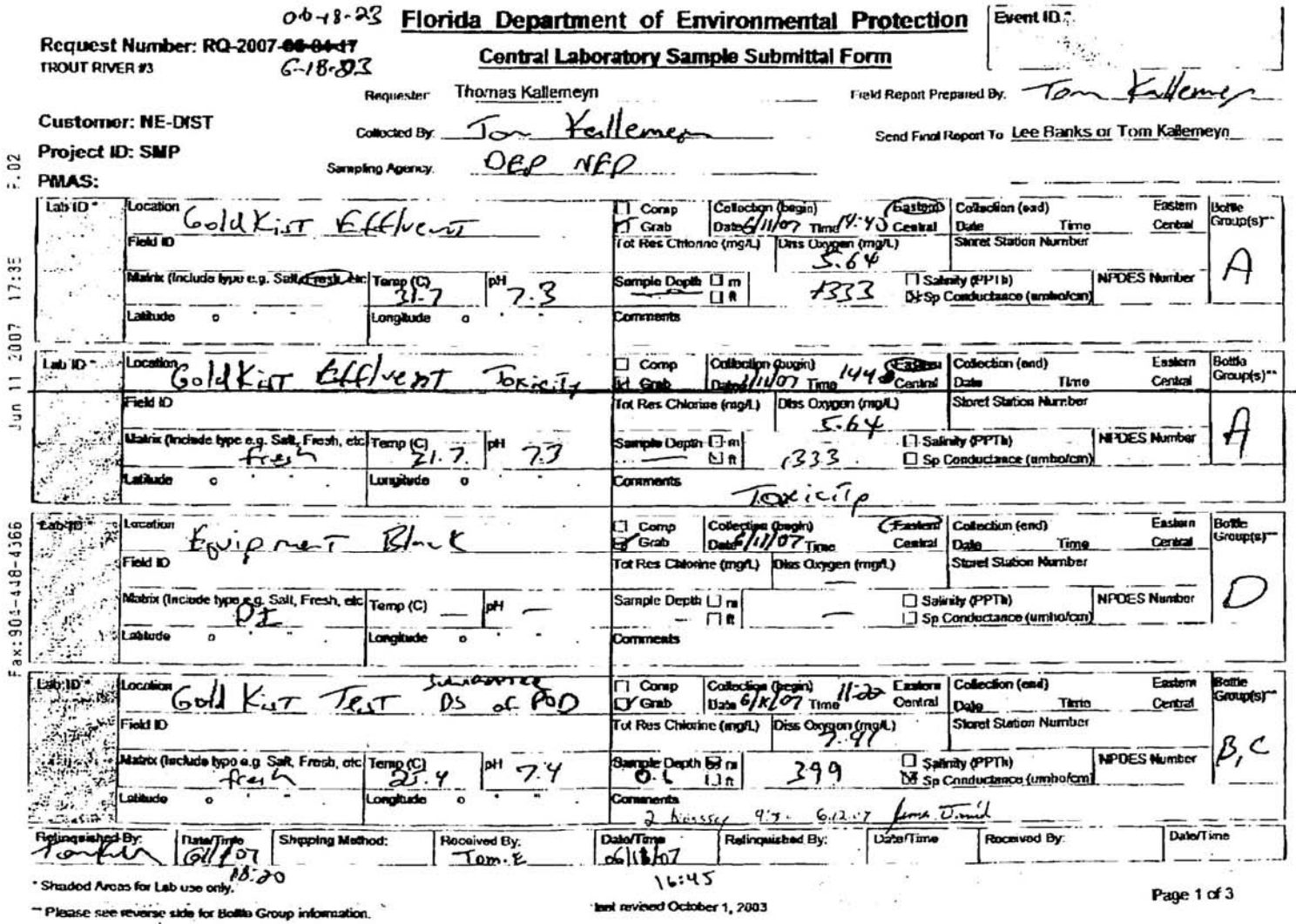
Draft DEP-SOP-002/01 as referenced in Draft Quality Assurance Rule (62-160 F.A.C.), September 17, 2007. A decrease in ordinal SCI score from the Control to the Test site may be evidence of degradation related to a facility's effluent. An SCI score in Category I, if it is shown to be related to a facility's effluent, may constitute violations of 62-302.530(46) F.A.C., 62-302.530(47)(a) F.A.C., 62-302.530(47)(b) F.A.C. and/or 62-302.530(61) 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 D

Chain of Custody form



06-18-23

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID:

Request Number: RQ-2007-~~00-04-17~~

TROUT RIVER #3 6-18-07

Requester: Thomas Kallemeyn

Field Report Prepared By: Tom Kallemeyn

Customer: NE-DIST

Collected By: Tom Kallemeyn

Send Final Report To: Lee Banks or Tom Kallemeyn

Project ID: SMP

Sampling Agency: OGP NED

PMAS:

Lab ID*	Location / Field ID	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Latitude	Longitude	Comp / Grab	Collection (begin) Date	Time	Eastern / Central	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Sample Depth	Salinity (PPTs) / Sp Conductance (umho/cm)	Collection (end) Date	Time	Eastern / Central	Stored Station Number	NPDES Number	Bottle Group(s)**	Comments
	Gold Kist Effluent		31.7	7.3			Grab	6/11/07	14:45	Eastern / Central		5.64		1333						A	
	Gold Kist Effluent Toxicity	fresh	21.7	7.3			Grab	6/11/07	1448	Eastern / Central		5.64		1333						A	Toxicity
	Equipment Blank	DI					Grab	6/11/07		Eastern / Central										D	
	Gold Kist Test Solution DS of POD	fresh	25.4	7.4			Grab	6/12/07	11:20	Eastern / Central		7.97	0.6 m	399 Sp Conductance (umho/cm)						B, C	2 bottles 9:7. 6.12.07

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	6/11/07 18:20		Tom.E	6/12/07 16:45				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Page 1 of 3

Jun 11 2007 17:35 P.02

Fax:901-418-4366

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2007-06-04-17
TROUT RIVER #3

Requester: Thomas Kallemeyn

Field Report Prepared By: Tom Kallemeyn

Customer: NE-DIST

Collected By: Tom Kallemeyn

Send Final Report To: Lee Banks or Tom Kallemeyn

Project ID: SMP

Sampling Agency:

PMAS:

Jun 11 2007 17:36 P. 03

Fax:904-448-4366

Lab ID *	Location: Gold Kist Control Swamke 3/5 of POD upstream	☐ Comp ☑ Grab	Collection (begin) Date: 6/11/07 Time: 11:03 (Eastern) Central	Collection (end) Date: Time: Eastern Central	Bottle Group(s)**		
Field ID		Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L): 7.05	Storet Station Number:	B, C		
Matrix (Include type e.g. Salt, Fresh, etc): fresh	Temp (C): 24.9 30.7k	pH: 7.94	Sample Depth: 0.6 ☐ m ☐ ft	397 ☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm)	NPDES Number:		
Latitude: o ' "	Longitude: o ' "	Comments:					
Lab ID *	Location	☐ Comp ☐ Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**		
Field ID		Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L):	Storet Station Number:			
Matrix (Include type e.g. Salt, Fresh, etc):	Temp (C):	pH:	Sample Depth: ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:		
Latitude: o ' "	Longitude: o ' "	Comments:					
Lab ID *	Location	☐ Comp ☐ Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**		
Field ID		Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L):	Storet Station Number:			
Matrix (Include type e.g. Salt, Fresh, etc):	Temp (C):	pH:	Sample Depth: ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:		
Latitude: o ' "	Longitude: o ' "	Comments:					
Lab ID *	Location	☐ Comp ☐ Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**		
Field ID		Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L):	Storet Station Number:			
Matrix (Include type e.g. Salt, Fresh, etc):	Temp (C):	pH:	Sample Depth: ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:		
Latitude: o ' "	Longitude: o ' "	Comments:					

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By	Date/Time
	6/11/07 1820		Tom. K	06/11/07 16:45				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2007-06-18-23
Gold Kist Inc.-Live Oak Processing

Requester: Shannan Bogdanov

Field Report Prepared By: D. Lucas

Customer: NE-DIST

Collected By: Dave Lucas

Send Final Report To Thomas Kallemeyn

Project ID: FYI5

Sampling Agency:

PMAS: 1143

Lab ID:*	Location				☐ Comp ☑ Grab	Collection (begin) Date	Time	Eastern Central	Collection (end) Date	Time	Eastern Central	Bottle Group(s)**
	Gold Kist Effluent					6/13/07	1130		6/13/07	1130		
	Field ID				Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L) 6.22		Storet Station Number			
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C) 30.35	pH 6.95		Sample Depth ☐ m ☑ ft 1		1350		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number	
	Latitude o ' " .	Longitude o ' " .			Comments							

Lab ID:*	Location				☐ Comp ☐ Grab	Collection (begin) Date	Time	Eastern Central	Collection (end) Date	Time	Eastern Central	Bottle Group(s)**
	Field ID				Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH		Sample Depth ☐ m ☐ ft				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number	
	Latitude o ' " .	Longitude o ' " .			Comments							

Lab ID:*	Location				☐ Comp ☐ Grab	Collection (begin) Date	Time	Eastern Central	Collection (end) Date	Time	Eastern Central	Bottle Group(s)**
	Field ID				Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH		Sample Depth ☐ m ☐ ft				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number	
	Latitude o ' " .	Longitude o ' " .			Comments							

Lab ID:*	Location				☐ Comp ☐ Grab	Collection (begin) Date	Time	Eastern Central	Collection (end) Date	Time	Eastern Central	Bottle Group(s)**
	Field ID				Tot Res Chlorine (mg/L)		Diss Oxygen (mg/L)		Storet Station Number			
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH		Sample Depth ☐ m ☐ ft				☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)		NPDES Number	
	Latitude o ' " .	Longitude o ' " .			Comments							

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
								6/19/07 9:00am

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2007-06-18-23
Gold Kist Inc.-Live Oak Processing

Requester: Shannan Bogdanov

Field Report Prepared By: M. Faircloth

Customer: NE-DIST

Collected By: N. Wilkinson / M. Faircloth

Send Final Report To Thomas Kallemeyn

Project ID: FYI5

Sampling Agency: FDEP

PMAS: 1143

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	[illegible] OUT CFF-1	☐ Comp ☒ Grab	Date 6-15-07 Time 1015	Date 6-15-07 Time 1015	A
	Field ID: Sandy Branch	Tot Res Chlorine (mg/L): —	Diss Oxygen (mg/L): 6.68	Storet Station Number:	
	Matrix (Include type e.g. Salt, Fresh, etc): Fresh	Temp (C): 29.96	pH: 7.19	Sample Depth: 0.1 ☒ m ☐ ft	Salinity (PPTh) ☒ Sp Conductance (umho/cm): 1235
	Latitude: o ' "	Longitude: o ' "		NPDES Number:	
	Comments: 3rd Set of Duplicate Samples				

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time	Date Time	
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude: o ' "	Longitude: o ' "		NPDES Number	
	Comments				

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time	Date Time	
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude: o ' "	Longitude: o ' "		NPDES Number	
	Comments				

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time	Date Time	
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude: o ' "	Longitude: o ' "		NPDES Number	
	Comments				

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	6-15-07 1153	Hand	Tom E	6/15/07 1158			M Faircloth	6-15-07 1148pm

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group Information.

last revised October 1, 2003

Appendix E

Chemical analysis of effluent and receiving water

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:40	GOLDKIST EFFLUENT	AGP/LN	Algal Growth Potential	443		mg DryWt/L	0.3	0.9
6/11/2007 14:40	GOLDKIST EFFLUENT	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected0.55	U	ug/L	0.55	1.7	
6/11/2007 14:40	GOLDKIST EFFLUENT	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.42	I	ug/L	0.24	0.71
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Aluminum	76	U	ug/L	76	300
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Calcium	58.7		mg/L	0.05	0.2
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Iron	16	I	ug/L	10	40
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Magnesium	95.7		mg/L	0.03	0.12
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Arsenic	1.6	I	ug/L	0.5	2
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Chromium	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Copper	0.8	I	ug/L	0.25	1
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Lead	0.2	U	ug/L	0.2	0.8
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Nickel	1.68		ug/L	0.25	1
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Selenium	0.5	U	ug/L	0.5	2
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Silver	0.025	U	ug/L	0.025	0.1
6/11/2007 14:40	GOLDKIST EFFLUENT	Metals	Zinc	6.3	I	ug/L	5	20
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	Specific_Conductance	1380		umhos/cm	2	8
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	Ammonia-N	0.037		mg N/L	0.01	0.02
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	NO2NO3-N	17		mg N/L	0.1	0.25
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	O-Phosphate-P	9		mg P/L	0.4	1
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	Kjeldahl Nitrogen	1.2		mg N/L	0.08	0.2
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	Total-P	9.6		mg P/L	0.2	0.6
6/11/2007 14:40	GOLDKIST EFFLUENT	Nutrients	TSS	4	U	mg/L	4	16
6/11/2007 14:40	GOLDKIST EFFLUENT	Overflow	Oil and Grease	1.7	U	mg/L		
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Alachlor	0.57	U	ug/L	0.57	2.3
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Ametryn	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Atrazine	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Azinphos Methyl	0.19	U	ug/L	0.19	0.76
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Bromacil	0.19	U	ug/L	0.19	0.76
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Butylate	0.19	UJ	ug/L	0.19	0.76
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Chlorpyrifos Ethyl	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Chlorpyrifos Methyl	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Diazinon	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Ethion	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Ethoprop	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Fenamiphos	0.19	U	ug/L	0.19	0.76
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Fonofos	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Hexazinone	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Malathion	0.14	U	ug/L	0.14	0.56
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Metalaxyl	0.24	U	ug/L	0.24	0.96

