

Effluent Quality Assessment

Pilgrim's Pride Processing Plant

Suwannee County

NPDES #FL0001465

Sampled August 6, 8, and 10, 2012

March 2013

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration

Quality Manual No. 870346G
NELAC Certification No. E31780

CONTENTS

Introduction

Methods

Results and Discussion

Literature Cited

Tables

Table 1	Measured and predicted algal growth potential (AGP)
Table 2	Effluent limits, Class III Freshwater Criteria, chemical data, microbiological data, and qualifiers

Appendices

Appendix A	Chain of Custody
Appendix B	Bioassay Bench Sheets
Appendix C	SRT Bench Sheets and Statistical Analyses
Appendix D	Organism Receipt
Appendix E	Chemical Analyses of Effluent
Appendix F	Facility Summary, Effluent Limits, and Permit Violations Recorded on Discharge Monitoring Report
Appendix G	EPA End Sheet

Pilgrim's Pride Processing Plant, 19470 U.S. Highway 90 W., Live Oak, Suwannee County, Florida, 32064. NPDES #FL0001465. Effluent composite samples for bioassays were collected on August 6, 8, and 10, 2012, and grab samples for biological and chemical analyses for this facility were collected on August 6, 2012.

Introduction

Pilgrim's Pride Processing Plant is a poultry processing plant which treats industrial wastewater and storm water. (See Appendix F for detailed facility information provided by Heather Webber of FDEP Northeast District.)

Methods

Samples were collected from the EFF-1 NPDES sampling point for Outfall D-001 by Sharon Piltz and Eesa Ali (FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.dep.state.fl.us/water/sas/sop/index.htm.

See Appendix A for the completed chain of custody form.

The 7-day chronic definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_05, TA07_09, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.dep.state.fl.us/labs/library/lab_sops.htm.

Samples 1-3 were aerated for 30, 30, and 20 minutes at a rate of approximately 100 bubbles per minute to decrease the dissolved oxygen (DO) from 9.8, 9.7, and 10.9 mg/L to 8.1, 8.0, and 8.0 mg/L, respectively.

Results and Discussion

- **Toxicity Test Results**

  Tests were performed August 7 -14, 2012.

  Ceriodaphnia dubia 7-day chronic definitive bioassay – NOEC: 100%
IC25: > 100%

  Pimephales promelas 7-day chronic definitive bioassay – NOEC: 100%
IC25: > 100%

  The bioassay samples were not chronically toxic to the test organisms.

  See Appendix B for bioassay bench sheets. See Appendix C for results of the last 20 standard reference toxicant (SRT) tests and the bench sheets and statistical analyses of the SRT tests that correspond to these facility tests. See Appendix D for test organism receipts.

- **Algal Growth Potential**

  The effluent Algal Growth Potential (AGP) was 283 A mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Schultz (1987) determined that AGP values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is nitrogen limited.

  See Table 1 for AGP results and qualifiers.

- **Chemistry Results**
  Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory. The total ammonia concentration in the composite sample collected and preserved for chemical analysis was 0.068 mg N/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

  Benzo(g,h,i)perylene (0.25 I µg/L), dibenzo(a,h)anthracene (0.35 I µg/L), and indeno(1,2,3-cd)pyrene (0.33 I µg/L) were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL) which may constitute an exceedance of the Class III Fresh Water Criteria (62-302.530 (56) F.A.C.) but this cannot be determined from a single sample as the limit is for an annual average. Copper, nickel, zinc, total Kjeldahl nitrogen, and Carbonaceous Biochemical Oxygen Demand were detected in the effluent at levels that comply with Class III Fresh Water Quality Criteria (62-302.530, F.A.C.) and/or the facility's permitted limit. Dissolved oxygen, pH, and conductivity were detected in the effluent at levels that complied with water quality criteria and permit limits. Arsenic, selenium, phaeophytin, total suspended solids, and fluoride were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).

  See Table 2 for results of analytes detected in the effluent, corresponding limits, and qualifiers. See Appendix E for a complete list of chemical analyses performed. See Appendix B for bioassay lab equipment.

Conclusion

The effluent samples collected from the EFF-1 NPDES sampling point for this facility on August 6, 8, and 10, 2012, were not chronically toxic to either test species during the 7-day chronic definitive bioassays. The effluent AGP result was greater than the "problem" threshold for fresh receiving waters suggesting that nutrient enrichment may be an issue. The effluent's benzo(g,h,i)perylene (0.25 I µg/L), dibenzo(a,h)anthracene (0.35 I µg/L), and indeno(1,2,3-cd)pyrene (0.33 I µg/L) may constitute an exceedance of the Class III Fresh Water annual average criterion of ≤ 0.031 a µg/L; however, these results were from a single sample, so additional data should be evaluated to determine if the facility has an issue with polycyclic aromatic hydrocarbons. Additional effluent water quality samples collected on August 6, 2012 did not exceed any applicable water quality standards or violate any permit conditions.

Literature Cited

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

Table 1. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble inorganic nitrogen (TSIN) and total nitrogen (TN) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of nitrogen to phosphorus for samples collected from the Pilgrim's Pride Processing Plant on August 6, 2012.

Pilgrim's Pride Processing Plant NPDES# FL0001465					
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	283 A	496.6 ± 99.3	558.6 ± 111.7	1.1	1.1

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

Table 2. Effluent limits, Class III Freshwater Criteria, chemical and microbiological data, and qualifiers for samples collected from the Pilgrim's Pride Processing Plant on August 6, 2012.

Pilgrim's Pride Processing Plant NPDES# FL0001465	Class III Criteria	Effluent Limits	Effluent	
Organic Constituents (µg/L)				
Benzo(g,h,i)perylene	≤ 0.031 a	-	0.25	I
Dibenzo(a,h)anthracene	≤ 0.031 a	-	0.35	I
Indeno(1,2,3-cd)pyrene	≤ 0.031 a	-	0.33	I
Metals (µg/L unless otherwise noted)				
Arsenic	≤ 50	-	0.98	I
Cadmium	≤ 0.6 b	-	0.05	U
Calcium (mg/L)	-	-	51.1	
Chromium-III	≤ 207.5 b	-	0.3	U
Copper	≤ 23.3 b	-	5.77	
Iron	≤ 1,000	-	30	U
Lead	≤ 12.5 b	-	0.2	U
Magnesium (mg/L)	-	-	40	
Nickel	≤ 129.3 b	-	2.14	
Selenium	≤ 5.0	-	0.34	I
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 297.3 b	-	27	
Nutrients (mg/L)				
Ortho-phosphate	-	-	12	
Total Phosphorus	-	Report	13	
Total Ammonia	-	Report	0.068	
Un-ionized Ammonia	≤ 0.02 s	≤ 0.02 s	< 0.02	c
Nitrate and Nitrite	-	Report	13	
Total Kjeldahl Nitrogen	-	≤ 15.0 p	1.7	
Organic Nitrogen	-	-	1.632	c
Total Nitrogen	-	Report	14.7	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0	8.5	
pH (SU)	6.0 - 8.5	6.0 - 8.5	7.2	
Conductivity (µmhos/cm)	≤ 1,275	-	848	
Temperature (°C)	-	Report	29.7	
Salinity	-	Report	≤ 0.38	c
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	0.001	
Chlorophyll *a* (µg/L) - Corrected	-	-	6.1	
Phaeophytin (µg/L)	-	-	0.51	I
Total Suspended Solids (mg/L)	-	≤ 46.2 p	4	I
CBOD, 5 day (mg/L), N - inhibited	-	≤ 24.3 p	2.3	A
Oils and Greases (mg/L)	≤ 5.0	≤ 5.0	0.81	U
Chloride (mg/L)	-	-	130	
Fluoride (mg/L)	≤ 10.0	-	0.046	I
Sulfate (mg/L)	-	-	68	
Hardness (mg $CaCO_3$)	-	-	292.32	c
Microbiology (Number of colony forming units/100ml)				
Fecal Coliforms ¥	≤ 400s #	≤ 200 s	21	B

Value exceeds the Class III Water Quality Criteria or permit limits

"-" Sample/measurement was not collected or limit/criterion does not exist

a - Annual average

b - Value is calculated based on hardness

c - Value is calculated

p - 24 hour flow proportioned composite

s - Single sample

t - Shall not exceed 29 NTUs above background

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

B - Results based on colony counts outside the acceptance range

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

J - Estimated value

L - Actual value is known to be greater than value given

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

¥ - Fecal coliform analysis performed by Colombia Analytical Services - Fl lab

- If 10 or fewer samples are taken within a month, the single sample limit is 400 CFU (62-302.530(6), F.A.C.)

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2012-08-06-12
FYI3 Pilgrim's Pride Sampling Inspection

Requester: Michelle Fish
Field Report Prepared By: E. M.
Collected By: SP/EA
Send Final Report To: Tom Rauth
Sampling Agency: DEP

Customer: NE-DIST
Project ID: FYI3
PMAS: 1143

Lab ID *	Location	Collection (comp begin or grab)	Composite end	Bottle Group(s)**
A	Pilgrims Pride EFF-1 Field ID	☑ Comp ☐ Grab Date 8/15/12 Time 0900 Eastern/Central	Date 8/16/12 Time 0900 Eastern/Central	B
	Matrix (include type e.g. Salt, Fresh, etc): EFFLUENT	Temp (C): 2.5	pH:	Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L):	Storet Station Number:
	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: 0.772 MGD After Weir

Lab ID *	Location	Collection (comp begin or grab)	Composite end	Bottle Group(s)**
A	Pilgrims Pride Eff-1 Field ID	☐ Comp ☑ Grab Date 8/16/12 Time 1120 Eastern/Central	Date Time Eastern/Central	A, B, B2
	Matrix (include type e.g. Salt, Fresh, etc): EFF	Temp (C): 29.74	pH: 7.24	Tot Res Chlorine (mg/L): 0.51	Diss Oxygen (mg/L): 8.48
	Sample Depth ☑ m 0.9 ☐ ft	0.41 ☑ Salinity (PPTh) 845 ☑ Sp Conductance (umho/cm)	NPDES Number:
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: After Weir

Lab ID *	Location	Collection (comp begin or grab)	Composite end	Bottle Group(s)**
C	Field Blank	☐ Comp ☐ Grab Date 8/16/12 Time 1115 Eastern/Central	Date Time Eastern/Central	
	Matrix (include type e.g. Salt, Fresh, etc):	Temp (C):	pH:	Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L):	Storet Station Number:
	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number:
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments:

Lab ID *	Location	Collection (comp begin or grab)	Composite end	Bottle Group(s)**
	Manhole Field ID	☐ Comp ☐ Grab Date 8/16/12 Time 1128 Eastern/Central	Date Time Eastern/Central	
	Matrix (include type e.g. Salt, Fresh, etc): EFF	Temp (C): 29.72	pH: 7.3	Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L): 7.16
	Sample Depth ☑ m 0.15 ☐ ft	0.44 ☑ Salinity (PPTh) 907 ☑ Sp Conductance (umho/cm)	NPDES Number:
	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Comments: Meter only

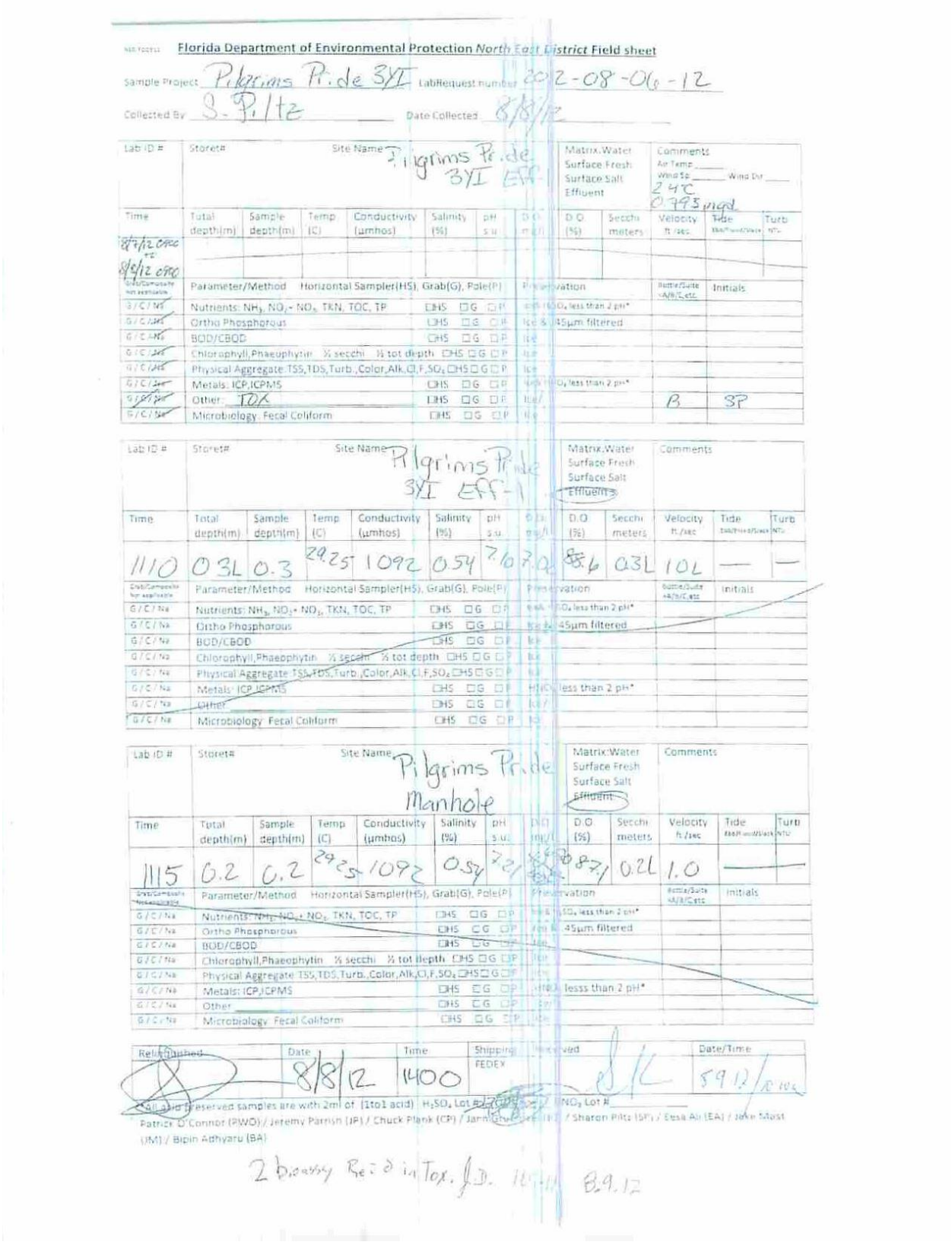
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E. M.	1500 8/16/12	Fedex					SK	8-7-12 10:00am