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Metolachlor	0.48	UJ	ug/L	0.48	1.9
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Metribuzin	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Mevinphos	0.19	U	ug/L	0.19	0.76
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Naled	0.76	UJ	ug/L	0.76	3
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Norflurazon	0.14	U	ug/L	0.14	0.56
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Parathion Ethyl	0.14	U	ug/L	0.14	0.56
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Parathion Methyl	0.095	U	ug/L	0.095	0.38
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Phorate	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Prometryn	0.14	U	ug/L	0.14	0.56
6/11/2007 14:40	GOLDKIST EFFLUENT	Pesticides	Simazine	0.048	U	ug/L	0.048	0.19
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	1,2-Dichlorobenzene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	1,3-Dichlorobenzene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	1,4-Dichlorobenzene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,4,6-Trichlorophenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,4-Dichlorophenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	60
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,4-Dinitrotoluene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2,6-Dinitrotoluene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2-Chloronaphthalene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2-Chlorophenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3	UJ	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	2-Nitrophenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	UJ	ug/L	40	160
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4,4'-DDD	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4,4'-DDE	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4,4'-DDT	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4-Chloro-3-methylphenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	8
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	60
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Acenaphthene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Acenaphthylene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Aldrin	1.5	UJ	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Anthracene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	400
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzo(a)anthracene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzo(a)pyrene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzo(b)fluoranthene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzo(g,h,i)perylene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Benzo(k)fluoranthene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1	U	ug/L	1	4

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	60
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Butyl benzyl phthalate	5	U	ug/L	5	20
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Chrysene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Di-n-butyl phthalate	5	U	ug/L	5	20
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Di-n-octyl phthalate	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Dibenzo(a,h)anthracene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Dieldrin	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Diethyl phthalate	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Dimethyl phthalate	50	U	ug/L	50	200
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Endosulfan I	4	U	ug/L	4	16
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Endosulfan II	4	U	ug/L	4	16
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Endosulfan sulfate	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Endrin	1.5	UJ	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Endrin aldehyde	4	U	ug/L	4	16
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Fluoranthene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Fluorene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Heptachlor	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Heptachlor epoxide	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Hexachlorobenzene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Hexachlorobutadiene	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Hexachlorocyclopentadiene	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Hexachloroethane	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Isophorone	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	8
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	8
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Naphthalene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	8
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Pentachlorophenol	3	U	ug/L	3	12
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Phenanthrene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Phenol	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	Pyrene	1	U	ug/L	1	4
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	alpha-BHC	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	beta-BHC	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	delta-BHC	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Priority Organic Pollutants	gamma-BHC	1.5	U	ug/L	1.5	6
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Dissolved Oxygen	5.64		mg/L		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Specific Conductance	1333		umhos/cm		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Temperature	31.7		C		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	pH	7.3				

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:40	GOLDKIST EFFLUENT	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC20	100	L		IC20	
6/11/2007 14:40	GOLDKIST EFFLUENT	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100			NOEC	
6/11/2007 14:40	GOLDKIST EFFLUENT	Toxicology	Bioassay-Chron-Def-FW-Fish, IC20	No Result			IC20	
6/11/2007 14:40	GOLDKIST EFFLUENT	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	No Result			NOEC	
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Dissolved Oxygen	5.64		mg/L		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Specific Conductance	1333		umhos/cm		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	Temperature	31.7		C		
6/11/2007 14:40	GOLDKIST EFFLUENT	Field Parameters	pH	7.3				
6/13/2007 11:30	GOLD KIST EFFLUENT	Field Parameters	Dissolved Oxygen	6.22		mg/L		
6/13/2007 11:30	GOLD KIST EFFLUENT	Field Parameters	Specific Conductance	1350		umhos/cm		
6/13/2007 11:30	GOLD KIST EFFLUENT	Field Parameters	Temperature	30.85		C		
6/13/2007 11:30	GOLD KIST EFFLUENT	Field Parameters	pH	6.65				
6/15/2007 10:15	GOLD KIST EFFLUENT	Field Parameters	Dissolved Oxygen	6.68		mg/L		
6/15/2007 10:15	GOLD KIST EFFLUENT	Field Parameters	Specific Conductance	1235		umhos/cm		
6/15/2007 10:15	GOLD KIST EFFLUENT	Field Parameters	Temperature	29.96		C		
6/15/2007 10:15	GOLD KIST EFFLUENT	Field Parameters	pH	7.19				
6/11/2007 11:03	GOLDKIST CONTROL	AGP/LN	Algal Growth Potential	24.6	A	mg DryWt/L	0.3	0.9
6/11/2007 11:03	GOLDKIST CONTROL	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.7		ug/L	0.55	1.7
6/11/2007 11:03	GOLDKIST CONTROL	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.7		ug/L	0.24	0.71
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Aluminum	76	U	ug/L	76	300
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Calcium	48.4	A	mg/L	0.05	0.2
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Iron	118	A	ug/L	10	40
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Magnesium	10.3	A	mg/L	0.03	0.12
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Arsenic	0.63	I	ug/L	0.5	2
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Chromium	1	U	ug/L	1	4
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Copper	4.68	AJ	ug/L	0.25	1
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Lead	0.2	U	ug/L	0.2	0.8
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Nickel	0.25	U	ug/L	0.25	1
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Selenium	0.5	U	ug/L	0.5	2
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Silver	0.025	U	ug/L	0.025	0.1
6/11/2007 11:03	GOLDKIST CONTROL	Metals	Zinc	5	U	ug/L	5	20
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	Specific_Conductance	349		umhos/cm	2	8
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	Ammonia-N	0.013	I	mg N/L	0.01	0.02
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	NO2NO3-N	0.33		mg N/L	0.004	0.01
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	O-Phosphate-P	0.19		mg P/L	0.008	0.02
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	Kjeldahl Nitrogen	0.25		mg N/L	0.08	0.2
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	Total-P	0.24		mg P/L	0.02	0.06
6/11/2007 11:03	GOLDKIST CONTROL	Nutrients	TSS	4	I	mg/L	4	16
6/11/2007 11:03	GOLDKIST CONTROL	Field Parameters	Dissolved Oxygen	7.05		mg/L		
6/11/2007 11:03	GOLDKIST CONTROL	Field Parameters	Sample Depth	0.6		m		
6/11/2007 11:03	GOLDKIST CONTROL	Field Parameters	Specific Conductance	347		umhos/cm		
6/11/2007 11:03	GOLDKIST CONTROL	Field Parameters	Temperature	24.9		C		

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 11:03	GOLDKIST CONTROL	Field Parameters	pH	7.94				
6/11/2007 11:22	GOLDKIST TEST	AGP/LN	Algal Growth Potential	88.9		mg DryWt/L	0.3	0.9
6/11/2007 11:22	GOLDKIST TEST	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	3.4		ug/L	0.55	1.7
6/11/2007 11:22	GOLDKIST TEST	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.6		ug/L	0.24	0.71
6/11/2007 11:22	GOLDKIST TEST	Metals	Aluminum	76	U	ug/L	76	300
6/11/2007 11:22	GOLDKIST TEST	Metals	Calcium	48.8		mg/L	0.05	0.2
6/11/2007 11:22	GOLDKIST TEST	Metals	Iron	112		ug/L	10	40
6/11/2007 11:22	GOLDKIST TEST	Metals	Magnesium	14.1		mg/L	0.03	0.12
6/11/2007 11:22	GOLDKIST TEST	Metals	Arsenic	0.7	I	ug/L	0.5	2
6/11/2007 11:22	GOLDKIST TEST	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
6/11/2007 11:22	GOLDKIST TEST	Metals	Chromium	1	U	ug/L	1	4
6/11/2007 11:22	GOLDKIST TEST	Metals	Copper	1.25		ug/L	0.25	1
6/11/2007 11:22	GOLDKIST TEST	Metals	Lead	0.2	U	ug/L	0.2	0.8
6/11/2007 11:22	GOLDKIST TEST	Metals	Nickel	0.3	I	ug/L	0.25	1
6/11/2007 11:22	GOLDKIST TEST	Metals	Selenium	0.5	U	ug/L	0.5	2
6/11/2007 11:22	GOLDKIST TEST	Metals	Silver	0.025	U	ug/L	0.025	0.1
6/11/2007 11:22	GOLDKIST TEST	Metals	Zinc	5	U	ug/L	5	20
6/11/2007 11:22	GOLDKIST TEST	Nutrients	Specific_Conductance	404		umhos/cm	2	8
6/11/2007 11:22	GOLDKIST TEST	Nutrients	Ammonia-N	0.013	I	mg N/L	0.01	0.02
6/11/2007 11:22	GOLDKIST TEST	Nutrients	NO2NO3-N	1.2		mg N/L	0.04	0.1
6/11/2007 11:22	GOLDKIST TEST	Nutrients	O-Phosphate-P	0.67		mg P/L	0.028	0.07
6/11/2007 11:22	GOLDKIST TEST	Nutrients	Kjeldahl Nitrogen	0.3		mg N/L	0.08	0.2
6/11/2007 11:22	GOLDKIST TEST	Nutrients	Total-P	0.72		mg P/L	0.02	0.06
6/11/2007 11:22	GOLDKIST TEST	Nutrients	TSS	4	I	mg/L	4	16
6/11/2007 11:22	GOLDKIST TEST	Field Parameters	Dissolved Oxygen	7.41		mg/L		
6/11/2007 11:22	GOLDKIST TEST	Field Parameters	Sample Depth	0.6		m		
6/11/2007 11:22	GOLDKIST TEST	Field Parameters	Specific Conductance	399		umhos/cm		
6/11/2007 11:22	GOLDKIST TEST	Field Parameters	Temperature	25.4		C		
6/11/2007 11:22	GOLDKIST TEST	Field Parameters	pH	7.4				
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Aluminum	76	U	ug/L	76	300
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Calcium	0.05	U	mg/L	0.05	0.2
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Iron	10	U	ug/L	10	40
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Magnesium	0.03	U	mg/L	0.03	0.12
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Arsenic	0.5	U	ug/L	0.5	2
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Chromium	1	U	ug/L	1	4
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Copper	0.25	U	ug/L	0.25	1
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Lead	0.2	U	ug/L	0.2	0.8
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Nickel	0.25	U	ug/L	0.25	1
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Selenium	0.5	U	ug/L	0.5	2
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Silver	0.025	U	ug/L	0.025	0.1
6/11/2007 14:20	EQUIPMENT BLANK	Metals	Zinc	5	U	ug/L	5	20
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	Specific_Conductance	2	U	umhos/cm	2	8

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
6/11/2007 14:20	EQUIPMENT BLANK	Nutrients	TSS	4	U	mg/L	4	16
6/11/2007 14:20	EQUIPMENT BLANK	Overflow	Oil and Grease	1.7	U	mg/L		
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Alachlor	0.58	U	ug/L	0.58	2.3
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Ametryn	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Atrazine	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Azinphos Methyl	0.19	U	ug/L	0.19	0.76
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Bromacil	0.19	U	ug/L	0.19	0.76
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Butylate	0.19	UJ	ug/L	0.19	0.76
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Chlorpyrifos Ethyl	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Chlorpyrifos Methyl	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Diazinon	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Ethion	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Ethoprop	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Fenamiphos	0.19	U	ug/L	0.19	0.76
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Fonofos	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Hexazinone	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Malathion	0.14	U	ug/L	0.14	0.56
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Metalaxyl	0.24	U	ug/L	0.24	0.96
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Metolachlor	0.48	UJ	ug/L	0.48	1.9
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Metribuzin	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Mevinphos	0.19	U	ug/L	0.19	0.76
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Naled	0.77	UJ	ug/L	0.77	3.1
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Norflurazon	0.14	U	ug/L	0.14	0.56
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Parathion Ethyl	0.14	U	ug/L	0.14	0.56
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Parathion Methyl	0.096	U	ug/L	0.096	0.38
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Phorate	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Prometryn	0.14	U	ug/L	0.14	0.56
6/11/2007 14:20	EQUIPMENT BLANK	Pesticides	Simazine	0.048	U	ug/L	0.048	0.19
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	1,2-Dichlorobenzene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	1,3-Dichlorobenzene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	1,4-Dichlorobenzene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	9.7	U	ug/L	9.7	39
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	58
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97	U	ug/L	0.97	3.9

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2-Chloronaphthalene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2-Chlorophenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	UJ	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	2-Nitrophenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	UJ	ug/L	39	160
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4,4'-DDD	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4,4'-DDE	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4,4'-DDT	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	58
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Acenaphthene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Acenaphthylene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Aldrin	1.5	UJ	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Anthracene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzidine	97	U	ug/L	97	390
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	58
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	4.9	U	ug/L	4.9	19
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Chrysene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	4.9	U	ug/L	4.9	19
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Dieldrin	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Diethyl phthalate	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Dimethyl phthalate	49	U	ug/L	49	190
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Endosulfan I	3.9	U	ug/L	3.9	16
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Endosulfan II	3.9	U	ug/L	3.9	16
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Endosulfan sulfate	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Endrin	1.5	UJ	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Endrin aldehyde	3.9	U	ug/L	3.9	16
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Fluoranthene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Fluorene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Heptachlor	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Heptachlor epoxide	1.5	U	ug/L	1.5	5.8

Date_Sampled	Field_Sample_ID	SCH_Group	Component	Value	Qualifier	Units	MDL	PQL
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Hexachlorobenzene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Isophorone	1.3	I	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Naphthalene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Phenanthrene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Phenol	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	Pyrene	0.97	U	ug/L	0.97	3.9
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	alpha-BHC	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	beta-BHC	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	delta-BHC	1.5	U	ug/L	1.5	5.8
6/11/2007 14:20	EQUIPMENT BLANK	Priority Organic Pollutants	gamma-BHC	1.5	U	ug/L	1.5	5.8

Appendix F

Additional physical, chemical, toxicological and microbiological results

FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia

Facility: Gulf Kist Inc.
Address: Live Oak Processing
County: Suwannee
NPDES Permit #: FL 0001465
Contact/District: Tom Kallmeyn / Northeast

LIMS entry: 6.29.07 MF verified: 6.29.07 J.D.

Diluent/ Batch: 20% DMW / 6-8-07 Test Days Used: 0-3
20% DMW / 6-14-07 Test Days Used: 4-6

SOP#: TA07_05 EPA 821-R-02-013 Method 1002.0

Start Date: 6-12-07 Time: 1230
End Date: 6-18-07 Time: 1245

Organism: *Ceriodaphnia dubia*
Organism Batch #: 24-07
Organism age : <24 hours
Feeding: Prior to Test and Daily
Food: YCT *P. subcapitata*
Food Batch: 1-7-07 1-07
Chamber size : 30 ml
Sample volume : 20 ml

Sample Received	LAB Sample #	LIMS JOB #	LIMS SAMPLE #	Collection Date/Time	Received Date/Time
Test Day 0	1	TLH-2007-06-12-81	1017181	6.11.07 14:40	6/12/07 0950
Test Day 2	2	TLH-2007-06-14-01	1017786	6.13.07 11:30	6/14/07 1020
Test Day 4	3	TLH-2007-06-15-49	1018617	6.15.07 10:15	6.15.07 1318

Water Quality Parameters	Field Chlorine (mg/L)			Lab Chlorine (mg/L)			Alkalinity (mg/L as $CaCO_3$)		
Lab Sample #:	1	2	3	1	2	3	1	2	3
Sample:	Not Measured	Not Measured	Not Measured	0.04	0.05	0.06	442	389	369
Diluent/Control:				<0.03	<0.03	<0.03	81	81	84
Method:				Hach	Hach	Hach	Hach	Hach	Hach
Measured by:	~~MF~~	—	—	BA	~~PPV~~	JD	~~PPV~~	~~PPV~~	JD
Verified by:	MF	MF	MF	PPV	BA	BA	BA	BA	BA
	Conductivity (circle one) (µmhos-cm) (mmhos-cm)			Ammonia (mg/L)			Hardness (mg/L as $CaCO_3$)		
Lab Sample #:	1	2	3	1	2	3	1	2	3
Sample:	1376	1312	1200	<0.017	<0.017	0.159	536	484	466
Diluent/Control:	177	173	231	<0.017	<0.017	<0.017	102	102	93
Method:	Mettler	Mettler	Mettler	Denver	Denver	Denver	Hach	Hach	Hach
Measured by:	MF	BA	JD	MF	MF	MF	~~PPV~~	~~PPV~~	JD
Verified by:	BA	MF	BA	PPV	PPV	BA	BA	BA	BA

Temperature Shipped ≤6° C (all samples) yes (B) no
Holding Time ≤36 hours (yes) no
Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min. 25.6 max. 26.5 mean 26.0
Room B246 min. 24.9 max. 26.4 mean 25.6

Test Replicate	Loaded from culture vial
1	B2
2	B3
3	C24
4	B7
5	B10
6	B11
7	B12
8	C1
9	B26
10	B27

Results	
Control % CV:	37.4 %
Dunnetts PMSD:	32.3 %
Reproduction NOEC:	100%
Reproduction LOEC:	>100%
(A) Survival NOEC:	~~12.5 MF~~ 100%
(A) Survival LOEC:	~~25 MF~~ >100%
ICP_{20}:	>100%
ICP_{25}:	>100%

Investigators' signatures
Marshall Faircloth
Bruce Alderman
Patsy Vicenaire
Jana Jarrell

Nicole Wellendorf
REVIEWER

Comments: (A) Survival NOEC/LOEC from Fisher's Exact Test per EPA 821-R-02-013 Pg. 117-118, MF 6-19-07 mc
(B) Sample 3 hand delivered to lab within 2 hours of collection. Temperature decreasing but still above 6.0°C mc 6.18.07

Test Page 1 of 5

PAGE 000001

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FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Survival and Reproduction

Facility: GOLD KIST INC. Start Date: 6-12-07 Time: 1230

LIMS Sample #: 1017181 for lab sample #1 End Date: 6-18-07 Time: 1245

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving adults	Neonates per adult
Control	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	3	5	0	0	6	2	2	3	5	6	32	10	3.2
	4	0	0	3	0	0	0	0	0	0	0	3	10	3
	5	14	12	11	0	11	10	10	10	13	12	103 MF	10	10.3
	6	13	18	15	1	16	9	16	14	14	18	137 MF 4	10	13.4
	7													
	8													
	Total	30	35	29	1	33	21	28	27	32	36	272	10	27.2

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving adults	Neonates per adult
6.25%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	1	2	0	2	7	6	1	0	6	5	30	10	3.0
	4	0	0	0	0	0	0	0	4	0	0	4	10	0.9
	5	8	9	11	11	13	11	12	11	10	9	105	10	10.5
	6	16	12	13	16	14	12	15	12	15	12	137	10	13.7
	7													
	8													
	Total	25	23	29	29	34	29	28	27	31	26	281	10	28.1

Organisms loaded by: BA

Day	Counted/ verified by:	Concentrations prepared by:
0	MF	MF
1	MF	MF
2	BA	BA
3	BA	BA
4	BA	BA
5	MF	MF
6	MF	NA
7		
8		

Concentration	Mean neonates /adult	% survival
Control	27.2	100%
6.25%	28.1	100%
12.50%	27.2	100%
25%	22.1	70%
50%	25.4	90%
100%	22.3	90%

Test acceptability	
Mean control reproduction 15/female	(yes) no
3rd brood in 60% of surviving females	(yes) no
Control survival ≥80%:	(yes) no

Comments: ⑥ Rep 3, day 4 conc. 6.25%: 5 neonates BA 6-16-07

*Day 0 is test initiation day
X = Dead (original organism)

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FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Survival and Reproduction

Facility: GOLDS KIST INC

LIMS Sample # : 1017181 for lab sample #1

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving Adults	Neonates per adult
12.50%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	4	5	5	0	0	3	5	0	3	7	32	10	3.2
	4	0	0	0	0	0	0	0	6	6	0	6	10	0.6
	5	10	10	9	12	10	10	10	11	8	11	101	10	10.1
	6	10	13	15	12	14	15	15	14	12	13	133	10	13.3
	7													
	8													
	Total	24	28	29	24	24	28	30	31	23	31	272	10	27.2

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving Adults	Neonates per adult
25%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	6	0	7	7	5	3	5	0	6	4	43	10	4.3
	4	0	0	0	0	0	X	0	0	0	X	0	8	0
	5	12	X1	11	9	11	|	10	13	12	|	79	7	7.9
	6	17	X	13	13	15	|	13	16	12	|	99	7	9.9
	7													
	8													
	Total	35	1	31	29	31	3	28	29	30	4	221	7	22.1

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving Adults	Neonates per adult
50%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	4	7	0	0	2	6	2	0	5	4	30	10	3.0
	4	0	0	x4	3	0	0	0	6	0	0	13	9	1.3
	5	12	9	|	11	11	13	13	12	11	10	102	9	10.2
	6	15	14	|	15	13	13	12	0	14	13	109	9	10.9
	7													
	8													
	Total	31	30	4	29	26	32	27	18	30	27	254	9	25.4

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving Adults	Neonates per adult
100%	0*												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	6	0	4	0	4	0	3	0	17	10	1.7
	4	0	0	0	X1	0	1	0	6	0	2	10	9	1.0
	5	10	8	14	|	13	10	11	11	3	8	88	9	8.8
	6	12	14	10	|	16	14	13	0	15	14	108	9	10.8
	7													
	8													
	Total	22	22	30	1	33	25	28	17	21	24	223	9	22.3

Comments:

0000 3

*Day 0 is test initiation day
X = Dead (original organism)

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FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Parameters

Facility: GOLD COAST INC

LIMS Sample #: 1017181 for lab sample 1

Circle µmhos-cm or mmhos-cm

Test Day ↓		Concentration	New Sample: Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Old Sample: Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 0	sample	Control	M	8.1	25.1	7.8	177					
	1	6.25%	M	8.1	25.2	7.9	228					
	1	12.5%	M	8.1	25.2	7.9	347					
	1	25%	M	8.0	25.1	7.9	498					
	1	50%	M	7.8	25.2	7.9	804					
	1	100%	M	7.7	25.5	8.0	1378					
	Measured by:			MF	MF	MF	MF					
	Recorded by:			MF	MF	MF	MF					
Day 1	sample:	Control	M	8.2	24.5	7.7	176	M	8.1	25.0	6.9	187
	1	6.25%	M	8.1	24.9	7.8	292	M	8.2	25.0	7.1	264
	1	12.5%	M	8.0	25.1	7.8	339	M	8.3	25.0	7.2	337
	1	25%	M	7.9	24.9	7.6	487	M	8.3	24.9	7.2	514
	1	50%	M	7.8	24.5	7.5	784	M	8.5	24.9	7.1	807
	1	100%	M	7.6	24.5	7.1	1367	M	8.6	24.9	7.1	1368
	Measured by:			JD	JD	JD	JD		MF	MF	MF	MF
	Recorded by:			JD	JD	JD	JD		MF	MF	MF	MF
Day 2	sample:	Control	M	7.9	24.7	7.3	173	M	8.0	24.7	7.3	185
	2	6.25%	M	8.1	24.9	7.3	251	M	8.2	24.5	7.4	280
	2	12.5%	M	8.0	24.9	7.3	335	M	8.3	24.3	7.5	358
	2	25%	M	8.0	24.6	7.3	479	M	8.5	24.4	7.5	490
	2	50%	M	7.8	24.4	7.3	769	M	8.6	24.3	7.6	792
	2	100%	M	7.7	24.2	7.3	1312	M	8.7	24.4	7.6	1326
	Measured by:			BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:			BA	BA	BA	BA		BA	BA	BA	BA
Day 3	sample:	Control	M	8.2	24.8	7.6	178	M	8.1	24.4	7.2	183
	2	6.25%	M	8.2	25.1	7.7	264	M	8.2	24.1	7.2	271
	2	12.5%	M	8.1	24.9	7.7	341	M	8.3	24.0	7.2	348
	2	25%	M	8.0	24.8	7.8	496	M	8.5	24.0	7.2	509
	2	50%	M	7.8	24.7	8.1	774	M	8.6	24.1	7.1	801
	2	100%	M	7.6	24.5	8.3	1308	M	8.7	24.2	7.2	1327
	Measured by:			BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:			BA	BA	BA	BA		BA	BA	BA	BA

Comments:

Replicate M= "Metered" vial, a surrogate vial for parameters

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FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Parameters

Facility: Gold Coast Inc

LIMS Sample #: 1017181 for lab sample 1

Circle (µmhos-cm) or mmhos-cm

Test Day ↓		Concentration	New Sample					Old Sample					
			Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 4	sample:	Control	M	8.2	24.6	~~24.6~~ 24.7 JD	221	M	8.1	24.6	7.1	182
	3	6.25%	M	8.2	24.7	~~24.7~~ JD	259	M	8.2	24.3	7.3	265
	3	12.5%	M	8.0	24.9	~~24.7~~ JD	331	M	8.4	24.2	7.4	365
	3	25%	M	7.9	25.0	~~25.0~~ JD	468	M	8.6	24.2	7.5	512
	3	50%	M	7.8	25.0	~~25.0~~ JD	718	M	8.7	24.2	7.5	807
	3	100%	M	7.5	25.2	~~25.2~~ JD	1200	M	8.7	24.3	7.5	1340
	Measured by:			JD	JD	JD	JD		BA	BA	BA	BA
	Recorded by:			JD	JD	JD	JD		BA	BA	BA	BA
Day 5	sample:	Control	M	8.2	24.8	7.6	184	M	8.2	24.9	7.6	200
	3	6.25%	M	8.1	25.2	7.4	249	M	8.3	24.9	7.1	275
	3	12.5%	M	8.0	25.1	7.4	311	M	8.3	24.9	7.3	346
	3	25%	M	7.8	25.1	7.4	449	M	8.4	24.8	7.4	500
	3	50%	M	7.6	25.1	7.3	726	M	8.5	24.9	7.4	745
	3	100%	M	7.4	25.3	6.8	1216	M	8.7	25.0	7.3	1240
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 6	sample:	Control	M					M	8.2	25.9	7.5	180
	3	6.25%	M					M	8.2	25.6	7.3	246
	3	12.5%	M					M	8.3	25.4	7.3	323
	3	25%	M					M	8.4	25.2	7.4	458
	3	50%	M					M	8.6	25.0	7.5	735
	3	100%	M					M	8.7	25.0	7.5	1278
	Measured by:								MF	MF	MF	MF
	Recorded by:								MF	MF	MF	MF
Day 7	sample:	Control	M					M				
	3	6.25%	M					M				
	3	12.5%	M					M				
	3	25%	M					M				
	3	50%	M					M				
	3	100%	M					M				
	Measured by:											
	Recorded by:											