* Shaded Areas for Lab use only 2 bronssag 8/17/12 10:55 B. Alexander

** Please see reverse side for Bottle Group information

last revised October 1, 2003

Appendix A. (continued)



Florida Department of Environmental Protection North East District Field sheet

Sample Project: Pilgrims Pride 3YI Lab/Request number: 2012-08-06-12

Collected By: S. Pilz Date Collected: 8/8/12

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments
		Pilgrims Pride 3YI Eff-2	Effluent	Air Temp: ____ Wind Sp: ____ Wind Dir: ____ 24C 0.793 mgd

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (%)	pH s.u.	D.O mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide	Turb NTU
8/7/12 0900 to 8/8/12 0900												

Grab/Composite (not applicable)	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G / C / Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	ice & H_2SO_4 less than 2 pH*		
G / C / Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G / C / Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G / C / Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G / C / Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G / C / Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	Ice & H_2SO_4 less than 2 pH*		
G / C / Na	Other: TOX ☐HS ☐G ☐P	Ice/	B	3P
G / C / Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments
		Pilgrims Pride 3YI Eff-1	Effluent	

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (%)	pH s.u.	D.O mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide	Turb NTU
1110	03L	0.3	29.25	1092	0.54	7.10	7.02	86	03L	10L	—	—

Grab/Composite (not applicable)	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G / C / Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	ice & H_2SO_4 less than 2 pH*		
G / C / Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G / C / Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G / C / Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G / C / Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G / C / Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	HNO_3 less than 2 pH*		
G / C / Na	Other ☐HS ☐G ☐P	Ice/		
G / C / Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments
		Pilgrims Pride Manhole	Effluent	

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (%)	pH s.u.	D.O mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide	Turb NTU
1115	0.2	0.2	29.25	1092	0.54	7.21	8.34	87.1	0.2L	1.0	—	—

Grab/Composite (not applicable)	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G / C / Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	ice & H_2SO_4 less than 2 pH*		
G / C / Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G / C / Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G / C / Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G / C / Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G / C / Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	HNO_3 less than 2 pH*		
G / C / Na	Other ☐HS ☐G ☐P	Ice/		
G / C / Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

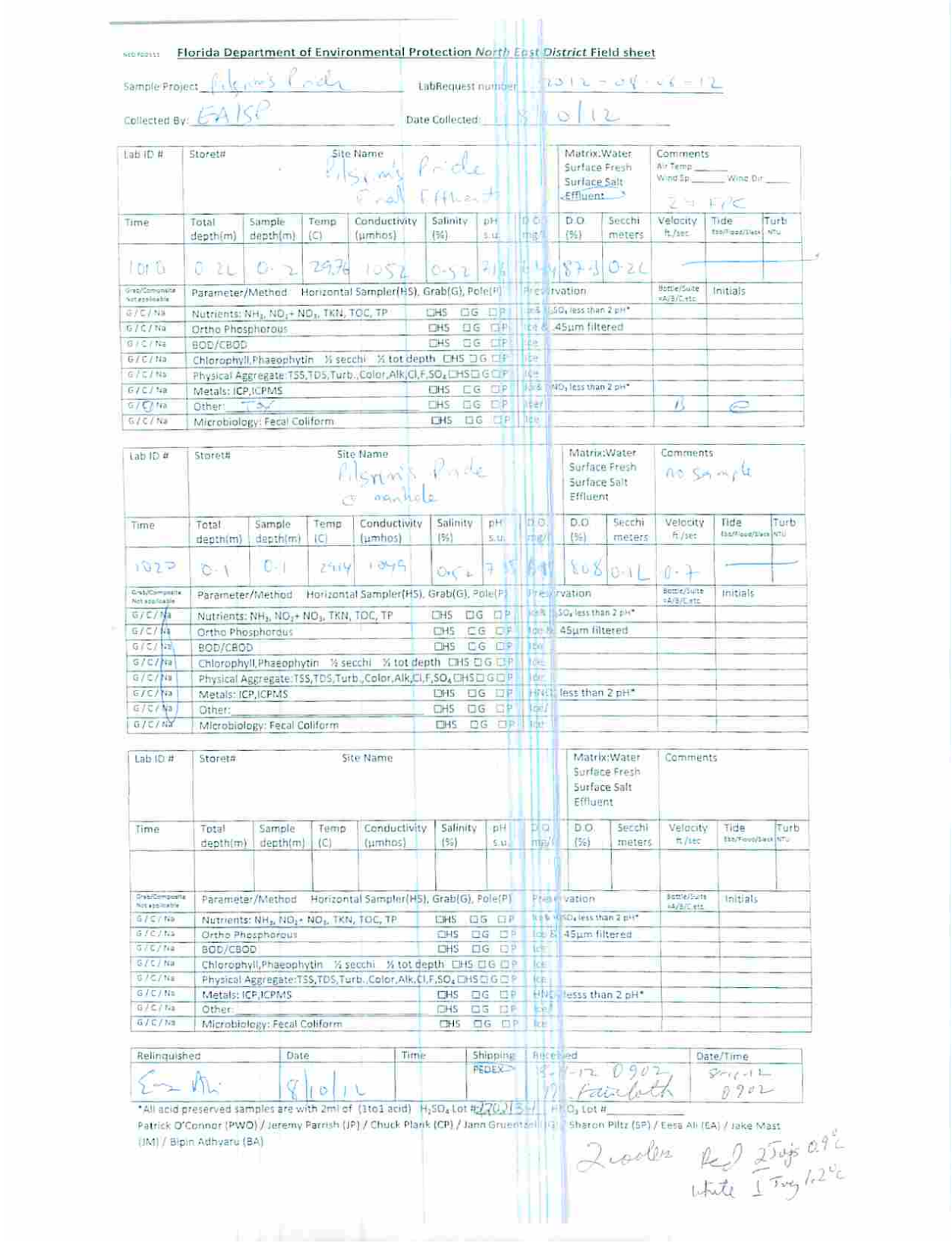
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All acid preserved samples are with 2ml of (1to1 acid) H_2SO_4 Lot #: [illegible] / HNO_3 Lot #: ____

Patrick O'Connor (PWO) / Jeremy Parrish (JP) / Chuck Plank (CP) / Jarrod [illegible] (JP) / Sharon Pitts (SP) / Essa Ali (EA) / John Most (JM) / Bipin Adhyaru (BA)

2 bioassay Rec'd in Tox. J.D. 8.9.12

Appendix A. (continued)



NEO FD0111 **Florida Department of Environmental Protection *North East District* Field sheet**

Sample Project: Pilgrim's Pride — LabRequest number: 2012-08-08-12

Collected By: EA/SP — Date Collected: 8/8/12

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments
		Pilgrim's Pride Final Effluent	Effluent	Air Temp ____ Wind Sp ____ Wind Dir ____ 24 hrs

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (‰)	pH s.u.	D.O. mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide Ebb/Flood/Slack	Turb NTU
1010	0.2L	0.2	29.76	1052	0.52	7.16	6.44	87.3	0.2L			

Grab/Composite Not applicable	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G/C/Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	Ice & H_2SO_4 less than 2 pH*		
G/C/Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G/C/Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G/C/Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G/C/Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G/C/Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	Ice & HNO_3 less than 2 pH*		
G/C/Na	Other: TSS ☐HS ☐G ☐P	Ice	B	C
G/C/Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments
		Pilgrim's Pride c/ manhole		no sample

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (‰)	pH s.u.	D.O. mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide Ebb/Flood/Slack	Turb NTU
1027	0.1	0.1	29.14	1049	0.52	7.15	6.91	80.8	0.1L	0.7		

Grab/Composite Not applicable	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G/C/Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	Ice & H_2SO_4 less than 2 pH*		
G/C/Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G/C/Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G/C/Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G/C/Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G/C/Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	HNO_3 less than 2 pH*		
G/C/Na	Other: ☐HS ☐G ☐P	Ice		
G/C/Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

Lab ID #	Store#	Site Name	Matrix: Water / Surface Fresh / Surface Salt / Effluent	Comments

Time	Total depth(m)	Sample depth(m)	Temp (C)	Conductivity (µmhos)	Salinity (‰)	pH s.u.	D.O. mg/l	D.O (%)	Secchi meters	Velocity ft./sec	Tide Ebb/Flood/Slack	Turb NTU

Grab/Composite Not applicable	Parameter/Method Horizontal Sampler(HS), Grab(G), Pole(P)	Preservation	Bottle/Suite #A/B/C,etc	Initials
G/C/Na	Nutrients: NH_3, NO_2+ NO_3, TKN, TOC, TP ☐HS ☐G ☐P	Ice & H_2SO_4 less than 2 pH*		
G/C/Na	Ortho Phosphorous ☐HS ☐G ☐P	Ice & 45µm filtered		
G/C/Na	BOD/CBOD ☐HS ☐G ☐P	Ice		
G/C/Na	Chlorophyll,Phaeophytin ½ secchi ½ tot depth ☐HS ☐G ☐P	Ice		
G/C/Na	Physical Aggregate:TSS,TDS,Turb.,Color,Alk,Cl,F,SO_4 ☐HS ☐G ☐P	Ice		
G/C/Na	Metals: ICP,ICPMS ☐HS ☐G ☐P	HNO_3 less than 2 pH*		
G/C/Na	Other: ☐HS ☐G ☐P	Ice		
G/C/Na	Microbiology: Fecal Coliform ☐HS ☐G ☐P	Ice		

Relinquished	Date	Time	Shipping	Received	Date/Time
	8/10/12		FEDEX	8-9-12 0902 Fairbeth	8-9-12 0902

*All acid preserved samples are with 2ml of (1to1 acid) H_2SO_4 Lot #270135A HNO_3 Lot #____

Patrick O'Connor (PWO) / Jeremy Parrish (JP) / Chuck Plank (CP) / Jann Gruentzel (JG) / Sharon Piltz (SP) / Eesa Ali (EA) / Jake Mast (JM) / Bipin Adhyaru (BA)

2 coolers Red 2 Trips 0.9°C White 1 Trip 1.2°C

Appendix B. Bench Sheets

FDEP Biology Laboratory - Chronic Definitive Bench Sheet
Ceriodaphnia dubia

Facility: Pilgrims Pride
Address: 19478 U.S. Highway 90 west, Live Oak
County: Suwannee Zip 32064
NPDES Permit #: FL 000 1465
Contact/District: Resa Ali / Northeast

LIMS entry: 8-14-12 MF verified: BA 8.22.12

Diluent/ Batch: ~~20% DMW~~ SDMHW / 8-4-12 Test Days Used: 0 - 5
~~20% DMW~~ / _____ Test Days Used: _____

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

Organism: *Ceriodaphnia dubia*
Organism Batch #: 8-7-12
Organism age : <24 hours
Feeding: Prior to Test and Daily
Food: ☑ YCT ☑ *P. subcapitata*
Food Batch: 5-14-12 4-2-12
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- 2012-08-07-37	1446737	8/6/2012 0900	8/7/2012 1000
Test Day 2	2	TLH-2012-08-09-68	1447363	8/8/2012 0900	8/9/2012 1010
Test Day 4	3	TLH- 2012-08-13-03	1447603	8-10-2012 1010	8-11-2012 0902

Water Quality Parameters	Batch # 8-4-12 ~~20% DMW~~ SDMHW	20% DMW	NA Sample 1	NA Sample 2	NA Sample 3	Other:	Measured By:	Verified by:
Field Total Residual Cl_2 (mg/L):	NA	NA	0.51 *	Not measured	Not measured		EA	MF
Lab Total Residual Cl_2 (mg/L):	<0.03		<0.03	<0.03	<0.03		AP	MF
Alkalinity (mg/L as $CaCO_3$):	71		250	234	221		AP	MF
Hardness (mg/L as $CaCO_3$):	83		271	276	252		AP	MF
Total Ammonia (mg/L as N):	<0.017		<0.017	<0.017	<0.017		MF	AP
Conductivity ~~µmhos~~ mmhos:	316		1147	1080	1065		MF / AP	AP / MF
Salinity (ppth):								

* after water - NOT measured at mark hel, MF 21 MF

Test Incubated in: Incubator #: 2

Loaded by: MF

Temperature Shipped ≤ 6° C (all samples) (yes) no
Holding Time ≤ 36 hours (yes) no
Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min. 24.6 max. 28.7 mean –
Room B246 min. 24.7 max. 25.2 mean –
Test min. 23.9 max. 26.0 mean –

Test Replicates	Loaded from culture vial
1	A4
2	A6
3	A8
4	A9
5	A10
6	A12
7	A20
8	B22
9	C27
10	C28

Results	
Control % CV:	34.5%
Dunnetts PMSD:	40.9%
Reproduction NOEC:	100%
Reproduction LOEC:	>100%
Survival NOEC:	100%
Survival LOEC:	>100%
ICP_{20}:	>100%
ICP_{25}:	>100%

Investigators' signatures
Marshall Faircloth
Adrienne Pennington
Bree Alick
James Daniels
Lisa M. Coles
REVIEWER

Comments:

Test Page 1 of 6

PAGE 43

revised 07/15/08 MF

FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Survival and Reproduction

SOP TA07_05

Facility: Pilgrim Pride

LIMS Sample #: 1446737 for lab sample #1

Start Date: 8/7/12 Time: 1210

End Date: 8-13-12 Time: 1400

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	0	0	0	0	0	0	4	0	0	0	4	10	0,4
	4	0	0	2	2	1	0	0	3	3	3	14	10	1.4
	5	5	0	9	8	9	4	8	7	7	9	66	10	6.6
	6	9	8	10	4	7	6	12	13	11	14	94	10	9.4
	7													
	8													
	Total	14	8	21	14	17	10	24	23	21	26	178	10	17.8

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	0	0	0	0	0	0	3	2	0	2	7	10	0,7
	4	0	6	3	4	2	0	0	0	4	0	13	10	1.3
	5	0	0	8	10	5	4	8	7	9	10	57	10	5.7
	6	8	8	16	11	9	8	11	13	13	11	108	10	10.8
	7													
	8													
	Total	8	8	27	21	16	12	22	22	26	23	185	10	18.5