Not Reviewed

Comments: @ 48hrs reborn / D.O. C: 7.7 6: 7.7 12: 7.8 25: 7.8 50: 7.8 100: 7.7 - D.O.'s

Replicate M= "Metered" vial, a surrogate vial for parameters

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Ceriodaphnia Survival and Reproduction Test-7 Day Survival

Start Date:	6/12/2007	Test ID:	1godk	Sample ID:	FL0001465-NPDES Permit #
End Date:	6/18/2007	Lab ID:	Goldkist effluent	Sample Type:	EFF2-Industrial
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	CD-Ceriodaphnia dubia
Comments:	Goldkist chronic C. dubia test June 2007				

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	0.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	0.0000
50	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical
D-Control	1.0000	1.0000	0	10	10	10		
6.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500
12.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500
25	0.7000	0.7000	3	7	10	10	0.1053	0.0500
50	0.9000	0.9000	1	9	10	10	0.5000	0.0500
100	0.9000	0.9000	1	9	10	10	0.5000	0.0500

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1
Treatments vs D-Control				

FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Pimphales promelas or *Menidia beryllina*

Facility: Gold Kist INC
Address: LIVE OAK DRIVE SUWANEE
County: SUWANEE
NPDES Permit #: FL0001465
Contact/District: Tom Kallhoff NORTHEAST

Test Species (circle one)
P. promelas SOP#: TA07_09 EPA-821-R-02-013 Method 1000.0
M. beryllina SOP#: TA07_14 EPA-821-R-02-014 Method 1006.0

Start Date: 6-12-07 Time: 13:30
End Date: 6.19.07 Time: 1200

Diluent/ Batch:
MHW / 5-30-07 Test Days Used: 0-7
MHW /_____ Test Days Used: _____
ASW /_____ Test Days Used: _____
ASW /_____ Test Days Used: _____
LIMS Entry 6-29-07 MF Verification 6.29.07 /B

Organism age : 1 days
Feeding Prior to Test and Daily
Artemia Lot # GSL-326 40r
Chamber size : 1000 ml
Test volume : 500 ml

Artemia Batch #			
Day 0	83-07	Day 3	86-07
Day 1	84-07	Day 4	87-07
Day 2	85-07	Day 5	88-07
		Day 6	89-07

Sample Received	Lab Sample #	LIMS Job #	LIMS Sample #	Collection Date/Time	Received Date/Time
Test Day 0	1	TLH-2007-06-12-01	IC17681	6-11-07 1440	6/12/07 0950
Test Day 2	2	TLH-2007-06-14-01	IC17786	6-13-07 1130	6/14/07 1025
Test Day 4	3	TLH-2007-06-15-49	IC17867	6-15-07 1015	6/15/07 1318

Water Quality Parameters	Field Chlorine (mg/L)			Lab Chlorine (mg/L)			Alkalinity (mg/L as $CaCO_3$)			Hardness (mg/L as $CaCO_3$)		
Lab Sample #:	1	2	3	1	2	3	1	2	3	1	2	3
Sample:	Not measured	Not measured	Not measured	0.04	0.05	0.06	142	389	~~375~~ (A)	536	484	466
Diluent/Control:				<0.03	<0.03	<0.03	74	79	79	132	132	132
Method:	—	—	—	Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach
Measured by:	—	—	—	BA	PPV	JD	~~PPV~~	PPV	JD	~~PPV~~	PPV	JD
Verified by:	MF	MF	MF	~~PPV~~	MF	MF	~~PPV~~ BA	MF	MF	~~PPV~~ BA	MF	MF

	Conductivity (circle one) (umhos-cm) (mmhos-cm)			Ammonia (mg/L)			Salinity (ppth)		
Lab Sample#:	1	2	3	1	2	3	1	2	3
Sample:	1382	1345	1221	<0.017	<0.017	0.159	<1	<1	<1
Diluent/Control:	324	344	330	<0.017	<0.017	<0.017	<1	<1	<1
Method:	Mettler	Mettler	Mettler	Denver	Denver	Denver	Mettler	Mettler	Mettler
Measured by:	BA	JD	BA/JD	MF	MF	MF	BA	JD	JD
Verified by:	MF	MF	MF	~~PPV~~	PPV	JD	~~PPV~~	MF	MF

Statistics (B)	
Growth NOEC:	
Growth LOEC:	
Growth IC_{20}:	
Growth IC_{25}:	
Ctrl % CV:	
Dunnetts PMSD:	
Survival NOEC:	
Survival LOEC:	

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light :8 dark
Temperature Range °C
Incubator # 2 min 25.6 max 26.5 mean 26.0
Water bath # ____ min _____ max _____ mean _____
Room B246 min 24.9 max 26.4 mean 25.6

Investigators' signatures
Eric Richard
Patsy Michaels
Jason Stamps
Matthew Faircloth
Mitch Wellendorf
REVIEWER

Comments: (A) hardness Sample 3 369 mg/L as $CaCO_3$ MF 6-22-07
(B) Due To growth pattern and organisms appearing not To grow, TOST was reported as No Result. NCR 2535 created. MF 6/29/07

Fish species received From MBL were unhealthy upon arrival. - JD.

revised 08/24/06 MF/SP

Chronic Definitive Bioassay Survival Benchsheet

Facility: Gold KIST

LIMS Sample Number: 161781
(for Lab Sample # 1)

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

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

		TEST DAY							
Concentration	Replicate	0	1	2	3	4	5	6	7
Control	A	10	9.0	9	3 1D	8	8	8	8
	B	10	10	10	9 1D	9	9	3 1D	8
	C	10	10	9 1D	9	9	9	9	9
	D	10	10	10	10	10	10	10	10
Sample 6.25 %	A	10	8 2D	8	9	7 1D	7	7	7
	B	10	9.0	5 4D	4 1D	4	4	4	4
	C	10	9.0	3 1D	7 1D	7	7	7	7
	D	10	10	3 2D	8	8	8	8	8
Sample 12.5%	A	10	10	8 2D	8	8	8	8	8
	B	10	3 2D	8	5 3D	5	5	5	5
	C	10	3 2D	7 1D	6 1D	6	6	6	6
	D	10	3 2D	8	4 4D	2 2D	2	2	2
Sample 25 %	A	10	8 2D	7 1D	7	7	7	7	7
	B	10	10	10	6 4D	6	4 2D	4	4
	C	10	9 1D	8 1D	6 2D	6	5 1D	5	5
	D	10	7 3D	7	6 1D	6	6	6	6
Sample 50 %	A	10	9.0	4 5D	4	4	3 1D	3	3
	B	10	9 1D	7 2D	7	7	7	7	7
	C	10	8 2D	5 3D	5	5	5	5	5
	D	10	9 1D	6 3D	6	6	6	6	6
Sample 100 %	A	10	9 1D	7 2D	7	7	7	7	7
	B	10	8 3D	7 1D	7	7	7	7	7
	C	10	9 2D	4 4D	4	4	4	4	4
	D	10	9 1D	7 2D	7	7	6 1D	6	6
Sample %	A	10							
	B	10							
	C	10							
	D	10							
Loaded by: BA	Checked by:		JD	JD	JD	JD	JD	JD	JD

Comments:

revised 10/11/04 MF

Chronic Definitive Bioassay Parameters Benchsheet

pg. 1

P. promelas and M. beryllina SOP TA07_09 and TA-07_15

Sample Source: GOLD KIST INC. Start Date: 6/12/07 PRV End Date: 6.19.07

LIMS Sample #: 101781 (for Lab sample #1) Start Time: 13:30 End Time: 1700

conc = concentration rep = replicate circle umhos or mmhos

Test Day		Conc.	New Sample Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (umhos/mmhos)	Salinity ppth	Old Sample Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth
Day 0	sample:	Control	A	8.1	25.1	7.1	324	<1						
	1	6.25%	A	8.0	25.0	7.2	401	<1						
	1	12.5%	A	8.0	25.2	7.2	464	<1						
	1	25%	A	7.9	25.1	7.6	603	<1						
	1	50%	A	7.8	25.3	7.5	860	<1						
	1	100%	A	7.6	25.5	7.4	1380	<1						
	1		A											
	Measured by:			BA	BA	BA	BA	BA						
	Recorded by:			BA	BA	BA	BA	BA						
			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 1	sample:	Control	B	8.1	24.6	7.7	329	<1	B	8.0	24.0	7.2	331	<1
	1	6.25%	B	8.1	24.6	7.7	392	<1	B	8.0	24.3	7.2	405	<1
	1	12.5%	B	8.1	24.5	7.7	437	<1	B	8.0	24.2	6.8	471	<1
	1	25.0%	B	7.9	24.5	7.7	619	<1	B	8.2	24.2	6.7	598	<1
	1	50.0%	B	7.8	24.5	7.6	889	<1	B	8.3	24.1	6.9	844	<1
	1	100.0%	B	7.8	24.4	7.5	1347	<1	B	8.3	24.0	6.9	1329	<1
	1		B						B					
	Measured by:			PRV	PRV	PRV	PRV	PRV		PRV	PRV	PRV	PRV	PRV
	Recorded by:			PRV	PRV	PRV	PRV	PRV		PRV	PRV	PRV	PRV	PRV
Old Sample			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 2	sample:	Control	C	7.8	24.8	6.2	312	<1	C	8.0	24.0	~~8.0~~ 7.3	~~344~~ 334	<1
	2	6.25	C	7.9	24.6	6.2	371	<1	C	8.0	24.0	~~8.0~~ 7.2	397	<1
	2	12.5	C	7.9	24.7	6.2	492	<1	C	7.1	24.0	7.2	475	<1
	2	25.0	C	8.0	24.6	6.3	590	<1	C	7.9	24.0	7.2	594	<1
	2	50.0	C	8.0	24.6	6.2	773	<1	C	7.8	24.0	7.3	834	<1
	2	100	C	8.2	24.5	5.6	1379	<1	C	7.7	24.1	7.3	1.35	<1
	2		C						C					
	Measured by:			JD	JD	JD	JD	JD		BA	BA	BA	BA	BA
	Recorded by:			JD	JD	JD	JD	JD		BA	BA	BA	BA	BA
			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 3	sample:	Control	D	8.1	24.9	7.7	~~334~~	<1	D	7.9	24.7	7.6	340	<1
	2	6.25	D	8.1	24.6	7.7	~~333~~ 414	<1	D	7.9	24.3	7.5	400	<1
	2	12.5	D	7.9	24.5	7.7	~~604~~	<1	D	8.0	24.3	7.4	480	<1
	2	25.0	D	7.8	24.5	7.7	~~884~~	<1	D	8.1	24.3	6.9	604	<1
	2	50.0	D	7.7	24.5	7.8	889	<1	D	8.2	24.6	6.9	881	<1
	2	100.0	D	7.6	24.4	7.9	1.18	<1	D	8.2	24.4	7.1	1.36	<1
	2		D						D					
	Measured by:			JD	JD	JD	JD	JD		PRV	PRV	PRV	PRV	PRV
	Recorded by:			JD	JD	JD	JD	JD		PRV	PRV	PRV	PRV	PRV

New sample

revised 10/11/04 mf

Comments: For salinity <1 ppth insert <1. For salinity > 1 ppth, conductivity measurement is not required if salinity probe is functional.

Day 3 Cond C: 334 6.25: 414 12.5: 489 25.0: 632 S.D.

Chronic Definitive Bioassay Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_15

Sample Source: Gold Kist Inc
LIMS Sample #: 1017181 (for Lab sample #1)

Start Date: 6/12/07 End Date: 6/19/07
Start Time: 13:30 End Time: 13:00

conc = concentration rep = replicate

Test Day		Conc.	New Sample Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth	Old Sample Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth
Day 4	sample:	Control	A	7.8	24.0	7.2	350	<1	A	8.1	24.1	7.6	374	<1
	3	6.25	A	7.9	24.0	7.1	431	<1	A	8.0	24.1	7.5	422	<1
	3	12.5	A	8.0	24.0	7.1	480	<1	A	7.9	24.1	7.4	455	<1
	3	25	A	8.1	24.0	7.0	601	<1	A	7.9	24.1	7.4	552	<1
	3	50	A	8.2	24.1	6.9	873	<1	A	7.7	24.2	7.2	731	<1
	3	100%	A	8.3	24.1	6.9	1350	<1	A	7.6	24.3	7.1	~~1277~~ A	<1
	3		A						A					
	Measured by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	JD	JD	JD	JD	JD
	Recorded by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	JD	JD	JD	JD	JD
			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 5	sample:	Control	B	7.8	24.2	5.9	3410	<1	B	8.1	24.0	7.3	351	<1
	3	6.25	B	7.8	24.2	6.1	420	<1	B	8.0	24.0	7.2	400	<1
	3	12.5	B	7.9	24.1	6.0	494	<1	B	7.9	24.0	7.2	437	<1
	3	25	B	7.9	24.1	5.8	602	<1	B	7.8	24.1	7.1	556	<1
	3	50	B	8.1	24.5	5.7	937	<1	B	7.7	24.2	7.0	790	<1
	3	100%	B	8.2	24.4	5.4	1261	<1	B	7.6	24.5	6.4	52~~7.9~~1238	<1
	3		B						B					
	Measured by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	JD	JD	JD	JD	JD
	Recorded by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	JD	JD	JD	JD	JD
			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 6	sample:	Control	C	7.8	24.5	5.5	363	<1	C	8.1	24.1	7.7	325	<1
	3	6.25	C	7.9	24.5	6.2	419	<1	C	7.9	24.2	7.6	402	<1
	3	12.5	C	7.9	24.3	6.2	455	<1	C	7.8	24.0	7.5	475	<1
	3	25	C	8.2	24.3	6.2	543	<1	C	7.8	24.2	7.4	577	<1
	3	50	C	8.0	24.2	6.0	805	<1	C	7.6	24.1	7.3	835	<1
	3	100%	C	8.2	24.3	4.7	1257	<1	C	7.6	24.3	7.3	1463	<1
	3		C						C					
	Measured by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	~~AA~~	~~AA~~	~~AA~~	~~AA~~	~~AA~~
	Recorded by:		[redacted]	JD	JD	JD	JD	JD	[redacted]	~~AA~~	~~AA~~	~~AA~~	~~AA~~	~~AA~~
			Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 7	sample:	Control	[redacted]						D	7.7	24.7	6.4	~~506~~ 530 JD	<1
	3	6.25	[redacted]						D	7.8	24.8	6.5	428	<1
	3	12.5	[redacted]						D	7.8	24.7	6.4	485	<1
	3	25	[redacted]						D	7.8	24.5	5.7	602	<1
	3	50	[redacted]						D	8.1	24.4	5.9	870	<1
	3	100%	[redacted]						D	8.1	24.6	5.6	1438	<1
	3		[redacted]						D					
	Measured by:		[redacted]							JD	JD	JD	JD	JD
	Recorded by:		[redacted]							JD	JD	JD	JD	JD

revised 10/11/04 mf

Comments: For salinity <1 ppth insert <1. For salinity > 1 ppth, conductivity measurement is not required if salinity probe is functional.