Pg. 1 of 4

Organisms loaded by: MF

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

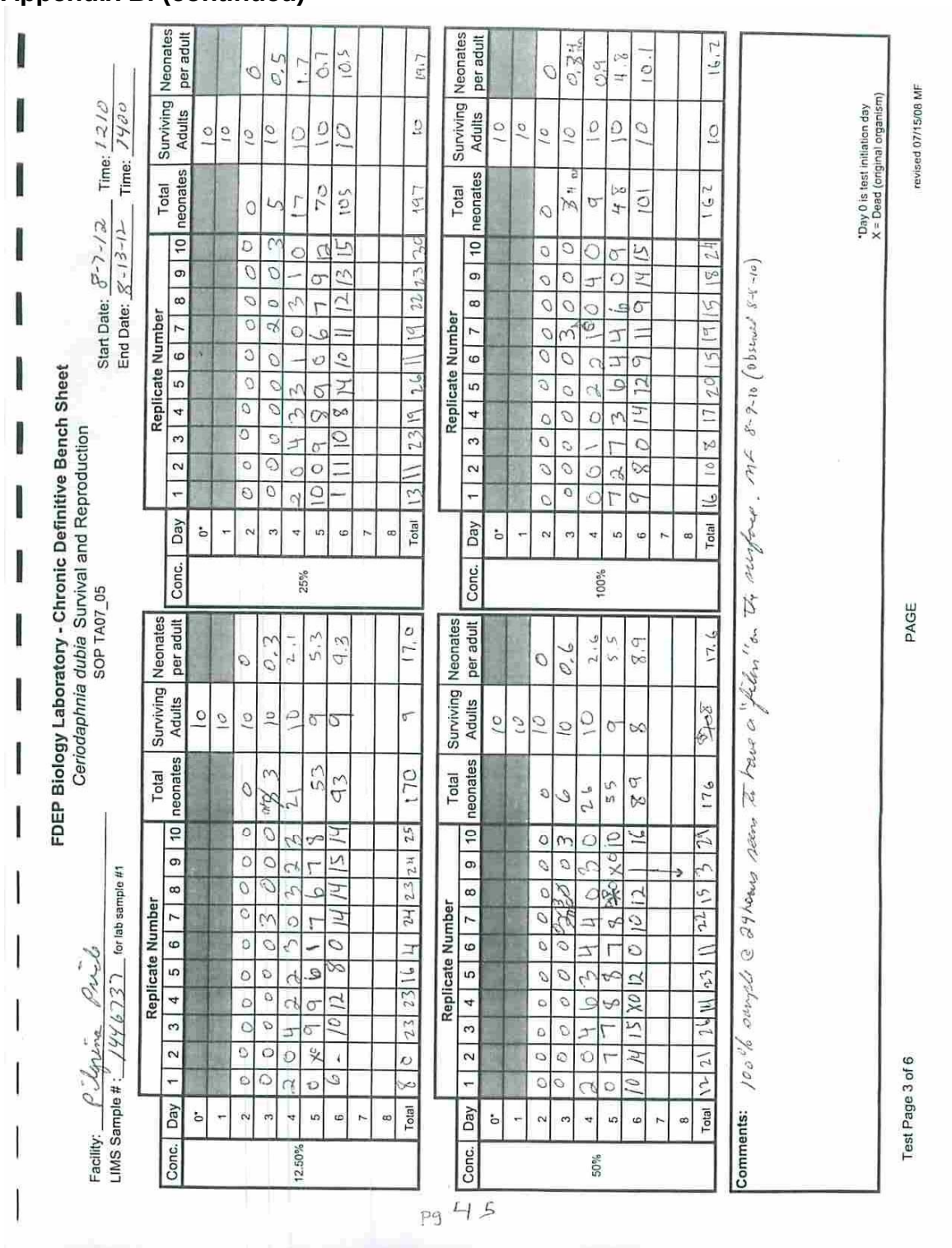
Concentration	Mean neonates /adult	% survival
Control	17.8	100
6.25%	18.5	100
12.50%	17.0	90
25%	19.7	100
50%	17.6	80
100%	16.2	100

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

Comments:

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

Appendix B. (continued)



FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Survival and Reproduction

SOP TA07_05

Facility: Pilgrim Creek

LIMS Sample # : 1446737 for lab sample #1

Start Date: 8-7-12 Time: 1210

End Date: 8-13-12 Time: 1420

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total neonates	Surviving Adults	Neonates per adult
12.50%	0*													
	1													
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	3	0	0	0	3	10	0.3
	4	2	0	4	2	2	3	0	3	2	3	21	10	2.1
	5	0	X	9	9	6	1	7	6	7	8	53	9	5.3
	6	6	-	10	12	8	0	14	14	15	14	93	9	9.3
	7													
	8													
	Total	8	0	23	23	16	4	24	23	24	25	170	9	17.0
25%	0*													
	1													
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	0	2	0	0	2	10	0.2
	4	2	0	0	4	3	3	1	0	3	1	17	10	1.7
	5	10	0	0	9	8	9	5	6	7	9	72	10	7.2
	6	1	1	1	0	8	14	10	11	12	13	105	10	10.5
	7													
	8													
	Total	13	1	1	23	19	26	16	19	22	23	197	10	19.7
50%	0*													
	1													
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	0	3	0	0	3	10	0.3
	4	2	0	4	6	3	4	4	0	3	0	26	10	2.6
	5	0	7	7	5	8	7	8	X	9	10	55	9	5.5
	6	10	14	15	X	0	12	0	12	1	16	89	8	8.9
	7													
	8													
	Total	12	21	26	14	11	23	22	15	3	29	176	8	17.6
100%	0*													
	1													
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	0	0	3	0	0	3	10	0.3
	4	0	0	1	0	0	2	2	1	0	0	9	10	0.9
	5	7	2	7	3	6	4	4	6	0	9	48	10	4.8
	6	9	8	0	14	12	9	11	9	14	15	101	10	10.1
	7													
	8													
	Total	16	10	8	17	20	15	17	19	15	18	162	10	16.2

Comments: 100% control @ 24 hours none to have a "fuzzy" on the neonates. MF 8-9-12 (observed 8-9-12)

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

Test Page 3 of 6

PAGE

revised 07/15/08 MF

pg 45

Appendix B. (continued)

FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Parameters

Facility: Pilgrims Pride SOP TA07_05

LIMS Sample #: 1446737 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 0	sample	Control	M	8.1	24.5	8.3	316					
	1	6.25%	M	8.0	24.7	8.4	372					
	1	12.5%	M	8.0	24.9	8.3	423					
	1	25%	M	8.0	25.0	8.2	524					
	1	50%	M	8.1	25.1	8.2	730					
	1	100%	M	8.2	25.5	8.2	1147					
	Measured by:			MF	MF	MF	MF					
	Recorded by:			MF	MF	MF	MF					
Day 1	sample:	Control	M	8.0	24.1	7.9	309	M	8.0	24.1	8.3	344
	1	6.25%	M	8.0	24.2	7.8	358	M	8.1	24.9	8.4	387
	1	12.5%	M	8.0	24.2	7.8	407	M	8.1	24.6	8.4	427
	1	25%	M	8.0	24.3	7.9	504	M	8.1	24.4	8.3	531
	1	50%	M	8.0	24.5	7.9	694	M	8.1	24.3	8.3	754
	1	100%	M	8.0	24.6	8.0	1098	M	8.0	24.3	8.3	1277
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 2	sample:	Control	M	8.2	24.7	8.1	297	M	8.2	24.2	8.0	350MF
	2	6.25%	M	8.2	25.0	8.1	349	M	8.2	24.8	8.1	384
	2	12.5%	M	8.1	25.1	8.1	401	M	8.2	24.7	8.1	433
	2	25%	M	8.1	25.2	8.1	500	M	8.2	24.7	8.2	549
	2	50%	M	8.1	25.2	8.1	691	M	8.3	24.6	8.2	746
	2	100%	M	8.1	25.4	8.1	1080	M	8.4	24.7	8.0	1160
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 3	sample:	Control	M	8.2	24.2	7.7	291	M	8.2	24.2	7.6	314
	2	6.25%	M	8.1	24.6	7.6	342	M	8.2	24.6	7.6	366
	2	12.5%	M	8.1	24.8	7.5	391	M	8.3	24.9	7.6	408
	2	25%	M	8.0	24.8	7.7	489	M	8.3	24.9	7.6	507
	2	50%	M	7.9	24.9	7.7	683	M	8.3	24.7	7.6	710
	2	100%	M	7.8	24.7	8.3	1071	M	8.3	24.2	7.5	1190
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF

Comments:

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

Test Page 4 of 6 PAGE 46 revised 07/15/08 MF

Appendix B. (continued)

FDEP Biology Laboratory - Chronic Definitive Bench Sheet

Ceriodaphnia dubia Parameters

Facility: Pilgrim's Pride SOP TA07_05

LIMS Sample #: 1446737 for lab sample 1

Circle µmhos-cm or mmhos-cm

Test Day		Concentration	New Sample: Test Replicate	New Sample: pH (su)	New Sample: Temp (°C)	New Sample: DO (mg/L)	New Sample: Conductivity (µmhos/cm) (mmhos/cm)	Old Sample: Test Replicate	Old Sample: pH (su)	Old Sample: Temp (°C)	Old Sample: DO (mg/L)	Old Sample: Conductivity (µmhos/cm) (mmhos/cm)
Day 4 ←	sample:	Control	M	7.8	24.5	8.1	409	M	8.1	24.1	8.0	354
	3	6.25%	M	7.9	24.8	8.1	371	M	8.1	24.6	8.1	364
	3	12.5%	M	8.0	25.0	8.1	416	M	8.1	24.7	8.1	413
	3	25%	M	8.2	24.9	8.0	508	M	8.2	24.6	8.1	520
	3	50%	M	8.3	24.9	8.1	691	M	8.3	24.2	8.0	748
	3	100%	M	8.3	25.1	8.1	1065	M	8.4	23.9	8.1	1181
	Measured by:			AP	AP	AP	AP		AP	AP	AP	AP
	Recorded by:			AP	AP	AP	AP		AP	AP	AP	AP
Day 5	sample:	Control	M	7.9	24.7	7.9	516	M	8.1	24.6	7.9	354
	3	6.25%	M	8.0	25.1	8.0	367	M	8.1	24.8	8.0	381
	3	12.5%	M	8.0	25.1	7.9	408	M	8.1	25.3	8.0	417
	3	25%	M	8.1	25.2	7.9	500	M	8.1	25.4	8.0	513
	3	50%	M	8.2	25.4	8.0	686	M	8.2	25.4	7.9	696
	3	100%	M	8.2	26.0	7.9	1056	M	8.3	24.6	7.8	1177
	Measured by:			AP	AP	AP	AP		AP	AP	AP	AP
	Recorded by:			AP	AP	AP	AP		AP	AP	AP	AP
Day 6	sample:	Control	M					M	8.2	24.5	8.2	343
	3	6.25%	M					M	8.2	24.3	8.2	382
	3	12.5%	M					M	8.2	24.5	8.4	431
	3	25%	M					M	8.2	24.6	8.4	534
	3	50%	M					M	8.2	24.5	8.5	753
	3	100%	M					M	8.3	24.6	8.5	1184
	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:											

Comments:

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

Test Page 5 of 6 PAGE 47 revised 07/15/08 MF

Appendix B. (continued)

Test ID: Pilgrim Pride Dates: August 7-13, 2012

METER / DEVICE	ID	SOP	Parameter	Method	v used
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
YSI DO Probe	5905	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	✓
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity Salinity	SM 2510 B SM 2520 B	✓
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	✓
Traceable Thermometer	#1-SN101686412 #2-SN221295527 #3-SN240116020 #4-SN80361795 #5 SN61990624	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	#5
Hach Pocket Colorimeter II	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	✓
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	✓
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.

Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT–Chronic SRT)

entered by M. Faircloth 8-14-12

V 1.1 9/21/10 MF/jd

48

Appendix B. (continued)

FDEP Biology Laboratory - Chronic Bioassay Bench Sheet

Pimphales promelas or Menidia beryllina

Facility: Pilgrim's Pride Processing Plant
Address: 19470 U.S. Highway 90 west (Live Oak)
County: Suwannee
NPDES Permit #: FL 0001465
Contact/District: Essa ahl / 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: 8.7.12 Time: 1300
End Date: 8-14-12 Time: 1000

Diluent/ Batch:
MHW / 8.6.12 Test Days Used: 0-6
MHW /_____ Test Days Used: _____
ASW /_____ Test Days Used: _____
ASW /_____ Test Days Used: _____

Organism age : <24hrs ~~days~~
Feeding Prior to Test and Daily
Artemia Lot # : 08817
Chamber size : 1000 ml
Test volume : 500 ml

Artemia Batch #		Day 3	114-12
Day 0	111-12	Day 4	115-12
Day 1	112-12	Day 5	116-12
Day 2	113-12	Day 6	117-12

Sample Received	Lab Sample #	LIMS Job #	LIMS Sample #	Collection Date/Time	Received Date/Time
Test Day 0	1	TLH-2012-08-07-37	1446727	~~8.6.12~~ 8.7.12 0900	8.7.12 1000
Test Day 2	2	TLH-2012-08-09-68	1447363	8.8.12 0900	8.9.12 1010
Test Day 4	3	TLH-2012-08-13-03	1447603	8.10.12 1010	8.11.12 0902

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:	0.51*	Not measured		<0.03	<0.03	<0.03	250	234	221	271	276	252
Diluent/Control:				<0.03	—	—	71	—	—	93	—	—
Method:				Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach	Hach
Measured by:	EA	—	—	AP	AP	AP	AP	AP	AP	AP	AP	AP
Verified by:	MF	— MF	— MF	BA	BA	BA	BA	BA	BA	BA	BA	BA

	Conductivity (circle one) (µmhos-cm mmhos-cm)			Ammonia (mg/L)			Salinity (ppth)		
Lab Sample#:	1	2	3	1	2	3	1	2	3
Sample:	1143	1106	1105	<0.017	<0.017	<0.017			
Diluent/Control:	323	339	335	<0.017	—	—			
Method:	Mettler	Mettler	Mettler	Denver	Denver	Denver	Mettler	Mettler	Mettler
Measured by:	JD	AP	BA	MF	MF	MF			
Verified by:	AP	BA	AP	AP	AP	AP			

* after ~~after~~ weir - not measured at Manhole, MF

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min 24.6 max 28.7 mean —
Water bath # ____ min.____ max.____ mean____
Room B246 min ~~25.7~~ 24.7 max 25.2 mean —

Statistics	
Growth NOEC:	100%
Growth LOEC:	>100%
Growth IC_{20}:	>100%
Growth IC_{25}:	>100%
Ctrl % CV:	5.8%
Dunnetts PMSD:	31.6%
Survival NOEC:	100%
Survival LOEC:	>100%

Investigators' signatures
James Daniels
Adrienne Pennington
Marshall Faircloth
Bruce Penk
Liz Miller
REVIEWER

Comments: Lims entry 8-22-2012 MF Verified BA 8.22.12

PAGE 00029

revised 08/24/06 MF/SP

Appendix B. (continued)

Chronic Bioassay Survival Benchsheet

Facility: Pilgrim's Pride

LIMS Sample Number: 1446737
(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	10	10	10	10	9 1D	9	9
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	10	10
	D	10	10	10	10	10	10	10	10
Sample 6.25%	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	10	10	10	10	10	9 1D	9
	D	10	10	10	10	8 2D	7 1D	7	7
Sample 12.5%	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	9 1D	9	9
	C	10	7 3D	7	7	7	7	6 1D	6
	D	10	9 1D	9	9	9	9	9	9
Sample 25 %	A	10	10	10	10	10	10	10	10
	B	10	10	10	10	10	10	10	10
	C	10	6 4D	6	6	6	6	6	6
	D	10	9 1D	9	9	9	9	8 1D	8
Sample 50 %	A	10	10	10	10	10	10	10	10
	B	10	9 1D	9	9	9	8 1D	8	8
	C	10	10	10	10	10	9 1D	9	9
	D	10	7 3D	7	7	7	7	6 1D	6
Sample 100 %	A	10	7 3D	7	7	7	7	7	7
	B	10	10	10	10	10	10	10	~~9 1D~~ 9 1D
	C	10	9 1D	9	9	9	8 1D	8	8
	D	10	10	10	10	10	10	10	10
Sample %	A	10							
	B	10							
	C	10							
	D	10							
Loaded by: BA	Checked by:		JD	JD	AP	MF	BA	JD	JD
Verified by: JS									

Comments:

Page 00030

Appendix B. (continued)

Chronic Bioassay Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_15 parameter pg. 1

Sample Source: Pilgrim's Pride
LIMS Sample #: 1446737 (for Lab sample #1)
Start Date: 8.7.12 End Date: 8-14-12
Start Time: 1300 End Time: 1000

conc = concentration rep = replicate circle umhos or mmhos

Test Day	Conc.	Before Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth	After Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth
Day 0 sample:	Control	A	7.5	24.6	7.9	323							
1	6.25%	A	7.6	24.8	8.1	373							
1	12.5%	A	7.7	25.0	8.2	418							
1	25%	A	7.9	25.3	8.3	531							
1	50%	A	8.0	25.8	8.4	742							
1	100%	A	8.1	25.9	8.5	1143							
1		A											
Measured by:			JD	JD	JD	JD							
Recorded by:			JD	JD	JD	JD							
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 1 sample:	Control	B	7.8	25.9	7.9	366		B	7.6	24.4	8.0	328	
1	6.25%	B	7.8	25.8	7.8	386		B	7.7	24.4	7.9	371	
1	12.5%	B	7.8	25.9	7.6	430		B	7.8	24.4	7.8	424	
1	25%	B	7.9	25.7	7.5	535		B	7.9	24.5	7.7	523	
1	50%	B	8.2	25.6	7.4	729		B	8.0	24.8	7.7	725	
1	100%	B	8.3	25.8	7.5	1128		B	8.1	25.4	7.8	1134	
1		B						B					
Measured by:			AP	JD	AP	AP			AP	JD	AP	AP	
Recorded by:			AP	AP	AP	AP			AP	AP	AP	AP	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 2 sample:	Control	C	7.4	25.4	5.7	335		C	7.4	24.4	7.4	327	
2	6.25%	C	7.5	25.2	5.8	384		C	7.4	24.6	7.1	377	
2	12.5%	C	7.6	25.5	6.0	441		C	7.5	24.6	7.1	423	
2	25%	C	7.6	25.6	6.2	539		C	7.6	24.7	7.1	522	
2	50%	C	7.7	25.7	6.1	746		C	7.8	24.8	7.2	687	
2	100%	C	8.0	25.8	5.7	1135		C	8.0	25.1	7.3	1092	
2		C						C					
Measured by:			JD	JD	JD	JD			JD	JD	JD	JD	
Recorded by:			JD	JD	JD	JD			JD	JD	JD	JD	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 3 sample:	Control	D	7.2	25.5	5.4	3456		D	7.7	24.4	7.2	339	
2	6.25%	D	7.3	25.6	5.0	399		D	7.7	24.5	7.0	385	
2	12.5%	D	7.3	25.5	5.8	443		D	7.8	24.5	7.0	437	
2	25%	D	7.4	25.3	5.9	542		D	7.8	24.5	7.1	529	
2	50%	D	7.5	25.3	6.0	730		D	7.8	24.3	7.1	709	
2	100%	D	8.1	25.3	6.0	1111		D	7.8	24.8	7.1	1106	
2		D						D					
Measured by:			JD	JD	JD	JD			AP	JD	AP	AP	
Recorded by:			JD	JD	JD	JD			AP	JD	AP	AP	

Comments:

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

Page 00031

Appendix B. (continued)

Chronic Bioassay Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_15 parameter pg 2

Sample Source: Pilgrim's Pride — Start Date: 8.7.12 — End Date: 8.14.12

LIMS Sample #: 1446737 (for Lab sample #1) — Start Time: 1300 — End Time: 1000

conc = concentration — rep = replicate

Test Day			Before Renewal							After Renewal						
		Conc.	Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth		Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth	
Day 4	sample:	Control	A	7.5	26.2	6.5	428			A	8.2	24.7	7.5	330		
	3	6.25%	A	7.5	25.6	6.5	399			A	8.1	24.7	7.4	384		
	3	12.5%	A	7.7	25.4	6.9	445			A	8.1	24.7	7.4	430		
	3	25%	A	7.8	25.6	6.9	536			A	8.1	24.7	7.5	522		
	3	50%	A	7.8	25.6	6.3	724			A	8.2	24.7	7.5	706		
	3	100%	A	8.1	25.4	6.3	1105			A	8.3	24.8	7.3	1081		
	3		A							A						
	Measured by:			AP	AP	AP	AP				MF	MF	MF	MF		
	Recorded by:			AP	AP	AP	AP				MF	MF	MF	MF		
			Rep	pH	Temp	DO	Conductivity	Salinity		Rep	pH	Temp	DO	Conductivity	Salinity	
Day 5	sample:	Control	B	7.3	26.0	6.5	349			B	7.4	25.1	7.6	335		
	3	6.25%	B	7.4	26.0	6.4	400			B	7.4	24.9	7.3	386		
	3	12.5%	B	7.5	25.7	6.6	441			B	7.4	24.8	7.1	430		
	3	25%	B	7.6	25.8	6.7	543			B	7.5	24.8	7.2	531		
	3	50%	B	7.7	25.8	6.7	730			B	7.7	24.7	7.2	710		
	3	100%	B	8.1	25.7	6.4	1114			B	8.1	24.7	7.3	1105		
	3		B							B						
	Measured by:			BA	BA	BA	BA				BA	BA	BA	BA		
	Recorded by:			BA	BA	BA	BA				BA	BA	BA	BA		
			Rep	pH	Temp	DO	Conductivity	Salinity		Rep	pH	Temp	DO	Conductivity	Salinity	
Day 6	sample:	Control	C	7.7	25.2	7.2	428			C	7.8	25.2	8.0	332		
	3	6.25%	C	7.8	25.0	7.2	395			C	7.8	25.2	7.9	379		
	3	12.5%	C	7.8	25.3	7.3	441			C	7.8	25.0	7.8	418		
	3	25%	C	7.9	24.9	7.3	541			C	7.8	24.9	7.8	503		
	3	50%	C	8.0	25.4	7.2	721			C	7.9	24.8	7.8	685		
	3	100%	C	8.3	25.6	7.1	1089			C	8.1	24.7	7.8	1047		
	3		C							C						
	Measured by:			AP	JD	AP	AP				JD	JD	JD	JD		
	Recorded by:			AP	JD	AP	AP				JD	JD	JD	JD		
			Rep	pH	Temp	DO	Conductivity	Salinity		Rep	pH	Temp	DO	Conductivity	Salinity	
Day 7	sample:	Control	D	7.3	25.7	7.0	344			D						
	3	6.25%	D	7.4	25.8	6.7	395			D						
	3	12.5%	D	7.4	25.9	6.8	437			D						
	3	25%	D	7.5	25.6	6.6	519			D						
	3	50%	D	7.5	25.3	6.6	696			D						
	3	100%	D	7.9	25.2	6.7	1069			D						
	3									D						
	Measured by:			JD	JD	JD	JD									
	Recorded by:			JD	JD	JD	JD									

Comments:

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

00032

Page

Appendix B. (continued)

Chronic Bioassay Weighing Benchsheet

Facility: Pilgrim's Pride

LIMS Sample Number: 1446737 (for Lab Sample # 1)

P. promelas and *M. beryllina* Bench Sheet
SOP TA06_21

			mean wt = fish wt divided by 10 convert g to mg: move decimal 3 places to right					
Concentration	Replicate	Pan #	Pan wt. g	Pan + Fish g	Fish wt. g	Original # Fish	Mean wt. mg	Avg.
Control	A	1	0.02206	0.026605	0.00459	10	0.459	
	B	2	0.02272	0.02713	0.00441	10	0.441	0.441
	C	3	0.02228	0.02688	0.00460	10	0.460	
	D	4	0.02180	0.02585	0.00405	10	0.405	
sample 6.25 %	A	5	0.02340	0.02800	0.00460	10	0.460	
	B	6	0.02203	0.02648	0.00446	10	0.446	0.403
	C	7	0.02234	0.02638	0.00404	10	0.404	
	D	8	0.02185	0.02486	0.00301	10	0.301	
sample 12.5 %	A	9	0.02119	0.02468	0.00349	10	0.349	
	B	10	0.02187	0.02512	0.00325	10	0.325	
	C	11	0.02189	0.02487	0.00298	10	0.298	0.368
	D	12	0.02181	0.02682	0.00501	10	0.501	
sample 25 %	A	13	0.02173	0.02474	0.00301	10	0.301	
	B	14	0.02174	0.02563	0.00389	10	0.389	
	C	15	0.02284	0.02626	0.00342	10	0.342	0.365
	D	16	0.02224	0.02652	0.00428	10	0.428	
sample 50 %	A	17	0.02118	0.02705	0.00587	10	0.587	
	B	18	0.02211	0.02731	0.005200	10	0.520	
	C	19	0.02201	0.02737	0.00536	10	0.536	0.483
	D	20	0.02234	0.02524	0.00290	10	0.290	
sample 100 %	A	21	0.02283	0.02649	0.00366	10	0.366	
	B	22	0.02191	0.02680	0.00489	10	0.489	
	C	23	0.02234	0.02566	0.00332	10	0.332	0.412
	D	24	0.02186	0.02648	0.00462	10	0.462	
sample %	A					10		
	B					10		
	C					10		
	D					10		
	Weighed by initials:		AP	AP	revised 7/16/08 mf			

Comments:

Balance: Ohaus 250D Ser# 1125481084
S-Weights: BIO-S-Weights-01

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

Page 00023

Appendix B. (continued)

Chronic Bioassay Weighing Benchsheet

Quality Control

Facility: Pilgrim's Pride

LIMS Sample Number: 144737

(for Lab Sample # 1)

P. promelas and M. beryllina Bench sheet

SOPs TA07_09, TA07_14 and TA06_21

Drying Oven ID:	ER034000
Temperature °C:	100
Hours:	8

Tare weighed by: AP

Final weighed by: AP

Tare Weighing Date: 8-13-12 Final Weighing Date: 8-16-12

			Measured Value (g)		S-weight Value (g)
Tare Pan 1 after Pan 5 (g)	0.02208	@ 0.02206	S-weights	@	0.01
Tare Pan 1 after Pan 10 (g)	0.02204	@ 0.02206	at tare	@	0.03
Tare Pan 1 after Pan 15 (g)	0.02207	@ 0.02206	S-weights	@	0.01
Tare Pan 1 after Pan 20 (g)	0.02204	@ 0.02206	at final	@	0.05
Tare Pan 1 after Pan 25 (g)	0.02204	@ 0.02206			
Tare Pan 1 after Pan 30 (g)		@			
Tare Pan 1 after Pan 35 (g)		@			
Tare Pan 1 after Pan 40 (g)		@			
Tare Pan 1 after Pan 45 (g)		@			
Tare Pan 1 after Pan 48 (g)		@			
Final Pan 1 after Pan 5 (g)	0.02663	@ 0.02665			
Final Pan 1 after Pan 10 (g)	0.02665	@ 0.02665			
Final Pan 1 after Pan 15 (g)	0.02664	@ 0.02665			
Final Pan 1 after Pan 20 (g)	0.02667	@ 0.02665			
Final Pan 1 after Pan 25 (g)	0.02665	@ 0.02665			
Final Pan 1 after Pan 30 (g)		@			
Final Pan 1 after Pan 35 (g)		@			
Final Pan 1 after Pan 40 (g)		@			
Final Pan 1 after Pan 45 (g)		@			
Final Pan 1 after Pan 48 (g)		@			

Balance: Ohaus 250D Ser# 1125481084

S-Weights: BIO-S-Weights-01

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

Comments:

revised 7/16/08 MF

Page 00034

Appendix B. (continued)

Test ID: Pisces Pilot Dates: 8.7.12 - 8.14.12

METER / DEVICE	ID	SOP	Parameter	Method	v used
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
YSI DO Probe	5905	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	✓
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity Salinity	SM 2510 B SM 2520 B	✓
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	✓
Traceable Thermometer	#1-SN101686412 #2-SN221295527 #3-SN240116020 #4-SN80361795 (#5) <SN61990624>	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	✓ #5
Hach Pocket Colorimeter II	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	✓
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	✓
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	✓
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	✓

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.

Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT--Chronic SRT)

8.7.12 J.D.

V 1.1 9/21/10 MF/jd

00035

FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia

Diluent/ Batch: ~~20% DMW~~ / SDMHW MF 8-6-12 Test Days Used: 0-7.65 MF

20% DMW / _____ Test Days Used: _____

Toxicant/ Batch: NaCl / Sig/L 8-6-12

SOP # : TA 07_05

EPA-821-R-02-013 Method 1002.0

Organism: *Ceriodaphnia dubia*

Organism Batch #/ Age: 8-14-12 / <24 hr.