(A) 1.27 - Cnd Dy 4 ATC J.D.

Chronic Definitive Bioassay Weighing Benchsheet

Facility: Gold Kist INC

LIMS Sample Number: 161181

(for Lab Sample # 1)

P. promelas and *M. beryllina* Bench Sheet

SOP TA06_21

Concentration	Replicate	Pan #	Pan wt. g (mean wt = fish wt divided by 10; convert g to mg: move decimal 3 places to right)	Pan + Fish g	Fish wt. g	Original # Fish	Mean wt. mg
Control	A	230	0.02335	0.02678	0.00343	10	0.343
	B	231	0.02439	0.02783	0.00344	10	0.344
	C	232	0.02357	0.02505	0.00148	10	0.148
	D	233	0.02487	0.02862	0.00375	10	0.375
sample 6.25 %	A	234	0.02405	0.02769	0.00364	10	0.364
	B	235	0.02465	0.02567	0.00102	10	0.102
	C	236	0.02355	0.02686	0.00301	10	0.301
	D	237	0.02353	0.02649	0.00296	10	0.296
sample 12.5%	A	238	0.02445	0.02817	0.00372	10	0.372
	B	239	0.02523	0.02794	0.00271	10	0.271
	C	240	0.02474	0.02816	0.00342	10	0.342
	D	241	0.02453	0.02581	0.00128	10	0.128
sample 25 %	A	242	0.02414	0.02801	0.00387	10	0.387
	B	243	0.02483	0.02672	0.00189	10	0.189
	C	244	0.02536	0.02798	0.00262	10	0.262
	D	245	0.02350	0.02712	0.00362	10	0.362
sample 50 %	A	246	0.02527	0.02681	0.00154	10	0.154
	B	247	0.02439	0.02679	0.00240	10	0.240
	C	248	0.02406	0.02778	0.00372	10	0.372
	D	249	0.02445	0.02734	0.00289	10	0.289
sample 100 %	A	250	0.02425	0.02681	0.00246	10	0.246
	B	251	0.02462	0.02585	0.00123	10	0.123
	C	252	0.02481	0.02765	0.00284	10	0.284
	D	253	0.02472	0.02697	0.00216	10	0.216
sample %	A					10	
	B					10	
	C					10	
	D					10	
	Weighed by initials:		PPU by MF	MF		revised 10/11/04 mf	

Comments:

Note: Pan number (#) refers to actual Pan number.

Page 000017

Chronic Definitive Test Weighing Benchsheet

Quality Control

Facility: GOLD KIST INC

LIMS Sample Number: 101181
(for Lab Sample # 1)

P. promelas and M. beryllina Bench sheet
SOPs TA07_09, TA07_14 and TA06_21

Drying Oven ID:	CRO3400
Temperature °C:	10.5°C
Hours:	8h

Tare Weighing Date: 6-14-07 Final Weighing Date: 6-22-07

			Measured Value		S-weight Value
Tare Pan 1 after Pan 5	0.02624	@ 0.02626	S-weights	@	0.20000
Tare Pan 1 after Pan 10	0.02625	@ 0.02626	at tare	@	0.50000
Tare Pan 1 after Pan 15	0.02623	@ 0.02626	S-weights	@	0.01999
Tare Pan 1 after Pan 20	0.02623	@ 0.02626	at final	@	0.04000
Tare Pan 1 after Pan 25	0.02622	@ 0.02626			
Tare Pan 1 after Pan 30		@			
Tare Pan 1 after Pan 35		@			
Tare Pan 1 after Pan 40		@			
Tare Pan 1 after Pan 45		@			
Tare Pan 1 after Pan 48		@			
Final Pan 1 after Pan 5	~~0.02727~~	@ ~~0.02725~~	MF 0.02677 @ 0.02678		
Final Pan 1 after Pan 10	0.02678	@ 0.02678			
Final Pan 1 after Pan 15	0.02678	@ 0.02678			
Final Pan 1 after Pan 20	0.02677	@ 0.02678			
Final Pan 1 after Pan 25	0.02678	@ 0.02678			
Final Pan 1 after Pan 30		@			
Final Pan 1 after Pan 35		@			
Final Pan 1 after Pan 40		@			
Final Pan 1 after Pan 45		@			
Final Pan 1 after Pan 48		@			

Note: Pan numbers (5, 10, etc.) for Tare and Final refers to sequence of weighing as actual Pan #s may differ.

Comments:

revised 10/11/04 MF

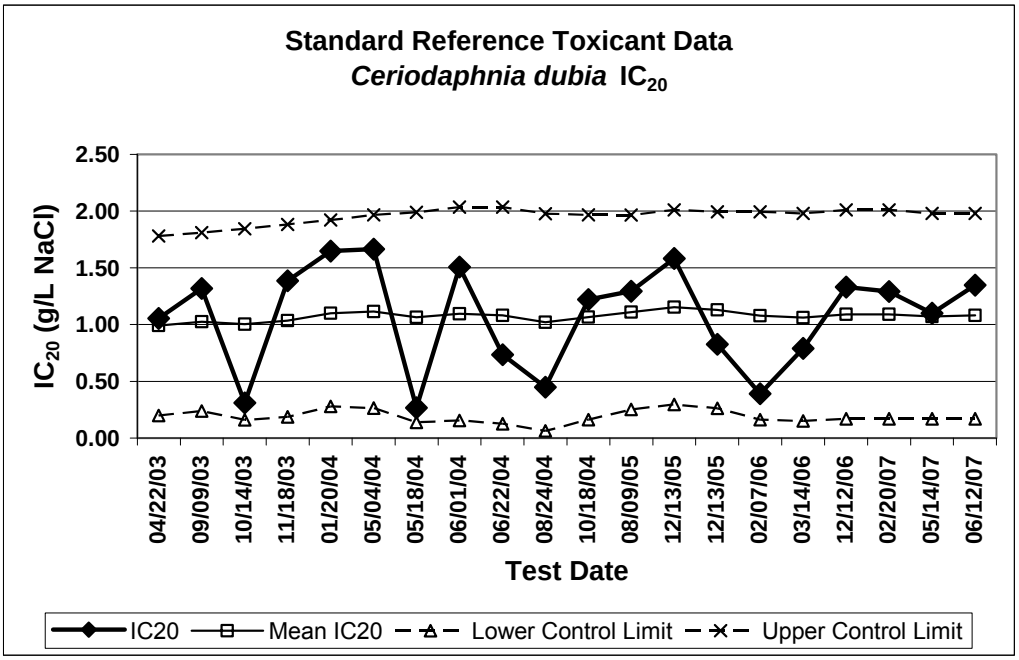
Standard Reference Toxicant data

Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 7-Day Chronic Toxicity
Ceriodaphnia dubia (water flea) - Sodium Chloride (NaCl)

Date	IC20	Mean IC20	Std Dev	Lower Control Limit	Upper Control Limit
04/22/03	1.05	0.99	0.40	0.20	1.78
09/09/03	1.32	1.02	0.39	0.24	1.81
10/14/03	0.31	1.00	0.42	0.16	1.84
11/18/03	1.39	1.03	0.42	0.19	1.88
01/20/04	1.65	1.10	0.41	0.28	1.92
05/04/04	1.66	1.12	0.43	0.26	1.97
05/18/04	0.27	1.06	0.46	0.14	1.99
06/01/04	1.51	1.10	0.47	0.15	2.04
06/22/04	0.73	1.08	0.48	0.13	2.03
08/24/04	0.45	1.02	0.48	0.06	1.98
10/18/04	1.22	1.07	0.45	0.16	1.97
11/16/04	1.29	1.11	0.43	0.25	1.96
08/09/05	1.58	1.15	0.43	0.30	2.01
12/13/05	0.83	1.13	0.43	0.26	1.99
02/07/06	0.39	1.08	0.46	0.16	1.99
03/14/06	0.79	1.06	0.46	0.15	1.98
12/12/06	1.33	1.09	0.46	0.17	2.01
02/20/07	1.29	1.09	0.46	0.17	2.01
05/14/07	1.10	1.07	0.45	0.17	1.98
06/12/07	1.35	1.08	0.45	0.17	1.98

Means are of the last 20 SRT tests.
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev



Start Date:	6/12/2007 10:20	Test ID:	607 srt	Sample ID:	REF-Ref Toxicant
End Date:	6/18/2007 12:10	Lab ID:	DEP TOXLAB-FDEP Biology To	Sample Type:	NACL-Sodium chloride
Sample Date:		Protocol:	EPAFW02-EPA/821/R-02-013	Test Species:	CD-Ceriodaphnia dubia

Comments: SRT associated with Goldkist bioassay

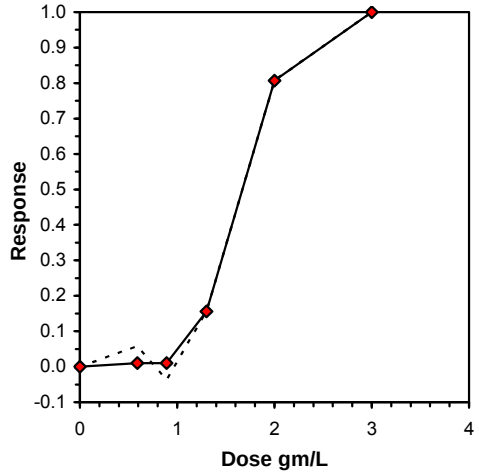
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	20.000	37.000	24.000	27.000	36.000	31.000	31.000	24.000	32.000	33.000
0.59	29.000	33.000	35.000	32.000	26.000	28.000	34.000	32.000	25.000	4.000
0.89	33.000	32.000	28.000	33.000	30.000	29.000	31.000	32.000	30.000	28.000
1.3	32.000	32.000	22.000	20.000	24.000	28.000	28.000	18.000	29.000	16.000
2	12.000	16.000	1.000	0.000	9.000	5.000	9.000	5.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

			Transform: Untransformed					Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Mean	N-Mean
D-Control	29.500	1.0000	29.500	20.000	37.000	18.857	10	29.500	1.0000
0.59	27.800	0.9424	27.800	4.000	35.000	32.432	10	29.200	0.9898
0.89	30.600	1.0373	30.600	28.000	33.000	6.201	10	29.200	0.9898
1.3	24.900	0.8441	24.900	16.000	32.000	23.067	10	24.900	0.8441
2	5.700	0.1932	5.700	0.000	16.000	99.260	10	5.700	0.1932
3	0.000	0.0000	0.000	0.000	0.000	0.000	10	0.000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.92072	0.93	-1.40318	4.611712
Bartlett's Test indicates unequal variances (p = 2.90E-03)	16.09055	13.2767		

Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	1.0020	0.3095	0.2034	1.3041	-0.9253
IC10	1.1427	0.2292	0.4068	1.3507	-1.7056
IC15	1.2833	0.1559	0.8993	1.3973	-2.4270
IC20	1.3474	0.0875	1.1165	1.4469	-1.1694
IC25	1.4012	0.0662	1.2395	1.4974	-0.7614
IC40	1.5625	0.0505	1.4507	1.6350	-0.1172
IC50	1.6701	0.0471	1.5808	1.7498	0.1427



FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia

Diluent/ Batch: 20% DMW / 6-8-07 Test Days Used: 0 – 3
20% DMW / 6-14-07 Test Days Used: 4-6
Toxicant/ Batch: NaCl / 31% 6-11-07

SOP # : TA 07_05
EPA-821-R-02-013 Method 1002.0

Organism: *Ceriodaphnia dubia*
Organism Batch #/ Age: 24-07 / <24 hr.
Feeding: Prior to Test and Daily
Food: YCT *P. subcapitata*
Food Batch: 1-3-07 1-07
Chamber size: 30 mL
Test Volume: 20 mL

Start Date: 6-12-07 Time: 1020
End Date: 6-18-07 Time: 1210

Water Quality Parameters	20% DMW 6-8-07	Diluent (or other)	Method	Measured by:	Verified by:
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03	HACH	BA/BPV	MF
Alkalinity (mg/L as $CaCO_3$):	81	44	HACH	BPV	MF
Hardness (mg/L as $CaCO_3$):	102	93	HACH	BPV	MF
Total Ammonia (mg/L as N):	<0.07	<0.07	DENVER	MF	BA
Conductivity (µmhos-cm, mmhos-cm):	MF 176	130	YSI / Mettler	MF	BA