Feeding: Prior to Test and Daily

Food: [1] YCT [ ] *P. subcapitata*

Food Batch: 5-14-12 4-2-12

Chamber size: 30 mL

Test Volume: 20 mL

Start Date: 8-14-12 Time: 0930

End Date: 8-20-12 Time: 1430

Batch:	8-6-12				
Water Quality Parameters	~~20% DMW~~ SDMHW	20% DMW	Other	Measured by:	Verified by:
Lab Total Residual Cl_2 (mg/L):	<0.03			AP	BA
Alkalinity (mg/L as $CaCO_3$):	67			AP	BA
Hardness (mg/L as $CaCO_3$):	85			AP	BA
Total Ammonia (mg/L as N):	<0.017			MF	BA
Conductivity ~~µmhos-cm~~ mmhos-cm :	311			MF	BA

Results	
Control % CV:	41.2%
Dunnetts PMSD:	27.6%
Reproduction NOEC:	0.325
Reproduction LOEC:	0.625
Survival NOEC:	1.25
Survival LOEC:	2.5
ICP_{20}:	0.4502
ICP_{25}:	0.4886 MFS

Loaded by: MF

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

Test Replicate	Loaded from culture vial
1	A6
2	A8
3	B4
4	B17
5	B18
6	C20
7	C26
8	C27
9	C28
10	C29

Comments:

Investigators' signatures

Marshall Faircloth

Adrien Pennington

Bill Rudis

James Davis

Liz Dawson

REVIEWER

Test Incubated in: Incubator: # 2

Light Intensity : 50 - 100 ft. candles

Photoperiod : 16 light 8 dark

Temperature Range °C:

Incubator # 2 min. 24.3 max. 26.4 mean —

Room B246 ___ min. 24.7 max. 25.1 mean —

Test min. 24.0 max. 25.8 mean —

000043

Appendix C. (continued)

Ceriodaphnia dubia Survival and Reproduction

Start Date: 8-14-12 Time: 0930 Loaded by: MF
End Date: 8-20-12 Time: 1430 Verified by: AP

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	0	1	0	0	0	2	0	0	0	1	4	10	0.44
	4	3	0	2	4	3	X 0	0	2	3	0	17	9	1.89
	5	9	9	10	9	9	–	8	9	11	5	71	9	7.89
	6	15	8	13	10	0	–	♂(M)	11	10	12	79	9	8.78
	7													
	8													
	Total	27	18	25	23	12	~~2~~	~~0~~	22	24	18	171	9	19
9,312g/L	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	4	0	0	0	2	0	0	0	4	10	10	~~1.0~~ 0.1 BA
	4	1	0	0	1	3	0	4	2	2	0	13	10	1.3
	5	7	5	8	11	8	6	7	7	7	6	72	10	7.2
	6	6	9	10	9	8	8	13	9	10	9	91	10	9.1
	7													
	8													
	Total	14	18	18	21	19	16	24	18	19	19	186	10	18.6
0,625g/L	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	2	4	0	0	0	1	0	0	0	4	11	10	1.1
	4	0	3	0	0	0	0	0	0	0	7	10	10	1.0
	5	4	6	7	3	4	3	7	4	5	0	43	10	4.3
	6	7	0	8	7	0	9	11	0	0	3	45	10	~~4.5~~ 4.5 BA
	7													
	8													
	Total	13	13	15	10	4	13	18	4	5	14	109	10	10,9

Comments: M = Male

00044

Appendix C. (continued)

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
1.25g/L	0												10	
	1												10	
	2	0	0	0	0	0	0	0	0	0	0	0	10	0
	3	0	0	0	0	0	1	0	0	0	2	3	10	0.3
	4	0	0	0	1	1	0	x2	0	1	0	5	9	0.5
	5	0	0	0	0	0	1	–	5	6	4	16	9	1.6
	6	3	5	0	1	0	3	–	1	6	4	23	9	2.3
	7													
	8													
	Total	3	5	0	2	1	5	2	6	13	10	47	9	4.7
2.5g/L	0												10	
	1												10	
	2	X	X	X	X	X	X	0	0	0	0	0	6 dead	
	3							X	X	0	0	0	2	
	4									X0	0		1	
	5										X0			
	6													
	7													
	8													
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0g/L	0												10	
	1	X	X	X	X	X	X	X	X	X	X		0	
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Comments:

Test Page 3 of 6 PAGE 00045 07/15/08 MF

Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Bench Sheet

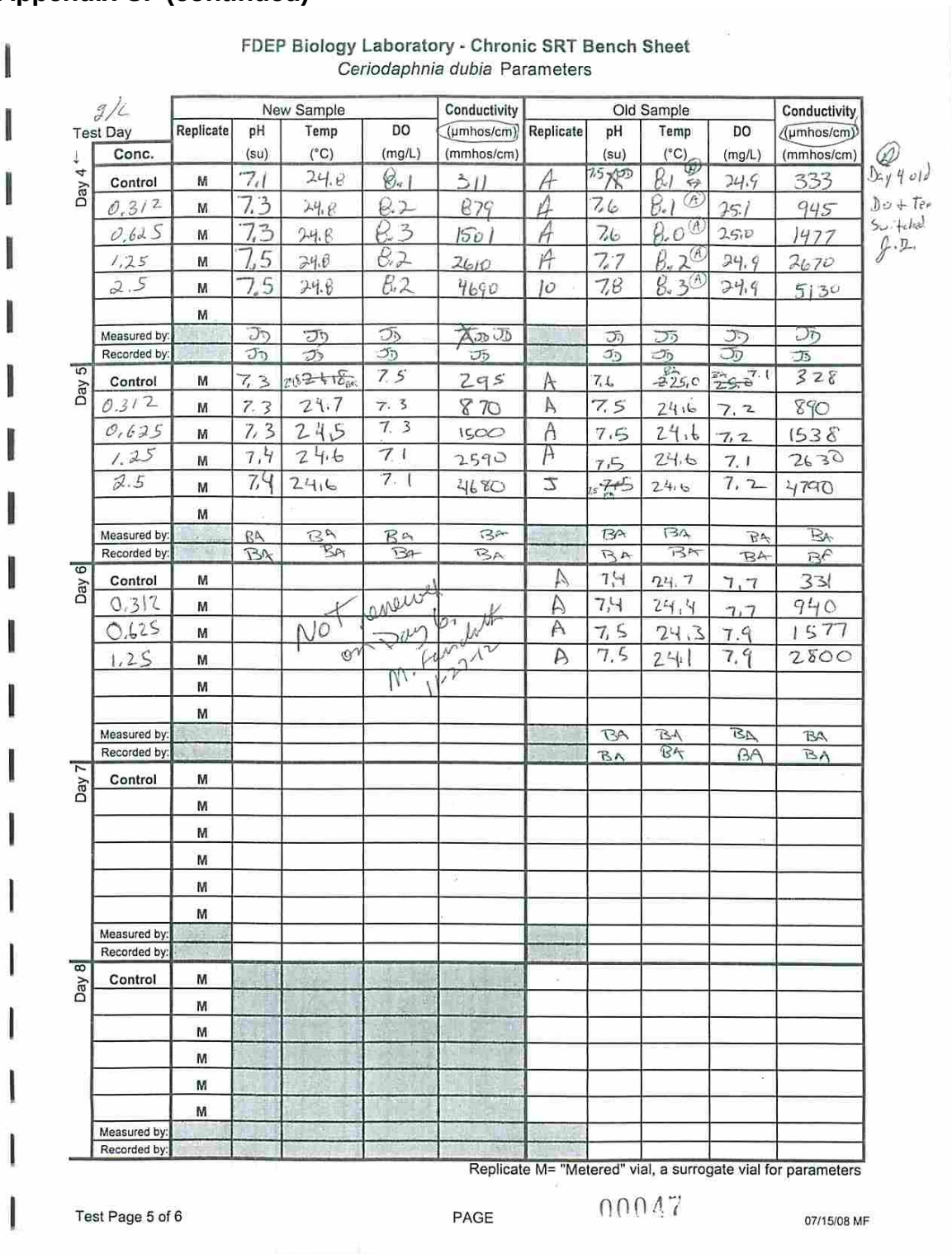
Ceriodaphnia dubia Parameters

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	7.8	25.1	7.7	294					
	0.312	M	7.8	25.1	7.7	900					
	0.625	M	7.8	25.2	7.7	1457					
	1.25	M	7.8	25.4	7.7	2600					
	2.5	M	7.8	25.5	7.8	4750					
	5.0	M	7.8	25.8	7.6	9090					
	Measured by:		MF	MF	MF	MF					
	Recorded by:		MF	MF	MF	MF					
Day 1	Control	M	7.9	24.6	7.8	324	A	7.8	24.1	8.1	340
	0.312	M	7.9	24.7	7.8	924	A	7.8	24.0	8.0	976
	0.625	M	7.8	24.8	7.9	1468	A	7.8	24.1	8.0	1515
	1.25	M	7.9	24.9	7.8	2540	A	7.9	24.2	8.0	2700
	2.5	M	7.9	25.1	7.8	4700	A	7.9	24.2	8.0	4780
	5.0	M	—	—	—	—	A	7.9	24.2	8.0	8970
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 2	Control	M	8.1	24.9	7.9	297	A	8.1	24.2	8.0	314
	0.312	M	8.1	25.2	7.9	888	A	8.0	24.4	8.0	948
	0.625	M	8.1	25.4	7.9	1480	A	8.0	24.7	8.0	1494
	1.25	M	8.1	24.5	7.8	2600	A	8.0	24.3	7.9	2690
	2.5	M	8.1	25.7	7.8	4790	A	8.0	24.0	7.9	5150
		M	—	—	—	—	—	—	—	—	—
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 3	Control	M	8.1	24.9	7.9	290	A	8.0	24.1	7.9	316
	0.312	M	8.1	25.2	8.0	877	A	8.0	24.2	8.1	940
	0.625	M	8.0	25.3	8.0	1438	A	8.0	24.7	8.1	1536
	1.25	M	8.0	25.4	7.9	2570	A	8.0	24.8	8.1	2700
	2.5	M	8.0	25.6	7.9	4690	G[1]	8.0	24.6	8.0	4960
		M									
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF

Comments:

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

Appendix C. (continued)



FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia Parameters

9/L

Test Day ↓	Conc.	Replicate	New Sample pH (su)	New Sample Temp (°C)	New Sample DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Replicate	Old Sample pH (su)	Old Sample Temp (°C)	Old Sample DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 4	Control	M	7.1	24.8	8.1	311	A	7.5 ~~7.7~~	8.1	24.9	333
	0.312	M	7.3	24.8	8.2	879	A	7.6	8.1 (A)	25.1	945
	0.625	M	7.3	24.8	8.3	1501	A	7.6	8.0 (A)	25.0	1477
	1.25	M	7.5	24.8	8.2	2610	A	7.7	8.2 (A)	24.9	2670
	2.5	M	7.5	24.8	8.2	4690	10	7.8	8.3 (A)	24.9	5130
		M									
	Measured by:		JD	JD	JD	~~A~~ JD JD		JD	JD	JD	JD
	Recorded by:		JD	JD	JD	JD		JD	JD	JD	JB
Day 5	Control	M	7.3	~~21.8 24.8~~ BA	7.5	295	A	7.6	~~24.8~~ BA 25.0	~~25.8~~ BA 7.1	328
	0.312	M	7.3	24.7	7.3	870	A	7.5	24.6	7.2	890
	0.625	M	7.3	24.5	7.3	1500	A	7.5	24.6	7.2	1538
	1.25	M	7.4	24.6	7.1	2590	A	7.5	24.6	7.1	2630
	2.5	M	7.4	24.6	7.1	4680	J	~~7.5~~ 7.5 BA	24.6	7.2	4790
		M									
	Measured by:		BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA
Day 6	Control	M					A	7.4	24.7	7.7	331
	0.312	M		NOT measured on Day 6, but M. Farnham 1/22/12			A	7.4	24.4	7.7	940
	0.625	M					A	7.5	24.3	7.9	1577
	1.25	M					A	7.5	24.1	7.9	2800
		M									
		M									
	Measured by:							BA	BA	BA	BA
	Recorded by:							BA	BA	BA	BA
Day 7	Control	M									
		M									
		M									
		M									
		M									
		M									
	Measured by:										
	Recorded by:										
Day 8	Control	M									
		M									
		M									
		M									
		M									
		M									
	Measured by:										
	Recorded by:										

(A) Day 4 old DO + Temp Switched J.D.

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

Test Page 5 of 6 PAGE 000047 07/15/08 MF

Appendix C. (continued)

Test ID: C. dubia SRT Dates: 8-14-12 — 8-20-12

METER / DEVICE	ID	SOP	Parameter	Method	v used
YSI Model 58 Dissolved Oxygen Meter	90H0182 62	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
YSI DO Probe	5905	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	✓
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity Salinity	SM 2510 B SM 2520 B	✓
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	✓
Traceable Thermometer	#1-SN101686412 #2-SN221295527 #3-SN240116020 #4-SN80361795 (#5) SN61990624	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	#5 ✓
Hach Pocket Colorimeter II	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	✓
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	✓
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.

Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT–Chronic SRT)

entered by M. Faircloth 8-21-12

V 1.1 9/21/10 MF/jd

0004S

Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or *Menidia beryllina*

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

Diluent/ Batch: MHW/8.6.12 Test Days Used: 0-6 Start Date: 8.7.12 Time: 1305

Diluent/ Batch: _____ Test Days Used: _____ End Date: 8.14.12 Time: 1005

Toxicant/ Batch # : KCl / 8.6.12 Organism Batch #/ Age: 8.7.12 / <24hrs

Artemia Lot # : 08817

Artemia Batch #	Day 2 11.3-12	Day 5 11.6-12	Chamber size : 1000 ml
Day 0 11.1-12	Day 3 11.4-12	Day 6 11.7-12	Test volume : 500 ml
Day1 11.2-12	Day 4 11.5-12		

Feeding: *P. promelas* 0.15 g wet wt. 2X day 6 hour interval

M. beryllina 0.10 g wet wt days 0-2 0.15g wet wt. days 3-7

Water Quality Parameters	Diluent MHW	Diluent (or other)	Method	Measured by	Verified by
Total Residual Cl_2 (mg/L):	<0.03		HACH	AP	MF
Alkalinity (mg/L as $CaCO_3$):	71		HACH	AP	MF
Hardness (mg/L as $CaCO_3$):	93		HACH	AP	MF
Total Ammonia (mg/L as N):	<0.017		DENVER	MF	AP
Conductivity (mmhos-cm) mmhos-cm:	323		METTLER	JD	AP

Statistics	
Growth NOEC:	0.5g/L
Growth LOEC:	1 g/L
Growth IC_{20}:	0.603g/L
Growth IC_{25}:	0.631g/L
Ctrl % CV:	15.3%
Dunnetts PMSD:	33.2%
Survival NOEC:	0.5g/L
Survival LOEC:	1 g/L

Light Intensity : 50 - 100 ft. candles

Photoperiod : 16 light 8 dark

Test incubated in : Temperature Range °C:

Incubator # 3 min. 24.4 max. 26.3

Water bath # ____ min. _____ max. _____

Room B246 min. 24.7 max. 25.7

P. promelas PMSD Bounds for Growth: Lower 12 Upper 30

M. beryllina PMSD Bounds for Growth: Lower 11 Upper 28

Investigators' signatures

James Daniels

Adrienne Pennington

Marshall Faircloth

Bree Steenbergen

Liz Mellen

REVIEWER

Comments:

PAGE 1

revised 8/6/12 JD

Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or Menidia beryllina Survival

Organism: *P. promelas* *M.beryllina* (circle one) D = dead M = missing

Concentration: µg/L g/L (circle one)

			TEST DAY							
Concentration	Replicate	Chamber	0	1	2	3	4	5	6	7
Control	A	C1	10	10	10	10	10	10	10	10
	B	C2	10	10	10	10	9 1D	9	9	9
	C	C3	10	10	10	10	10	10	10	10
	D	C4	10	10	10	10	10	10	10	10
0.125	A	C5	10	10	10	10	9 1D	9	9	9
	B	C6	10	10	10	10	10	10	10	9 1D
	C	C7	10	10	10	10	10	10	10	10
	D	C8	10	10	10	10	10	10	10	10
0.25	A	C9	10	10	10	10	10	10	10	10
	B	C10	10	10	10	10	10	10	10	10
	C	C11	10	10	10	10	10	10	10	10
	D	C12	10	10	10	10	10	10	10	10
0.5	A	C13	10	10	10	10	10	10	10	10
	B	C14	10	10	10	10	10	10	10	10
	C	C15	10	10	10	10	10	10	10	10
	D	C16	10	10	10	10	10	10	10	10
1.0	A	C17	10	0 1D	—	—	—	—	—	—
	B	C18	10	3 7D	2 1D	0 2D	—	—	—	—
	C	C19	10	2 8D	2	2	2	2	2	2
	D	C20	10	1 9D	1	1	1	1	1	1
2.0	A	C21	10	0 1D						
	B	C22	10	0 1D						
	C	C23	10	M 0D						
	D	C24	10	0 1D						
	A		10							
	B		10							
	C		10							
	D		10							
Loaded by (0 hr): BA			Checked by:	JD	JD	AP	MF	BA	JD	JD
Verified by (0 hr): JD										
Concentrations prepared by:				JD	JD	JD	JD	MF	BA	JD

Comments:

PAGE 2

revised 7/16/08 MF

Appendix C. (continued)

Chronic SRT Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_15 parameter pg. 1

Start Date: 8.7.12 End Date: 8.14.12

Start Time: 1305 End Time: 1605

conc = concentration rep = replicate circle umhos or mmhos

Test Day	Conc.	Before Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos/mmhos	Salinity ppth	After Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos/mmhos	Salinity ppth
Day 0	Control	A	8.0	24.8	8.3	323							
	.125	A	7.9	25.0	7.9	528							
	.25	A	8.0	25.1	7.9	827							
	.5	A	8.0	25.2	8.2	1269							
	1	A	8.1	25.5	8.5	2240							
	2	A	8.1	25.9	8.7	4140							
		A											
	Measured by		JD	JD	JD	JD							
	Recorded by		JD	JD	JD	JD							
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 1	Control	B	7.9	24.9	8.0	326		B	7.9	24.4	7.8	324	
	0.125	B	7.9	24.8	8.0	534		B	8.0	24.4	7.9	561	
	0.25	B	8.0	24.8	7.9	821		B	8.0	24.4	7.8	801	
	0.5	B	8.0	25.0	7.7	1259		B	8.0	24.5	7.8	1220	
	1.0	B	8.0	25.2	7.8	2180		B	8.0	24.7	7.9	2230	
	2.0	B	8.1	25.5	7.8	4000		B					
		B						B					
	Measured by		AP	JD	AP	AP			AP	JD	AP	AP	
	Recorded by		AP	AP	AP	AP			AP	AP	AP	AP	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 2	Control	C	8.0	24.5	6.4	331		C	7.9	24.4	7.5	326	
	0.125	C	7.8	24.4	6.1	569		C	7.9	24.5	7.5	603	
	0.25	C	7.8	24.5	5.9	812		C	7.9	24.5	7.3	798	
	0.5	C	7.8	24.3	6.1	1230		C	7.9	24.7	7.3	1278	
	1.0	C	7.9	24.6	7.1	2227		C	8.0	24.8	7.8	2150	
		C						C					
		C						C					
	Measured by		JD	JD	JD	JD			JD	JD	JD	JD	
	Recorded by		JD	JD	JD	JD			JD	JD	JD	JD	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 3	Control	D	7.8	24.6	6.1	340		D	7.9	24.5	7.4	326	
	.125	D	7.8	25.2	5.8	636		D	7.9	24.5	7.4	598	
	.25	D	7.8	24.6	5.5	818		D	7.9	24.5	7.2	812	
	.5	D	7.8	24.4	5.8	1306		D	7.9	24.6	7.2	1273	
	1	D	7.9	24.3	7.2	2160		D	8.0	24.7	7.2	2160	
		D						D					
		D						D					
	Measured by		JD	JD	JD	JD			AP	JD	AP	AP	
	Recorded by		JD	JD	JD	JD			AP	JD	AP	AP	

Comments:

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

Page 3

Appendix C. (continued)

Chronic SRT Parameters Benchsheet

P. promelas and M. beryllina SOP TA07_09 and TA-07_15 (parameter pg. 2)

Start Date: 8.7.12 End Date: 8.14.12

Start Time: 1305 End Time: 1005

conc = concentration rep = replicate

Test Day	Conc.	Before Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth	After Renewal: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Conductivity umhos mmhos	Salinity ppth
Day 4	Control	A	7.8	24.8	7.1	352		A	8.2	24.6	7.6	334	
	0.125	A	7.8	24.7	6.7	625		A	8.2	24.7	7.3	596	
	0.25	A	7.8	24.9	6.6	846		A	8.1	24.8	7.5	818	
	0.5	A	7.8	25.1	6.9	1253		A	8.2	24.9	7.7	1270	
	1.0	C~~A~~	7.9	25.0	7.1	2180		A	8.2	24.8	7.7	2160	
		A						A					
		A						A					
	Measured by		AP	AP	AP	AP			MF	MF	MF	MF	
	Recorded by		AP	AP	AP	AP			MF	MF	MF	MF	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 5	Control	B	7.9	25.2	6.2	363		B	7.9	24.2	7.3	342	
	0.125	B	7.8	24.7	6.3	612		B	7.9	24.5	7.1	609	
	0.25	B	7.8	24.7	6.4	849		B	8.0	24.3	7.0	855	
	0.5	B	7.9	25.1	6.5	1074		B	8.0	24.2	7.1	1281	
	1.0	C~~B~~	7.9	24.8	6.6	2210		B	8.0	24.2	7.2	2190	
		B						B					
		B						B					
	Measured by		BA	BA	BA	BA			BA	BA	BA	BA	
	Recorded by		BA	BA	BA	BA			BA	BA	BA	BA	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 6	Control	C	7.9	24.2	7.3	344		C	7.7	24.6	7.6	310	
	0.125	C	7.9	24.8	7.4	607		C	7.7	24.5	7.6	534	
	0.25	C	8.0	24.5	7.2	844		C	7.7	24.5	7.6	756	
	0.5	C	7.9	24.5	7.3	1272		C	7.8	24.5	7.7	1255	
	1.0	C	7.9	24.6	7.3	2190		C	7.8	24.6	7.6	2130	
		C						C					
		C						C					
	Measured by		AP	JD	AP	AP			JD	JD	JD	JD	
	Recorded by		AP	JD	AP	AP			JD	JD	JD	JD	
		Rep	pH	Temp	DO	Conductivity	Salinity	Rep	pH	Temp	DO	Conductivity	Salinity
Day 7	Control	D	7.9	25.9	6.4	339		D					
	.125	D	7.8	24.9	6.0	547		D					
	.25	D	7.8	24.8	6.5	779		D					
	.5	D	7.8	24.9	6.7	1246		D					
	1	D	7.9	25.0	6.8	2180		D					
		D						D					
		D						D					
	Measured by		JD	JD	JD	JD							
	Recorded by		JD	JD	JD	JD							

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

Page 4

Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or *Menidia beryllina* Weights

SOP TA06_21

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

Concentration: (µg/L) g/L (circle one)

mean wt = fish wt divided by 10

convert g to mg: move decimal 3 places to right

Concentration	Replicate	Pan #	Pan wt. (g)	Pan + Fish (g)	Fish wt. (g)	Original # of fish	Mean wt. (mg)	Avg
Control	A	25	0.02167	0.02590	0.00423	10	0.423	
	B	26	0.02289	0.02800	0.00511	10	0.511	0.498
	C	27	0.02222	0.02821	0.00599	10	0.599	
	D	28	0.02252	0.02711	0.00459	10	0.459	
0.125	A	29	0.02224	0.02578	0.00354	10	0.354	
	B	30	0.02123	0.02605	0.00482	10	0.482	0.48
	C	31	0.02188	0.02720	0.00532	10	0.532	
	D	32	0.02197	0.02777	0.00580	10	0.580	
0.25	A	33	0.02170	0.02696	0.00526	10	0.526	
	B	34	0.02204	0.02709	0.00505	10	0.505	0.473
	C	35	0.02148	0.02612	0.00464	10	0.464	
	D	36	0.02236	0.02633	0.00397	10	0.397	
0.5	A	37	0.02138	0.02580	0.00442	10	0.442	
	B	38	0.02209	0.02721	0.00512	10	0.512	
	C	39	0.02187	0.02623	0.00436	10	0.436	0.437
	D	40	0.02177	0.02535	0.00358	10	0.358	
1.0	A	—	—	—	—	10	—	
	B	—	—	—	—	10	—	
	C	41	0.02203	0.02320	0.00117	10	0.117	0.044
	D	42	0.02221	0.02280	0.00059	10	0.059	
	A					10		
	B					10		
	C					10		
	D					10		
	A					10		
	B					10		
	C					10		
	D					10		
		Weighed by:	AP	AP				

Comments:

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

PAGE 5

revised 8/24/06 MF/SP

Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or *Menidia beryllina* QC

SOPs TA07_09, TA07_14 and TA06_21

all weights in grams

Empty Pan Weights Date: 8-13-12 Weighed by: AP

	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	0.02166	@ AP 0.02167
after Pan 10	0.02168	@ 0.02167
after Pan 15	0.02166	@ 0.02167
after Pan 20	0.02167	@ 0.02167
after Pan 25		@
after Pan 30		@
after Pan 35		@
after Pan 40		@
after Pan 45		@
after Pan 48		@

	Measured Value	S-weight Value
S-weights	0.00999	@ 0.01
	0.03003	@ 0.03

Balance: Ohaus 250D Ser# 1125481084

S-Weights: BIO-S-Weights-01

Fish + Pan Weights Date: 8-16-12 Weighed by: AP

	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	0.02591	@ 0.02590
after Pan 10	0.02592	@ 0.02590
after Pan 15	0.02587	@ 0.02590
after Pan 20	0.02589	@ 0.02590
after Pan 25		@
after Pan 30		@
after Pan 35		@
after Pan 40		@
after Pan 45		@
after Pan 48		@

	Measured Value	S-weight Value
S-weights	0.01000	@ 0.01
	0.05002	@ 0.05

Drying Oven ID: ER034000

Temperature °C: 100

Drying Hours: 8

Note: Pan number (5, 10, etc.) refers to sequence of weighing as actual Pan #s may differ.

Comments:

PAGE 6

revised 7/16/08 MF

Appendix C. (continued)

Test ID: P. pseudo Chronic SRT Dates: August 7-14-2012

METER / DEVICE	ID	SOP	Parameter	Method	√ used
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
YSI DO Probe	5905	TA06_04	Dissolved Oxygen	SM 4500 O G	✓
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	✓
Metller-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity Salinity	SM 2510 B SM 2520 B	✓
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	✓
Traceable Thermometer	#1-SN101686412 #2-SN221295527 #3-SN240116020 #4-SN80361795 #5 SN61990624	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	✓ #5
Hach Pocket Colorimeter II #1	05110C042029	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Hach Pocket Colorimeter II #2	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	✓
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	✓
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	✓
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	✓
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	✓

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.
Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT--Chronic SRT)

Entered By: 8-21-12 AP

V 1.2 2/20/11 MF/jd

MF

~~Test Page 8 of 8~~ PAGE 7

Appendix C. (continued)

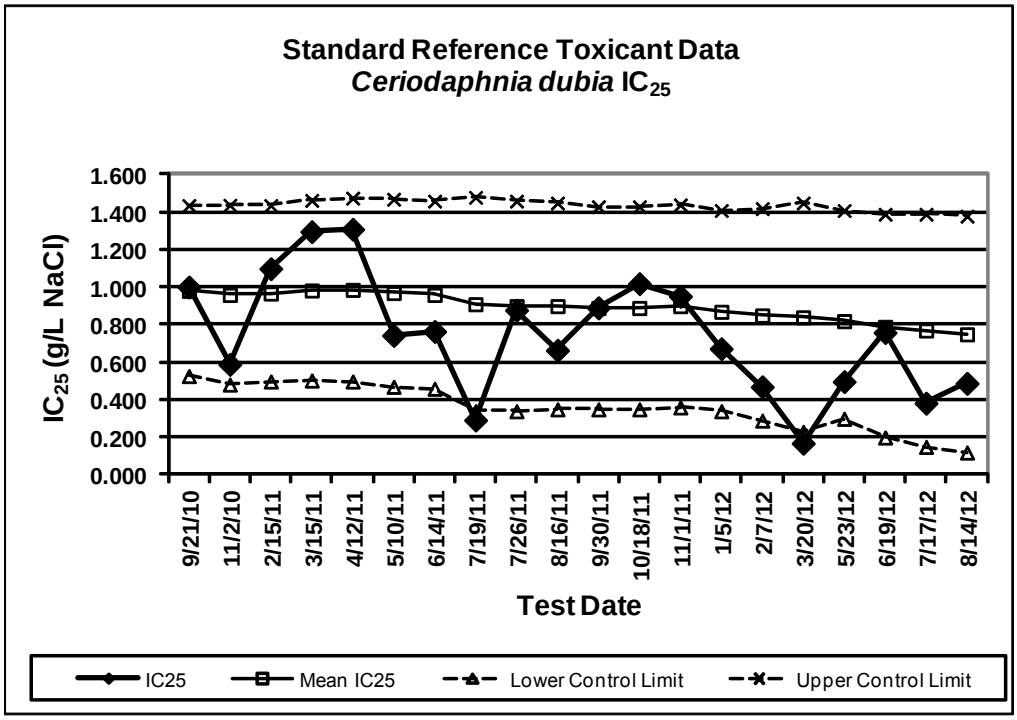
Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	IC25	Mean IC25	Std Dev	Lower Control Limit	Upper Control Limit
9/21/10	1.002	0.98	0.23	0.53	1.44
11/2/10	0.590	0.96	0.24	0.48	1.44
2/15/11	1.100	0.97	0.23	0.50	1.44
3/15/11	1.297	0.98	0.24	0.50	1.46
4/12/11	1.310	0.99	0.24	0.50	1.48
5/10/11	0.744	0.97	0.25	0.47	1.47
6/14/11	0.765	0.96	0.25	0.46	1.46
7/19/11	0.293	0.91	0.28	0.34	1.48
7/26/11	0.879	0.90	0.28	0.34	1.46
8/16/11	0.665	0.90	0.27	0.35	1.45
9/30/11	0.891	0.89	0.27	0.35	1.43
10/18/11	1.020	0.89	0.27	0.35	1.43
11/1/11	0.953	0.90	0.27	0.36	1.44
1/5/12	0.674	0.87	0.27	0.34	1.41
2/7/12	0.470	0.85	0.28	0.29	1.42
3/20/12	0.169	0.84	0.31	0.23	1.45
5/23/12	0.498	0.82	0.32	0.30	1.41
6/19/12	0.760	0.79	0.30	0.20	1.39
7/17/12	0.383	0.77	0.31	0.15	1.39
8/14/12	0.489	0.75	0.31	0.12	1.38