Results	
Control % CV:	18.9
Dunnetts PMSD:	20.3
Reproduction NOEC:	1.3
Reproduction LOEC:	2.0
Survival NOEC:	2.0
Survival LOEC:	3.0
ICP_{20}:	1.3174
ICP_{25}:	1.4012

Day	Concentrations prepared by	Counted by
0	MF	MF
1	MF	MF
2	BA	BA
3	BA	BA
4	BA	BA
5	MF	MF
6	NA	MF
7	—	—
8	—	—

Test Replicate	Loaded from culture vial
1	B2
2	B3
3	B4
4	B7
5	B10
6	B19 (B11)
7	B12
8	C1
9	B26
10	B27

Comments:
Test Terminated at Day 6.
Controls met reproduction/survival criteria. MF 6-18-07

Investigators' signatures
Marshall Faircloth
James David
Paul Anderson
Peter Vickaire

Krystle Wellendorf
REVIEWER

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min. 23.6 max 25.2 mean 24.4
Incubator # ____ min. _____ max. _____ mean _____
Room B246 min. 24.4 max 26.1 mean 25.6

Ceriodaphnia dubia Survival and Reproduction

Start Date: 6-12-07 Time: 1020 Loaded by: MF
End Date: 6-18-07 Time: 1210 Verified by: [illegible]

Concentration	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Live adults	Neonates per adult
Control	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	3	5	√0	0	6	0	4	0	5	6	29	10	2.9
	4	0	0	4	5	0	5	0	5	0	0	19	10	1.9
	5	16	15	11	11	14	11	10	8	13	10	119	10	11.9
	6	1X	17	9	11	16	15	17	11	14X	17	128	8	12.8
	7													
	8													
	Total	20	37	24	27	36	31	31	24	32	33	295	8	29.5
0.59 ppth	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	5	6	0	5	0	0	6	0	6	2	30	10	3
	4	0	0	6	0	2	4	0	5	0	0	17	10	1.7
	5	9	12	16	13	9	11	12	12	6	2	102	10	10.2
	6	15	15	13	14	15	13	16	15	13	0X	129	9 MF	12.9
	7													
	8													
	Total	29	33	35	32	26	28	34	32	25	4	278	9	27.8
0.89 ppth	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	6	4	0	5	7	6	4	√0	6	5	43	10	4.3
	4	0	0	5	0	0	0	0	5	0	0	10	10	1
	5	13	10	11	13	10	10	12	12	10	13	114	10	11.4
	6	14	18	12	15	13	13	15	15	14	10	139	10	13.9
	7													
	8													
	Total	33	32	28	33	30	29	31	32	30	28	306	10	30.6

Comments: Test Terminated at Day 6. Control Survival and Brood and ending neonate condition met. MF 6/18/07

FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia Survival and Reproduction

Concentration	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Live adults	Neonates per adult
1.3 ppth	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	6	6	0	0	5	6	7	0	6	5	41	10	4.1
	4	0	0	6	6	0	0	0	1	0	0	13	10	1.3
	5	12	10	4	2	8	10	9	5	10	2	72	10	7.2
	6	14	16	12	12	11	12	12	12	13	9	123	10	12.3
	7													
	8													
	Total	32	32	22	20	24	28	28	18	29	16	249	10	24.9
2.0 ppth	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	X	0	9	0
	3	2	4	0	X	0	0	0	0	0	|	6	8	0.6
	4	0	0	0	|	0	0	3	0	0	|	3	8	0.3
	5	1	4	1	|	1	5	2	5	X*0	|	19	7	1.9
	6	9	8	0	|	8	0	4	0	-	-	29	7	2.9
	7													
	8													
	Total	12	16	1	0	9	5	9	5	0	0	57	7	5.7
3.0 ppth	0												10	
	1												6	
	2	X	X	X	|	X	|	|	X	X	|	0	0	0
	3				|		|	|			|		0	0
	4				|		|	|			|		0	0
	5				|		|	|			|		0	0
	6				|		|	|			|		0	0
	7				|		|	|			|		0	0
	8				|		|	|			|	↓	0	0
	Total				|		|	|			|	0	0	0

Comments:

000023

FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia Parameters

Test Day ↓	Conc.	New Sample Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Old Sample Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 0	Control	M	8.1	24.7	7.9	176					
	0.59 ppth	M	8.1	25.1	7.9	1342					
	0.89 ppth	M	8.1	~~25.8~~ 24.5	7.8	1945					
	1.3ppth	M	8.1	25.0	7.8	2770					
	2.0 ppth	M	8.1	24.9	7.8	4040					
	3.0 ppth	M	8.1	24.9	7.8	5830					
	Measured by:		MF	MF	MF	MF					
	Recorded by:		MF	MF	MF	MF					
Day 1	Control	M	8.2	24.9	7.7	176	A	8.0	24.5	7.1	176
	0.59 ppth	M	8.2	24.9	7.7	1210	A	8.0	24.4	7.4	1360
	0.89 ppth	M	8.2	24.7	7.6	1915	A	8.0	24.4	7.3	1980
	1.3ppth	M	8.2	24.6	7.7	2670	A	8.0	24.4	7.3	2700
	2.0 ppth	M	8.2	24.3	7.7	3730	A	8.0	24.5	7.1	4010
	3.0 ppth	M	8.2	24.4	7.6	5710	A	8.0	24.5	7.0	5850
	Measured by:		MF	MF	MF	MF	MF	MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF	MF	MF	MF	MF	MF
Day 2	Control	M	8.1	24.6	7.7	173	A	8.2	24.4	7.6	194
	0.59 ppth	M	8.1	24.9	7.7	1210	A	8.1	24.4	7.4	1315
	0.89 ppth	M	8.1	24.8	7.7	1752	A	8.1	24.5	7.4	1897
	1.3ppth	M	8.1	24.7	7.7	2490	A	8.1	24.6	7.3	2750
	2.0 ppth	M	8.1	24.5	7.7	3580	A	8.1	24.6	7.5	3910
	3.0 ppth	M	~~SA~~	—	—	—	A	8.1	24.5	7.6	5840 ~~5850~~ MF New cal #'s
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 3	Control	M	8.2	25.0	7.9	178	A	8.1	24.5	7.7	218
	0.59 ppth	M	8.2	25.0	7.8	1297	A	8.1	24.4	7.6	1345
	0.89 ppth	M	8.2	25.0	7.7	1855	A	8.1	24.4	7.3	1845
	1.3ppth	M	8.2	24.9	7.7	2630	A	8.1	24.4	7.3	2800
	2.0 ppth	M	8.2	24.7	7.6	3770	A	8.1	24.9	7.5	3688
	3.0 ppth	M									
	Measured by:		SA	SA	SA	SA		SA	SA	SA	SA
	Recorded by:		SA	SA	SA	SA		SA	SA	SA	SA

Comments:

M= "Metered" vial, a surrogate vial for parameters

FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia Parameters

Test Day ↓	Conc.	New Sample Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Old Sample Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 4	Control	M	8.2	24.3	7.5	180	A	8.2	24.2	7.6	222
	0.59 ppth	M	8.2	24.4	7.6	1309	A	8.2	24.1	7.6	1425
	0.89 ppth	M	8.2	24.5	7.7	1869	A	8.2	24.2	7.5	1990
	1.3ppth	M	8.2	24.5	7.9	2660	A	8.1	24.4	7.4	2870
	2.0 ppth	M	8.2	24.6	7.9	3840	A	8.1	24.4	7.4	4230
	3.0 ppth	M									
	Measured by:		JD	JD	JD	JD		BA	BA	BA	BA
	Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA
Day 5	Control	M	8.2	24.5	7.6	189	A	8.2	24.5	7.6	186
	0.59 ppth	M	8.2	24.6	7.5	1272	A	8.2	24.6	7.6	1480
	0.89 ppth	M	8.2	24.4	7.6	1814	A	8.2	24.6	7.5	1975
	1.3ppth	M	8.2	24.3	7.6	2610	A	8.1	24.8	7.5	2970
	2.0 ppth	M	8.2	24.1	7.5	3760	A	8.2	24.7	7.6	3920
	3.0 ppth	M	—	—	—	—	—	—	—	—	—
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 6	Control	M					A	8.1	24.4	7.2	189
	0.59 ppth	M					A	8.1	24.9	7.2	1343
	0.89 ppth	M					A	8.1	24.1	7.2	1958
	1.3ppth	M					A	8.1	24.8	7.2	2840
	2.0 ppth	M					A	8.1	24.8	7.2	4190
	3.0 ppth	M					—	—	—	—	—
	Measured by:							BA	BA	BA	BA
	Recorded by:							BA	BA	BA	BA
Day 7	Control	M									
	0.59 ppth	M									
	0.89 ppth	M									
	1.3ppth	M									
	2.0 ppth	M									
	3.0 ppth	M									
	Measured by:										
	Recorded by:										
Day 8	Control	M									
	0.59 ppth	M									
	0.89 ppth	M									
	1.3ppth	M									
	2.0 ppth	M									
	3.0 ppth	M									
	Measured by:										
	Recorded by:										

Test ended at 12 hrs. 24 min.

Replicate M= "Metered" vial, a surrogate vial for parameters

MBL Aquaculture
4569 Samuel Street
Sarasota, Florida 34233
TEL: (800) 889-0384
FAX: (941) 922-3874
EMAIL: sales@mblaquaculture.com
WEB: www.MBLAquaculture.com

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 6/11/07

Shipped to: FDEP

P.O. No: N/A

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	250	6days	OMS070605	25°C	20ppt
	100	4days	MS070607	25°C	20ppt
Menidia beryllina	100	12days	SS070530	25°C	20ppt
Cyprinella leedsi					
Pimephales promelas	500	<24HRS	FM070611-0815	25°C	

Packed by: J —

Shipped Via: Fed Ex

Notes: _____

Thank you for your order.

Appendix H

Habitat Assessment Field Sheets

FDEP-SOP-001/01: Form FD 9000-3 (June 1, 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER: 21020019	DATE (M/D/Y): 6-11-07	TIME: 13:30	RECEIVING BODY OF WATER:
REMARKS: 21020019	COUNTY: Suwannee	LOCATION: Suwannee R upstream of Gall Kirby		FIELD ID/NAME: Control

RIPARIAN ZONE/STREAM FEATURES

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

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

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: 14

List & map dominant Vegetation on back

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

Artificially Impounded ☐ yes

Typical Width (m) Depth (m)/Velocity (m/sec) Transect: 40 m wide

m/s | 1.5 m/s | m/s

m deep | 1.5 m deep | m deep

High Water Mark: 1.5 (m above present water level) + 1.5 (present depth in m) = 36.5 (m above bed)

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

SEDIMENT/SUBSTRATE

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

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

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

Substrate Type	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)	2	5	DN	Sand	70	5	DN
Leaf Packs of Mats				Mud/Muck/Silt	27		
Aquatic Vegetation				Other:			
Rock or Shell Rubble	<1	5	DN	Other:			
Undercut banks/Roots	<1	5	DN	*Draw aerial view sketch of habitats found in 100 m section*			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (umho/cm) Or Salinity (ppt):			Secchi (m):
Top	0.1							0.7
Mid-depth	0.35	24.9	7.52	7.05	347			
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: ~85 sunny

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

SAMPLING TEAM: Kellemeyer/Ali

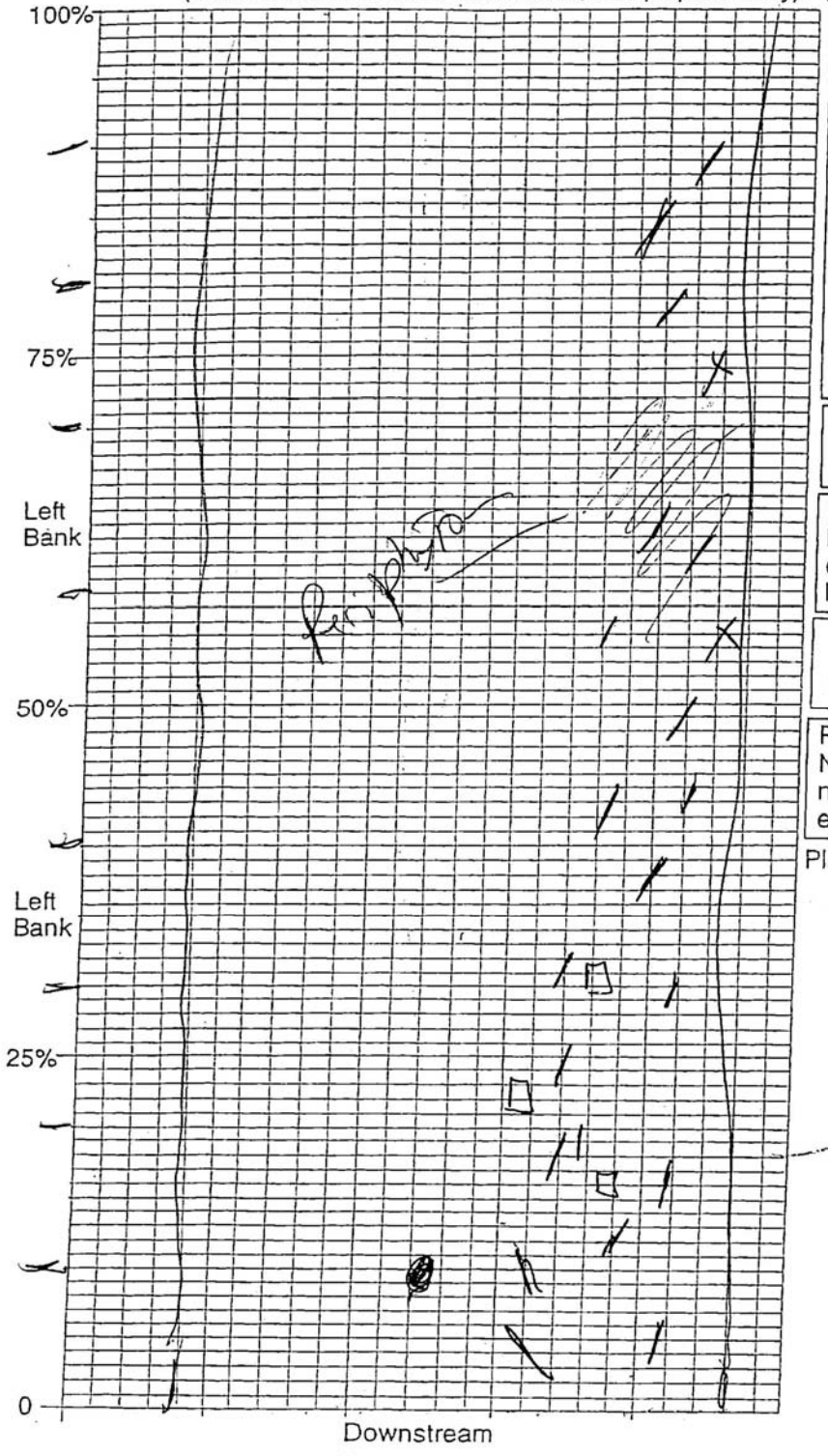
SIGNATURE: [signature]

DATE: 6-11-07

Swamp
Control

Site Map / Habitat Sketch

Length of grid represents 100m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Field ID:

Substrates: Code key, draw proportionate habitat abundan

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

Velocity:
Note where velocity measures were taken.