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

EPA 75th Percentile %CV for Reproduction **45%**
Last 20 - Lab %CV Reproduction 42.0%

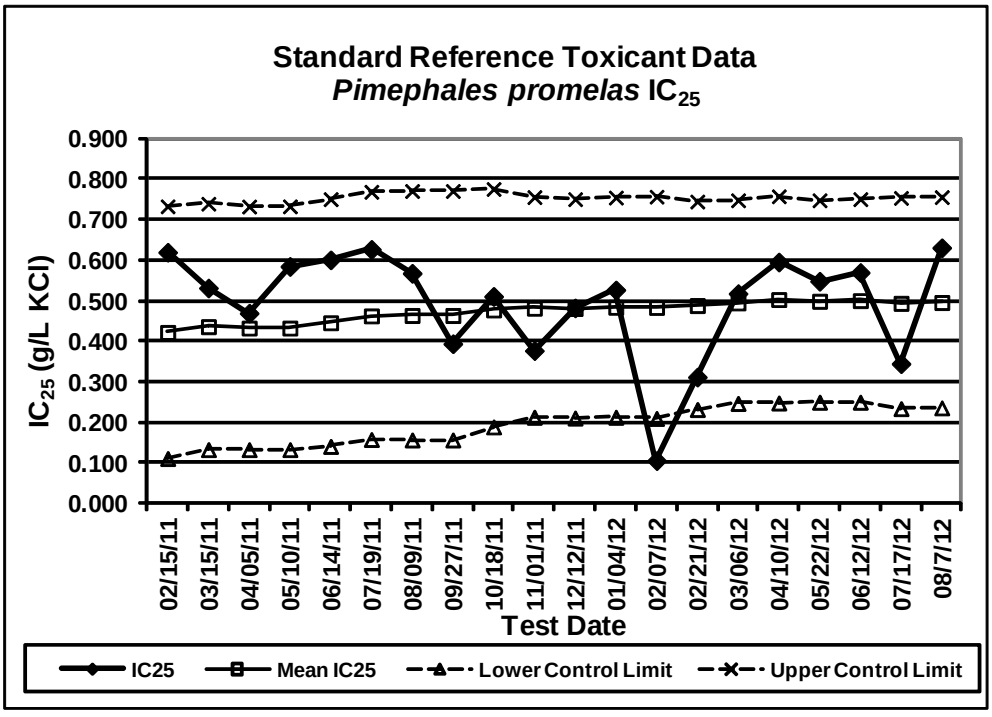


Appendix C. (continued)

Florida Department of Environmental Protection
Bureau of Laboratories
Standard Reference Toxicant (SRT) Test Data - 7-Day Chronic Toxicity
Pimephales promelas (fathead minnow) - Potassium Chloride (KCl)

Date	IC25	Mean IC25	Std Dev	Lower Control Limit	Upper Control Limit
02/15/11	0.620	0.422	0.16	0.111	0.733
03/15/11	0.532	0.436	0.15	0.133	0.740
04/05/11	0.470	0.433	0.15	0.133	0.733
05/10/11	0.585	0.433	0.15	0.133	0.733
06/14/11	0.601	0.446	0.15	0.141	0.751
07/19/11	0.627	0.463	0.15	0.158	0.769
08/09/11	0.568	0.464	0.15	0.157	0.771
09/27/11	0.394	0.464	0.15	0.157	0.771
10/18/11	0.511	0.478	0.14	0.189	0.776
11/01/11	0.377	0.482	0.14	0.213	0.756
12/12/11	0.483	0.481	0.14	0.211	0.751
01/04/12	0.527	0.484	0.14	0.213	0.755
02/07/12	0.106	0.484	0.14	0.210	0.757
02/21/12	0.312	0.489	0.13	0.232	0.745
03/06/12	0.518	0.495	0.13	0.247	0.748
04/10/12	0.596	0.503	0.13	0.248	0.758
05/22/12	0.548	0.499	0.12	0.250	0.748
06/12/12	0.570	0.501	0.12	0.250	0.751
07/17/12	0.345	0.494	0.13	0.234	0.754
08/7/12	0.631	0.496	0.13	0.236	0.756

Means are from the last 20 SRTs.
Lower Confidence Limit = mean - 2 * Std Dev EPA 75th %CV: 38%
Upper Confidence Limit = mean + 2 * Std Dev lab % CV: 26.6%



Appendix D. Test Organism Receipt

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Shipping Date: 8/6/12

Ship to: FDEP

P.O. No:_____

Species	Quantity	Age	Brood/Lot Number	Temp. (°C)	pH (S.U.)	Salinity (‰)
Mysidopsis bahia						
Menidia beryllina						
						Hardness mg/L
Cyprinella leedsi						
Pimephales promelas	550	<24 HRS	FM 120805-K30	25	7.8	80
Ceriodaphnia dubia						
Daphnia magna						
YCT						
P. subcapitata						

Packed by: PM

Shipped Via: Fed Ex

Notes:_____

Thank you for your order.

4569 Samuel Street · Sarasota, FL 34233 · Tel: 941-925-3594 · Fax: 941-922-3874 · Web: www.biologylab.com

Appendix E. Chemical Analyses performed on the effluent from the Pilgrim's Pride Processing Plant Outfall D-001, sampled on August 6, 2012.

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:00	Pilgrim's Pride EFF-1	AGP/LN	Algal Growth Potential	283	A	mg DryWt/L	0.3	0.9
8/6/2012 11:00	Pilgrim's Pride EFF-1	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.51	I	ug/L	0.4	1.2
8/6/2012 9:00	Pilgrim's Pride EFF-1	Chlorophyll/Grain Size/BOD	BOD-5 Day,N-Inhib	2.3	A	mg/L	0.2	2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	6.1		ug/L	0.55	1.7
8/6/2012 9:00	Pilgrim's Pride EFF-1	Toxicology	Bioassay-Chron-Def-FW-Fish, NOEC	100		NOEC		
8/6/2012 9:00	Pilgrim's Pride EFF-1	Toxicology	Bioassay-Chron-Def-FW-C.dubia, IC25	100	L	IC25		
8/6/2012 9:00	Pilgrim's Pride EFF-1	Toxicology	Bioassay-Chron-Def-FW-C.dubia, NOEC	100		NOEC		
8/6/2012 9:00	Pilgrim's Pride EFF-1	Toxicology	Bioassay-Chron-Def-FW-Fish, IC25	100	L	IC25		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Magnesium	40		mg/L	0.04	0.16
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Lead	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Nickel	2.14		ug/L	0.25	1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Cadmium	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Copper	5.77		ug/L	0.5	1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Zinc	27		ug/L	5	20
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Aluminum	5	U	ug/L	5	20
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Chromium	0.3	U	ug/L	0.3	1.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Silver	0.025	U	ug/L	0.025	0.1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Sodium	93.2		mg/L	0.5	2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Arsenic	0.98	I	ug/L	0.25	1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Selenium	0.34	I	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Calcium	51.1		mg/L	0.075	0.3
8/6/2012 11:00	Pilgrim's Pride EFF-1	Metals	Iron	30	U	ug/L	30	120
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Total-P	13		mg P/L	1	10
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Alkalinity	250	A	mg CaCO3/L	0.65	2.5
8/6/2012 11:00	Pilgrim's Pride EFF-1	Nutrients	O-Phosphate-P	12		mg P/L	0.4	1
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Sulfate	68		mg SO4/L	2	5
8/6/2012 11:00	Pilgrim's Pride EFF-1	Nutrients	NO2NO3-N	13		mg N/L	0.2	0.5
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	NO2NO3-N	12		mg N/L	0.2	0.5
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Organic Carbon	8.2	A	mg C/L	1	5
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	TSS	4	I	mg/L	2	10
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Fluoride	0.046	I	mg F/L	0.035	0.1
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Chloride	130		mg Cl/L	2	5
8/6/2012 9:00	Pilgrim's Pride EFF-1	Nutrients	Kjeldahl Nitrogen	1.7		mg N/L	0.4	1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Nutrients	Ammonia-N	0.068		mg N/L	0.01	0.02
8/6/2012 11:00	Pilgrim's Pride EFF-1	Overflow	Oil and Grease	0.81	U	mg/L	0.81	2.9

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Parathion Ethyl	0.1	U	ug/L	0.1	0.4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Hexazinone	0.15	UJ	ug/L	0.15	0.6
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Prometryn	0.1	U	ug/L	0.1	0.4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Fenamiphos	0.15	U	ug/L	0.15	0.6
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Chlorpyrifos Methyl	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Naled	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Phorate	0.025	U	ug/L	0.025	0.1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Fonofos	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Ethoprop	0.025	U	ug/L	0.025	0.1
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Parathion Methyl	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Metolachlor	0.3	U	ug/L	0.3	1.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Malathion	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Azinphos Methyl	0.1	U	ug/L	0.1	0.4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Alachlor	0.3	U	ug/L	0.3	1.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Mevinphos	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Metalaxyl	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Butylate	0.1	U	ug/L	0.1	0.4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,4-Dichlorophenol	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzo(a)anthracene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzo(b)fluoranthene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Fluoranthene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Fluorene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,6-Dinitrotoluene	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Anthracene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	400
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzo(k)fluoranthene	0.2	U	ug/L	0.2	0.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	60
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Dimethyl phthalate	10	U	ug/L	10	40
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Naphthalene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Pentachlorophenol	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Pyrene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,4-Dinitrotoluene	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	4-Chloro-3-methylphenol	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Di-n-octyl phthalate	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Phenanthrene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2-Chlorophenol	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Butyl benzyl phthalate	5	U	ug/L	5	20
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Diethyl phthalate	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.33	I	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	U	ug/L	40	160
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Acenaphthylene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.25	I	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Hexachlorobenzene	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Hexachlorobutadiene	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Isophorone	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2-Nitrophenol	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Chrysene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Di-n-butyl phthalate	5	U	ug/L	5	20
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Hexachlorocyclopentadiene	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Hexachloroethane	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,4-Dinitrophenol	15	U	ug/L	15	60
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Acenaphthene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.35	I	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2,4,6-Trichlorophenol	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	2-Chloronaphthalene	1	U	ug/L	1	4
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	60

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Benzo(a)pyrene	0.2	U	ug/L	0.2	0.8
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3	U	ug/L	3	12
8/6/2012 11:00	Pilgrim's Pride EFF-1	Priority Organic Pollutants	Phenol	1	U	ug/L	1	4
8/6/2012 9:00	Pilgrim's Pride EFF-1	Field Parameter	Temperature	2.8		C		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	Total Residual Chlorine	0.51		mg/L		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	pH	7.24				
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	Specific Conductance	848		umhos/cm		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	Sample Depth	0.4		m		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	Temperature	29.74		C		
8/6/2012 11:00	Pilgrim's Pride EFF-1	Field Parameter	Dissolved Oxygen	8.48		mg/L		
8/6/2012 11:15	FIELD BLANK	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.4	U	ug/L	0.4	1.2
8/6/2012 11:15	FIELD BLANK	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55	U	ug/L	0.55	1.7
8/6/2012 11:15	FIELD BLANK	Metals	Silver	0.025	U	ug/L	0.025	0.1
8/6/2012 11:15	FIELD BLANK	Metals	Calcium	0.075	U	mg/L	0.075	0.3
8/6/2012 11:15	FIELD BLANK	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
8/6/2012 11:15	FIELD BLANK	Metals	Arsenic	0.25	U	ug/L	0.25	1
8/6/2012 11:15	FIELD BLANK	Metals	Copper	0.5	U	ug/L	0.5	1
8/6/2012 11:15	FIELD BLANK	Metals	Lead	0.2	U	ug/L	0.2	0.8
8/6/2012 11:15	FIELD BLANK	Metals	Nickel	0.25	U	ug/L	0.25	1
8/6/2012 11:15	FIELD BLANK	Metals	Selenium	0.2	U	ug/L	0.2	0.8
8/6/2012 11:15	FIELD BLANK	Metals	Sodium	0.5	U	mg/L	0.5	2
8/6/2012 11:15	FIELD BLANK	Metals	Chromium	0.3	U	ug/L	0.3	1.2
8/6/2012 11:15	FIELD BLANK	Metals	Cadmium	0.05	U	ug/L	0.05	0.2
8/6/2012 11:15	FIELD BLANK	Metals	Aluminum	5	U	ug/L	5	20
8/6/2012 11:15	FIELD BLANK	Metals	Zinc	5	U	ug/L	5	20
8/6/2012 11:15	FIELD BLANK	Metals	Iron	30	U	ug/L	30	120
8/6/2012 11:15	FIELD BLANK	Nutrients	Organic Carbon	1	U	mg C/L	1	5
8/6/2012 11:15	FIELD BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
8/6/2012 11:15	FIELD BLANK	Nutrients	Chloride	0.2	U	mg Cl/L	0.2	0.5
8/6/2012 11:15	FIELD BLANK	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
8/6/2012 11:15	FIELD BLANK	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
8/6/2012 11:15	FIELD BLANK	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
8/6/2012 11:15	FIELD BLANK	Nutrients	Sulfate	0.2	U	mg SO4/L	0.2	0.5
8/6/2012 11:15	FIELD BLANK	Nutrients	Total-P	0.004	U	mg P/L	0.004	0.01
8/6/2012 11:15	FIELD BLANK	Nutrients	Fluoride	0.035	U	mg F/L	0.035	0.1
8/6/2012 11:15	FIELD BLANK	Nutrients	Alkalinity	0.65	U	mg CaCO3/L	0.65	2.5
8/6/2012 11:15	FIELD BLANK	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
8/6/2012 11:15	FIELD BLANK	Overflow	Oil and Grease	0.74	U	mg/L	0.74	2.6