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

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

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

Plants observed/other notes:

40m Across

20 Snags

9 rocks

3 root

27 x 2 = 54

1.3 %

.013
40,000 | 54,000
40000
14000
140

FDEP-SOP-001/01: Form FD 9000-5 (June 1, 2001)

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

Control

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	RECEIVING BODY OF WATER:
		6-11-07	Gulf

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Suwannee	Suwannee R up from Gulf R.	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 12	Four or more productive habitats present (snags, tree roots/undercut banks, aquatic vegetation, leaf packs (partially decayed), rock). 20 19 18 17 16	Three productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags). 15 14 13 12 11	Two productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less productive habitat. Lack of habitat is obvious, substrates unstable or smothered. 5 4 3 2 1
Substrate Availability 3	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 13	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 1.5 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 14 Primary Score (42) CAS	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** 20	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	Many 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 6 Left Bank 6	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 9 Left Bank 10	Width of native vegetation (least buffered side) greater than 18 m 10 9	Width of native vegetation (least buffered side) 12m 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 9 Left Bank 10 Secondary Score 68	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody machrophytes. 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 ozone 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 streambank 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

TOTAL SCORE 110 CAS

ANALYSIS DATE:	ANALYST:	SIGNATURE:
	Kellemen	

Gold Kist outfall
21021008

TEST

FDEP-SOP-001/01: Form FD 9000-3 (June 1, 2001)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER: 21020072	DATE (M/D/Y): 6-11-02	TIME 1122	RECEIVING BODY OF WATER:
REMARKS: 21020072	COUNTY: Suwannee	LOCATION: Suwannee R Dwn Stream Gold K FT Pad		FIELD ID/NAME:

RIPARIAN ZONE/STREAM FEATURES

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

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

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

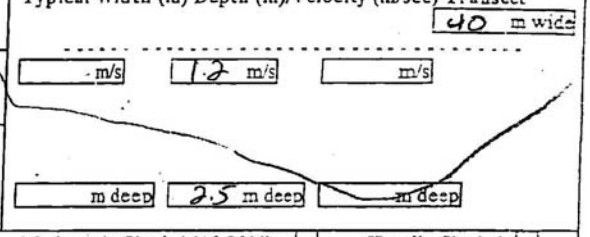
List & map dominant Vegetation on back

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

Artificially Impounded ☐ yes more sinuous

High Water Mark: 15 (m above present water level) + 2.5 (present depth in m) = 17.5 (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 moderate (slight) severe Silt smothering: none (moderate) slight severe Other: ____

Substrate Type	% coverage	# times sampled	method	Substrate Types	% coverage	# times sampled	method
Woody Debris (Snags)	<1	5	DW	Sand	70	5	DW
Leaf Packs of Mats				Mud/Muck/Silt	28		
Aquatic Vegetation				Other:			
Rock or Shell Rubble	<1	5	DW	Other:			
Undercut banks/Roots	<1	5	DW	*Draw aerial view sketch of habitats found in 100 m section*			

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (umho/cm) Or Salinity (ppt):			Secchi (m):
Top								
Mid-depth	0.6	25.4	7.84	7.41	396			1.2
Bottom								

System Type: Stream: 1st-2nd order 5th – 6th order 3rd-4th 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:

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

SAMPLING TEAM: Kellemen / Pki

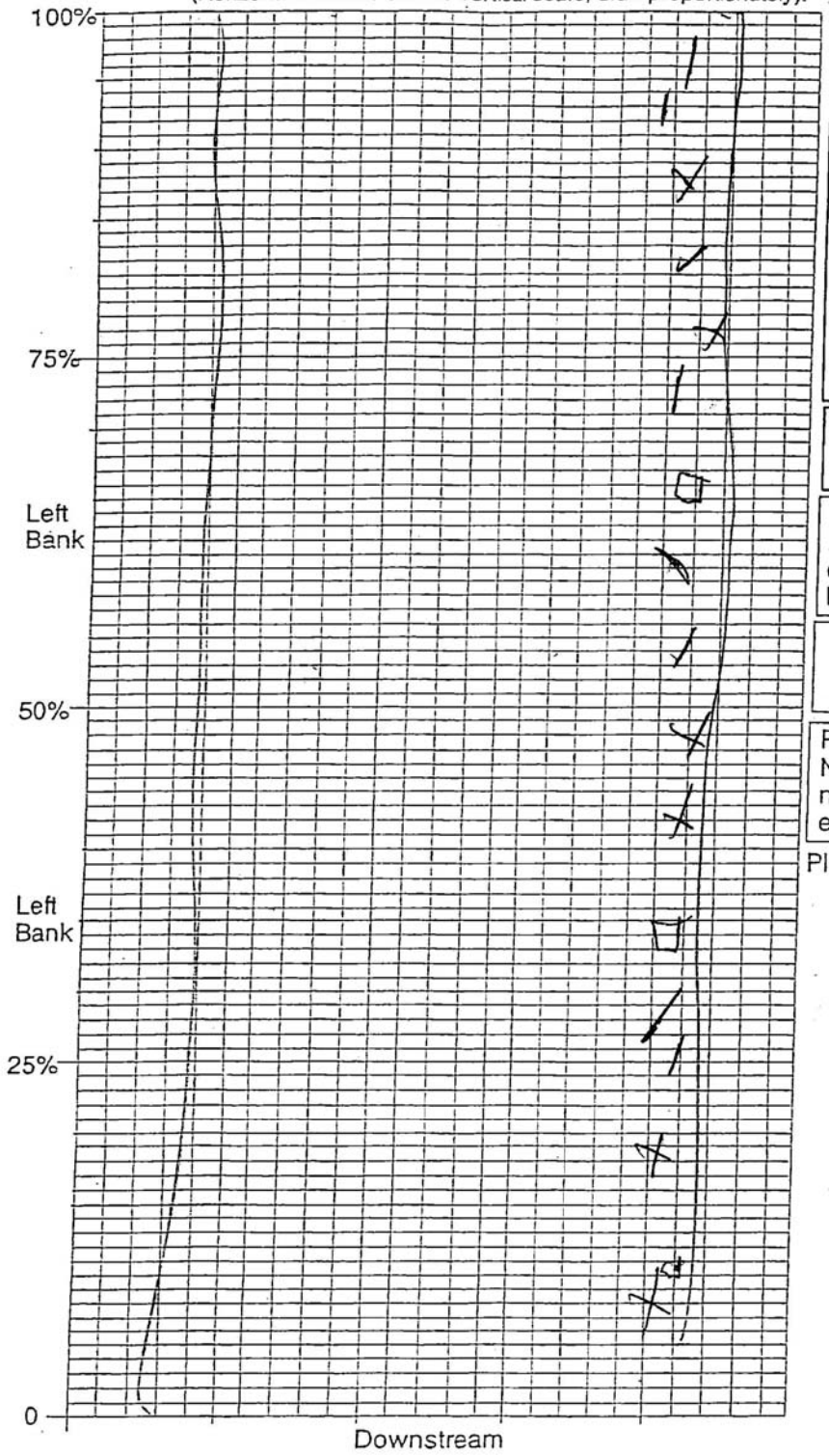
SIGNATURE: [signature]

DATE: 6-11-02

Gold Key Test

Site Map / Habitat Sketch

Length of grid represents 100m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).



Field ID:

Substrates: Code key, draw proportionate habitat abundan

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

Velocity:
Note where velocity measures were taken.

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

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

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

Plants observed/other notes:

mch

8 snags 16
3 rock 6
5 10
30

4000)32 = 8

.08%

Test

FDEP-SOP-001/01: Form FD 9000-5 (June 1, 2001)

STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: / SUBMITTING AGENCY NAME:	STORET STATION NUMBER:	DATE (M/D/Y):	RECEIVING BODY OF WATER:
		6-11-07	Gulf

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	Suwannee	Suwannee - Down Stream Fr. Gulf ST PSD	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 18	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 3	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 12	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 17 Primary Score (41) 43 43	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** 20	No artificial channelization or dredging. Stream with normal, sinuous pattern 20 19 18 17 16	Many 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 6 Left Bank 6	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) 12m 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 12	Over 80% of riparian surfaces consist of native plants, including trees, understory shrubs, or non-woody machrophytes. 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 ozone 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 streambank 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

115 **TOTAL SCORE**

ANALYSIS DATE: (113) 113	ANALYST: Kellemen	SIGNATURE:

Appendix I-1

Taxa list and number of individuals counted for qualitative natural periphyton collections made upstream and downstream of Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) on June 11, 2007.

	Control Site	Test Site
Bacillariophyta		
Bacillariophyta	281	265
Chlorophycota		
Chlorella sp.	2	3
Chlorococcum sp.	-	4
Cosmarium sp.	-	1
Scenedesmus abundans	-	3
Scenedesmus dimorphus	-	3
Scenedesmus quadricauda	2	6
Cyanophycota		
Aphanocapsa sp.	1	1
Cyanobium parvum	4	2
Oscillatoria formosa	2	-
Oscillatoria tenuis	1	1
Planktolyngbya sp.	-	4
Planktothrix sp.	3	3
Schizothrix calcicola	-	1
Synechocystis sp.	4	3

Appendix I-2

Taxa list and number of individuals counted for qualitative periphyton diatom collections made upstream and downstream of Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) on June 11, 2007.

	Control Site	Test Site
Bacillariophyceae		
Achnanthes clevei	5	9
Achnanthes exigua	20	11
Achnanthes lanceolata	13	8
Achnanthes lanceolata apiculata	1	3
Achnanthes rupestoides	2	-
Achnanthes sp.	15	27
Bacillaria paxillifer	-	1
Caloneis sp.	-	1
Cocconeis placentula	9	-
Cymbella sp.	3	1
Diadesmis confervacea	15	20
Gomphonema parvulum	2	-
Gomphonema sp.	2	-
Melosira sp.	-	4
Navicula minima	20	8
Navicula peregrina	1	-
Navicula sp.	3	4
Naviculaceae	-	1
Nitzschia amphibia	3	8
Nitzschia sp.	3	3
Opephora sp.	-	1
Planothidium delicatulum	3	4
Sellaphora pupula	-	1
Undetermined Bacillariophyceae	5	10
Fragilariophyceae		
Fragilariaceae	299	299
Fragilaria pinnata	20	35
Fragilaria sp.	-	40
Synedra fasciculata	-	1

Appendix J-1

Benthic macroinvertebrates collapsed taxa list and density (average number of individuals/m^2 rounded to the nearest individual, n = 3 samples) from Hester-Dendy artificial substrates incubated for 28 days upstream and downstream of the Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) and collected June 11, 2007. See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site	Test Site
Arthropoda		
Arachnida		
Acariformes		
Atractides sp.	17	-
Frontipoda sp.	3	-
Hydrodroma sp.	8	140
Lebertia sp.	8	-
Limnesia sp.	3	-
Sperchon sp.	11	-
Crustacea		
Amphipoda		
Gammarus sp.	-	3
Hyalella azteca	185	3,733
Insecta		
Coleoptera		
Dineutus sp.	603	50
Dubiraphia vittata	13	-
Hydrocanthus sp.	3	-
Microcylloepus pusillus	3	3
Peltodytes sp.	16	-
Stenelmis sp.	140	13
Diptera		
Ablabesmyia mallochi	-	6
Cricotopus bicinctus	48	-
Cricotopus sp. *or Orthocladius* sp.	53	-
Dasyhelea sp.	12	89
Goeldichironomus holoprasinus	-	6
Hemerodromia sp.	405	27
Labrundinia sp.	24	-
Limonia sp.	-	5
Nanocladius sp.	18	-
Nilotanypus fimbriatus	48	-
Palpomyia/bezzia grp.	372	20
Polypedilum flavum	84	-
Pseudochironomus sp.	314	64
Pseudosmittia sp.	-	3
Rheotanytarsus exiguus grp.	4,653	55
Rheotanytarsus pellucidus	529	6
Simulium sp.	11	-
Stelechomyia perpulchra	30	10
Stenochironomus sp.	60	-
Tanytarsus sp. A Epler	3	3
Tanytarsus sp. C Epler	762	51
Tanytarsus sp. Y Epler	-	3
Thienemanniella sp. B Epler	84	-
Tvetenia vitracies	711	-

	Control Site	Test Site
Ephemeroptera		
Attenella attenuata	-	3
Baetis intercalaris	18	-
Caenis sp.	48	-
Callibaetis floridanus	-	56
Centroptilum triangulifer	3	-
Maccaffertium exiguum	259	-
Maccaffertium sp.	-	5
Plauditus sp.	6	-
Procloeon rubropictum	-	4
Procloeon sp.	-	4
Pseudocloeon sp.	228	4
Stenacron sp.	-	5
Tricorythodes albilineatus	418	37
Trichoptera		
Cheumatopsyche sp.	400	-
Chimarra sp.	1,486	-
Hydropsyche sp.	131	-
Hydroptila sp.	1,699	51
Mayatrichia ayama	8	4
Neotrichia sp.	16	-
Oxyethira sp.	5	30
Mollusca		
Gastropoda		
Ancylidae	3	3
Elimia sp.	-	3
Floridobia sp.	-	6
Haitia sp.	19	-
Hydrobiidae	3	-
Micromenetus sp.	13	6
Physidae	-	86
Viviparus georgianus	-	6

Appendix J-2

Benthic macroinvertebrates taxa list and counts (number of individuals counted) collected from Hester-Dendy artificial substrates (n= 3 samples) incubated upstream and downstream of the Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) for 28 days and collected June 11, 2007.

	Control Site	Test Site
Arthropoda		
Arachnida		
Acariformes		
Atractides sp.	6	-
Frontipoda sp.	1	-
Hydrodroma sp.	3	53
Lebertia sp.	3	-
Limnesia sp.	1	-
Sperchon sp.	4	-
Unidentified Acariformes	1	-
Crustacea		
Amphipoda		
Gammarus sp.	-	1
Hyalella azteca	68	1411
Unidentified Amphipoda	2	-
Insecta		
Coleoptera		
Dineutus sp.	228	18
Dubiraphia vittata	5	-
Gyrinidae	-	1
Hydrocanthus sp.	1	-
Microcylloepus pusillus	1	1
Peltodytes sp.	6	-
Stenelmis sp.	53	5
Diptera		
Ablabesmyia mallochi	-	2
Ceratopogonidae	49	2
Chironomidae	320	14
Cricotopus bicinctus	6	-
Cricotopus sp.	10	-
Cricotopus sp. or *Orthocladius* sp.	18	-
Dasyhelea sp.	3	32
Goeldichironomus holoprasinus	-	2
Hemerodromia sp.	153	10
Labrundinia sp.	8	-
Limonia sp.	-	2
Nanocladius sp.	6	-
Nilotanypus fimbriatus	6	-
Nilotanypus sp.	10	-
Palpomyia/bezzia grp.	93	7
Polypedilum flavum	28	-
Pseudochironomus sp.	105	20
Pseudosmittia sp.	-	1
Rheotanytarsus exiguus grp.	1558	17
Rheotanytarsus pellucidus	177	2
Simulium sp.	4	-
Stelechomyia perpulchra	10	3
Stenochironomus sp.	20	-

	Control Site	Test Site
Tanytarsus sp. A Epler	1	1
Tanytarsus sp. C Epler	255	16
Tanytarsus sp. Y Epler	-	1
Thienemanniella sp.	12	-
Thienemanniella sp. B Epler	16	-
Tvetenia vitracies	238	-
Ephemeroptera		
Attenella attenuata	-	1
Baetidae	9	6
Baetis intercalaris	6	-
Caenis sp.	18	-
Callibaetis floridanus	-	3
Callibaetis sp.	-	13
Centroptilum triangulifer	1	-
Heptageniidae	11	2
Maccaffertium exiguum	20	-
Maccaffertium sp.	67	1
Plauditus sp.	2	-
Procloeon rubropictum	-	1
Procloeon sp.	-	1
Pseudocloeon sp.	78	1
Stenacron sp.	-	1
Tricorythodes albilineatus	158	14
Trichoptera		
Cheumatopsyche sp.	143	-
Chimarra sp.	559	-
Hydropsyche sp.	47	-
Hydropsychidae	10	-
Hydroptila sp.	637	14
Hydroptilidae	2	-
Mayatrichia ayama	3	1
Neotrichia sp.	6	-
Oxyethira sp.	2	8
Unidentified Trichoptera	7	9
Mollusca		
Gastropoda		
Ancylidae	1	1
Elimia sp.	-	1
Floridobia sp.	-	2
Haitia sp.	3	-
Hydrobiidae	1	-
Micromenetus sp.	5	2
Physidae	4	30
Unidentified Gastropoda	-	3
Viviparus georgianus	-	2

Appendix K-1

Qualitative benthic macroinvertebrate collapsed taxa list and number of individuals counted from 20-discrete-dipnet sweeps upstream and downstream of Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) (June 11, 2007). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site		Test Site	
	Rep 1	Rep 2	Rep 1	Rep 2
Annelida				
Hirudinea				
Glossiphonia sp.	1	-	-	-
Glossiphoniidae	-	2	-	-
Oligochaeta				
Limnodrilus hoffmeisteri	-	-	-	1
Nais communis complex	-	-	2	5
Tubificidae	1	-	2	-
Arthropoda				
Arachnida				
Acariformes				
Albia sp.	-	-	-	1
Arrenurus sp.	-	-	-	2
Frontipoda sp.	1	1	-	-
Hydrodroma sp.	16	17	10	7
Koenikea sp.	-	-	-	1
Lebertia sp.	12	15	6	5
Mideopsis sp.	4	3	7	-
Piona sp.	-	-	1	-
Crustacea				
Amphipoda				
Hyalella azteca	8	9	13	26
Decapoda				
Procambarus sp.	-	1	-	-
Insecta				
Coleoptera				
Berosus sp.	-	-	1	-
Dineutus sp.	-	1	-	-
Stenelmis sp.	10	5	1	-
Diptera				
Ablabesmyia mallochi	1	-	-	-
Cricotopus sp. or *Orthocladius* sp.	1	1	0	0
Dasyhelea sp.	-	-	1	3
Dicrotendipes neomodestus	2	2	-	-
Limonia sp.	-	-	2	-
Nanocladius sp.	-	-	-	1
Palpomyia/bezzia grp.	-	1	1	-
Polypedilum halterale grp.	1	-	-	-
Procladius (holotanypus) sp.	-	-	1	-
Pseudochironomus sp.	34	30	37	24
Rheotanytarsus exiguus grp.	8	2	5	6
Rheotanytarsus pellucidus	-	2	1	8
Stempellina sp. A Epler	3	8	3	1
Stenochironomus sp.	-	-	1	-

Appendix K-1 (continued)

	Control Site		Test Site	
	Rep 1	Rep 2	Rep 1	Rep 2
Tanytarsus sp. A Epler	-	-	-	1
Tanytarsus sp. C Epler	12	5	19	17
Tanytarsus sp. G Epler	-	-	8	3
Tanytarsus sp. L Epler	-	-	1	1
Xenochironomus xenolabis	-	-	1	-
Ephemeroptera				
Baetidae	2	2	-	-
Caenis sp.	1	1	-	1
Callibaetis sp.	-	-	3	2
Maccaffertium sp.	3	1	-	-
Maccaffertium exiguum	-	-	2	-
Procloeon sp.	-	-	1	3
Pseudocloeon sp.	-	-	-	4
Stenacron sp.	-	-	-	1
Tricorythodes albilineatus	11	5	1	4
Heteroptera				
Metrobates hesperius	-	-	1	-
Megaloptera				
Corydalus cornutus	-	1	-	-
Odonata				
Argia sp.	1	-	-	-
Trichoptera				
Cheumatopsyche sp.	2	-	-	-
Hydropsychidae	-	-	1	-
Hydroptila sp.	7	6	-	4
Leptoceridae	1	-	-	-
Neotrichia sp.	-	-	5	-
Mollusca				
Bivalvia				
Corbicula fluminea	-	1	3	2
Sphaeriidae	1	-	1	7
Gastropoda				
Ancylidae	1	-	-	-
Elimia sp.	1	14	7	1
Hydrobiidae	-	-	2	1
Lioplax sp.	-	1	-	-
Lymnaeidae	-	-	1	-
Viviparus georgianus	5	4	2	2

Appendix K-2

Qualitative benthic macroinvertebrate taxa list and number of individuals counted from 20-discrete-dipnet sweeps conducted upstream and downstream of Pilgrim's Pride Processing Plant (formerly known as Gold Kist Inc.) on June 11, 2007.

	Control Site		Test Site	
	Rep 1	Rep 2	Rep 1	Rep 2
Annelida				
Hirudinea				
Glossiphonia sp.	1	-	-	-
Glossiphoniidae	-	2	-	-
Oligochaeta				
Limnodrilus hoffmeisteri	-	-	-	1
Naididae	-	-	-	1
Nais communis complex	-	-	2	4
Tubificidae	1	-	2	-
Arthropoda				
Arachnida				
Acariformes				
Albia sp.	-	-	-	1
Arrenurus sp.	-	-	-	2
Frontipoda sp.	1	1	-	-
Hydrodroma sp.	14	12	10	7
Koenikea sp.	-	-	-	1
Lebertia sp.	11	11	6	5
Mideopsis sp.	4	2	7	-
Piona sp.	-	-	1	-
Unidentified Acariformes	3	10	-	-
Crustacea				
Amphipoda				
Hyalella azteca	8	9	13	26
Decapoda				
Procambarus sp.	-	1	-	-
Insecta				
Coleoptera				
Berosus sp.	-	-	1	-
Dineutus sp.	-	1	-	-
Stenelmis sp.	10	5	1	-
Diptera				
Ablabesmyia mallochi	1	-	-	-
Ceratopogonidae	-	-	-	1
Chironomidae	3	1	3	2
Cricotopus sp. or *Orthocladius* sp.	1	1	-	-
Dasyhelea sp.	-	-	1	2
Dicrotendipes sp.	1	-	-	-
Dicrotendipes neomodestus	1	2	-	-
Limonia sp.	-	-	2	-
Nanocladius sp.	-	-	-	1
Palpomyia/bezzia grp.	-	1	1	-
Polypedilum halterale grp.	1	-	-	-
Procladius (holotanypus) sp.	-	-	1	-
Pseudochironomus sp.	32	29	35	23
Rheotanytarsus exiguus grp.	8	2	5	6
Rheotanytarsus pellucidus	-	2	1	8
Stempellina sp. A Epler	3	8	3	1
Stenochironomus sp.	-	-	1	-

	Control Site		Test Site	
	Rep 1	Rep 2	Rep 1	Rep 2
Tanytarsus sp.	-	-	-	1
Tanytarsus sp. A Epler	-	-	-	1
Tanytarsus sp. C Epler	11	5	18	15
Tanytarsus sp. G Epler	-	-	8	3
Tanytarsus sp. L Epler	-	-	1	1
Xenochironomus xenolabis	-	-	1	-
Ephemeroptera				
Baetidae	2	2	-	3
Caenis sp.	1	1	-	1
Callibaetis sp.	-	-	3	1
Maccaffertium sp.	3	1	1	-
Maccaffertium exiguum	-	-	1	-
Procloeon sp.	-	-	1	2
Pseudocloeon sp.	-	-	-	3
Stenacron sp.	-	-	-	1
Tricorythodes albilineatus	11	5	1	4
Heteroptera				
Metrobates hesperius	-	-	1	-
Megaloptera				
Corydalus cornutus	-	1	-	-
Odonata				
Argia sp.	1	-	-	-
Trichoptera				
Cheumatopsyche sp.	2	-	-	-
Hydropsychidae	-	-	1	-
Hydroptila sp.	7	6	-	3
Hydroptilidae	-	-	1	1
Leptoceridae	1	-	-	-
Neotrichia sp.	-	-	4	-
Mollusca				
Bivalvia				
Corbicula fluminea	-	1	3	2
Sphaeriidae	1	-	1	7
Gastropoda				
Ancylidae	1	-	-	-
Elimia sp.	1	14	7	1
Hydrobiidae	-	-	2	1
Lioplax sp.	-	1	-	-
Lymnaeidae	-	-	1	-
Viviparus georgianus	5	4	2	2

The Bioassay of the Pilgrim's Pride Processing Plant effluent sampled on June 11, 2007, NPDES #FL0001465

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 F L 0 0 0 1 4 6 5 11	12 0 7 0 6 1 1	18 B	19 S	20 2

Remarks

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The Priority Pollutants Analysis for Bioassay of the Pilgrim's Pride Processing Plant effluent sampled onJune 11, 2007, NPDES #FL0001465

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 F L 0 0 0 1 4 6 5 11	12 0 7 0 6 1 1	18 X	19 S	20 2

Remarks

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Biological Analyses of the Pilgrim's Pride Processing Plant effluent sampled on June 11, 2007, NPDES #FL0001465

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

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 F L 0 0 0 1 4 6 5 11	12 0 7 0 6 1 1	18 S	19 S	20 2

Remarks

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