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:15	FIELD BLANK	Pesticides	Azinphos Methyl	0.098	U	ug/L	0.098	0.39
8/6/2012 11:15	FIELD BLANK	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.79
8/6/2012 11:15	FIELD BLANK	Pesticides	Chlorpyrifos Methyl	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Metalaxyl	0.2	U	ug/L	0.2	0.79
8/6/2012 11:15	FIELD BLANK	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.59
8/6/2012 11:15	FIELD BLANK	Pesticides	Parathion Ethyl	0.098	U	ug/L	0.098	0.39
8/6/2012 11:15	FIELD BLANK	Pesticides	Ametryn	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Simazine	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Ethion	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Ethoprop	0.025	U	ug/L	0.025	0.098
8/6/2012 11:15	FIELD BLANK	Pesticides	Malathion	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Mevinphos	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Phorate	0.025	U	ug/L	0.025	0.098
8/6/2012 11:15	FIELD BLANK	Pesticides	Diazinon	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Fenamiphos	0.15	U	ug/L	0.15	0.59
8/6/2012 11:15	FIELD BLANK	Pesticides	Parathion Methyl	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Atrazine	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Fonofos	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Hexazinone	0.15	UJ	ug/L	0.15	0.59
8/6/2012 11:15	FIELD BLANK	Pesticides	Metolachlor	0.29	U	ug/L	0.29	1.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Chlorpyrifos Ethyl	0.049	U	ug/L	0.049	0.2
8/6/2012 11:15	FIELD BLANK	Pesticides	Butylate	0.098	U	ug/L	0.098	0.39
8/6/2012 11:15	FIELD BLANK	Pesticides	Naled	0.2	U	ug/L	0.2	0.79
8/6/2012 11:15	FIELD BLANK	Pesticides	Metribuzin	0.098	U	ug/L	0.098	0.39
8/6/2012 11:15	FIELD BLANK	Pesticides	Prometryn	0.098	U	ug/L	0.098	0.39
8/6/2012 11:15	FIELD BLANK	Pesticides	Alachlor	0.29	U	ug/L	0.29	1.2
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrophenol	15	U	ug/L	15	58
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,4-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzidine	97	U	ug/L	97	390
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Pyrene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzo(b)fluoranthene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Dimethyl phthalate	9.7	U	ug/L	9.7	39
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Fluorene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Isophorone	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,4-Dichlorophenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	U	ug/L	39	160
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Acenaphthene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Anthracene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Di-n-butyl phthalate	4.9	U	ug/L	4.9	19
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.8
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Acenaphthylene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Butyl benzyl phthalate	4.9	U	ug/L	4.9	19
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Chrysene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Hexachlorobenzene	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Naphthalene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.8
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Phenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,4-Dimethylphenol	9.7	U	ug/L	9.7	39
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2-Chloronaphthalene	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2-Chlorophenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2-Nitrophenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Phenanthrene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	2,6-Dinitrotoluene	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.8
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzo(k)fluoranthene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	58
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Di-n-octyl phthalate	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.8
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	58
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzo(a)anthracene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Benzo(a)pyrene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Result	Remark	Units	MDL	PQL
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Diethyl phthalate	0.97	U	ug/L	0.97	3.9
8/6/2012 11:15	FIELD BLANK	Priority Organic Pollutants	Fluoranthene	0.19	U	ug/L	0.19	0.78
8/6/2012 11:00	EFF-1	Overflow	Fecal Coliforms-Membrane Filter	21	B	cfu/100 mL	1.6	
8/10/2012 10:10	Pilgrim's Pride Final Effluent	Field Parameter	pH	7.16				
8/10/2012 10:10	Pilgrim's Pride Final Effluent	Field Parameter	Dissolved Oxygen	7.16		mg/L		
8/10/2012 10:10	Pilgrim's Pride Final Effluent	Field Parameter	Specific Conductance	1052		umhos/cm		
8/10/2012 10:10	Pilgrim's Pride Final Effluent	Field Parameter	Temperature	29.76		C		
8/10/2012 10:10	Pilgrim's Pride Final Effluent	Field Parameter	Sample Depth	0.2		m		

Appendix F. Facility Summary, Effluent Limits, and Permit Violations Recorded on Discharge Monitoring Report

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Heather Webber – June 2012	**Contact Number:** 904-256-1622
Facility Name (as it appears on permit): Pilgrim's Pride Processing Plant	**Former Names:** Goldkist
NPDES Permit Number: FL0001465	**Permit Expiration Date:** 05/05/15
Physical Address: 19470 U.S. Highway 90 West, Live Oak, FL 32064	
District: Northeast	**County:** Suwannee
Function of Facility: This facility processes live poultry into fresh and frozen chicken meat products, operates a broiler hatchery to produce chicks for distribution to growers, and processes poultry byproducts into poultry meat, poultry fat and other animal feed products.	
Facility Type: Industrial	**Permitted Capacity (MGD):** 1.5
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 1.22 MGD (May 2011 – April 2012)	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): N/A	
Description of type of Discharge: ☒ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**	

Appendix F. (continued)

Description of Sampling Location(s) - actual permit designation of permitted sampling point(s): FLW-1: Flow meter with totalizer. EFF-1: Effluent sample point. After final treatment but prior to discharge into the receiving water. INF-1: Influent sample point. Shall be representative of untreated wastewater and shall not include any return process wastewater from the treatment system. SWU-1: 0.01 miles upstream of outfall D001. SWD-1: 0.02 miles downstream of outfall D001.
Description of Permitted Outfall(s): D-001: An existing 1.5 MGD monthly average daily flow permitted discharge to Suwannee River, Class III Fresh Waters (WBID# 3422B). The point of discharge is located approximately at latitude 30° 21' 56" N, longitude 83° 11' 30" W.
Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility): Wastewater is generated from poultry processing, byproducts processing, the hatchery, sanitary wastes, water treatment plant filtrate, sanitation, and storm water. The facility produces a monthly average waste stream flow of 1.5 million gallons per day (MGD). Collected wastewater goes into the dissolved air flotation (DAF) unit and then into the 15 million gallon (MG) anaerobic basin. Sanitary wastewater bypasses the DAF and joins the process waste stream entering the anaerobic basin. Treated water then flows into the 0.5 MG anoxic basin, then into the 1.4 MG aeration basin, and then is split into the north and south 0.1 MG clarifiers. Activated sludge is returned to the anoxic basin and waste sludge is sent to the aerobic sludge digester. Treated wastewater from the clarifiers flows into the 7.5 MG facultative polishing pond and is then pumped to the filters after which the waste stream receives pH adjustment treatment and then flows through the chlorine contact chamber. The final treatment step is dechlorination and then the treated wastewater is discharged into the Suwannee River, a Class III Outstanding Florida Surface Water. Waste sludge treated in the aerobic sludge digester is land applied by spray irrigation to a 44 acre site with an application rate of 0.04 MGD. An on-site closed loop recycle system is used for washing forklifts, engines, and other miscellaneous items. Wash water is treated using an oil/water separator and then is reused for washing. No discharge occurs from this system. All waste oil and solids are disposed of in a department approved manner offsite.

Appendix F. (continued)

PART I: Continued

List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)

			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Flow	MGD	Max		1.5		1.7	Continuous	Recording Flow Meter with Totalizer	FLW-1	
BOD, Carbonaceous 5-day, 20°C	mg/L	Max	15.0	18.0		24.3	Weekly	24-hr FPC	EFF-1	
BOD, Carbonaceous 5-day, 20°C	mg/L	Max				Report	Monthly	24-hr FPC	INF-1	
BOD, Carbonaceous 5-day, 20°C	lb/day	Max		156	211		Weekly	Calculated	CAL-1	
Solids, Total Suspended	mg/L	Max				Report	Monthly	24-hr FPC	INF-1	
Solids, Total Suspended	mg/L	Max	20.0	25.5		46.2	Weekly	24-hr FPC	EFF-1	
Solids, Total Suspended	lb/day	Max		221		401	Weekly	24-hr FPC	EFF-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max		10.0		15.0	Weekly	24-hr FPC	EFF-1	
Nitrogen, Kjeldahl, Total (as N)	lb/day	Max		87		130	Weekly	Calculated	CAL-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max				Report	Monthly	Grab	SWU-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max				Report	Monthly	Grab	SWD-1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max				Report	Weekly	Grab	EFF-1	
Nitrogen, Ammonia, Total (as N)	mg/L	Max				Report	Monthly	Grab	SWU-1	

Appendix F. (continued)

PART I: Continued

List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)

			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Nitrogen, Ammonia, Total (as N)	mg/L	Max				Report	Monthly	Grab	SWD-1	
Temperature (°C), Water	Deg C	Max				Report	Weekly	Grab	EFF-1	
Temperature (°C), Water	Deg C	Max				Report	Monthly	Grab	SWU-1	
Temperature (°C), Water	Deg C	Max				Report	Monthly	Grab	SWD-1	
Ammonia, Unionized (as NH3)	mg/L	Max				0.02	Weekly	Calculated	CAL-1	1
Ammonia, Unionized (as NH3)	mg/L	Max				Report	Monthly	Calculated	SWU-1	1
Ammonia, Unionized (as NH3)	mg/L	Max				Report	Monthly	Calculated	SWD-1	1
Oxygen, Dissolved (DO)	mg/L	Min		5.0		5.0	Weekly	Grab	EFF-1	
Oxygen, Dissolved (DO)	mg/L	Min				Report	Monthly	Grab	SWU-1	
Oxygen, Dissolved (DO)	mg/L	Min				Report	Monthly	Grab	SWD-1	
Nitrogen, Total	mg/L	Max	Report	Report		Report	Weekly	24-hr FPC	EFF-1	
Nitrogen, Total	lb/day	Max	313.0	Report		Report	Weekly	Calculated	CAL-1	
Nitrogen, Total	mg/L	Max				Report	Monthly	Grab	SWU-1	
Nitrogen, Total	mg/L	Max				Report	Monthly	Grab	SWD-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max		Report		Report	Weekly	Grab	EFF-1	

Appendix F. (continued)

PART I: Continued

List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)

			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max				Report	Monthly	Grab	SWU-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max				Report	Monthly	Grab	SWD-1	
Phosphorus, Total (as P)	mg/L	Max				Report	Monthly	24-hr FPC	EFF-1	
Phosphorus, Total (as P)	mg/L	Max				Report	Monthly	Grab	SWU-1	
Phosphorus, Total (as P)	mg/L	Max				Report	Monthly	Grab	SWD-1	
Oil and Grease	mg/L	Max		5.0		5.0	Weekly	Grab	EFF-1	
Chlorine, Total Residual	mg/L	Max				0.01	Weekly	Grab	EFF-1	
Coliform, Fecal	#/100mL	Max				200	Weekly	Grab	EFF-1	
pH	s.u.	Min				6.0	Weekly	Grab	EFF-1	
pH	s.u.	Max				8.5	Weekly	Grab	EFF-1	
pH	s.u.	Max				Report	Monthly	Grab	SWU-1	
pH	s.u.	Min				Report	Monthly	Grab	SWU-1	
pH	s.u.	Max				Report	Monthly	Grab	SWD-1	
pH	s.u.	Min				Report	Monthly	Grab	SWD-1	
Specific Conductance	umhos/cm	Max				Report	Weekly	Grab	EFF-1	3
Specific Conductance	umhos/cm	Max				Report	Monthly	Grab	SWU-1	
Specific Conductance	umhos/cm	Max				Report	Monthly	Grab	SWD-1	

Appendix F. (continued)

PART I: Continued

List current Effluent Limits of Outfall(s) to be Sampled: This should include any AO or CO limits the facility may be under (Leave cell blank if not applicable)

			Effluent Limitations				Monitoring Requirements			
Parameter	Units	Max/Min	Annual Average	Monthly Average	Weekly Average	Single Sample	Monitoring Frequency	Sample Type	Monitoring Location Site Number	Notes
Chronic Whole Effluent Toxicity, 7-Day IC_{25} (*Ceriodaphnia dubia*)	percent	Min	Report				According to approved Plan of Study	24 hour composite	EFF-1	2, 3
Chronic Whole Effluent Toxicity, 7-Day IC_{25} (*Pimephales promelas*)	percent	Min	Report				According to approved Plan of Study	24 hour composite	EFF-1	2, 3

1 – Effluent samples for pH and temperature shall be monitored at the same time and location as the total ammonia grab sample which is used to calculate the unionized ammonia value.
2 – See toxicity test requirements below.
3 – AO-137 NE Limits

Appendix F. (continued)

PART I: Continued	
Receiving Waters: Suwannee River	**Classification (indicate whether fresh or marine):** Class III Fresh Water (WBID# 3422B)

Toxicity Test Requirements (routine and/or additional test language, test species, salinity adjustment, etc.):

Permit requirements are below. However, AO-137 NE provides a report only interim limit and sampling according to the approved plan.

Effluent Limitation

(1) In any routine or additional follow-up test for chronic whole effluent toxicity, the 25 percent inhibition concentration (IC_{25}) shall not be less than 100% effluent.

(2) For acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent in any test.

Monitoring Frequency

(3) Routine toxicity tests shall be conducted quarterly, once every three months, the first starting within 60 days of the issuance date of this permit and lasting for the duration of this permit.

Sampling Requirements

(4) For each routine test or additional follow-up test conducted, a total of three *flow proportional 24-hour composite* samples of final effluent shall be collected.

Test Requirements

(1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five test dilutions: 100%, 50%, 25%, 12.5% and 6.25% final effluent.

(2) The permittee shall conduct a daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test and a fathead minnow, *Pimephales promelas*, Larval Survival and Growth Test, concurrently.

(3) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-013, Section 7

Appendix F. (continued)

Administrative or Consent Orders (date executed, specific requirements, interim limit dates-if applicable, etc.):

AO-137 NE effective 05/06/10. Provides interim limits for specific conductance and toxicity, as shown in the parameters table above. The following corrective actions are also required.

Schedule to address specific conductance:

	ACTION ITEM	DUE DATE
a.	The plant shall be operational and in compliance with all limits specified in condition I.A.1 of the permit except for specific conductance and toxicity.	July 1, 2010
b.	Submit a Plan of Study (POS), for DEP approval detailing, how the source of specific conductance will be isolated.	September 1, 2010
c.	Begin implementing steps detailed in the Department-approved POS to determine the source(s) of specific conductance.	November 1, 2010
d.	Submit a preliminary report of the information and data gathered from the POS. Schedule a meeting with DEP NED office to discuss the preliminary findings.	January 2, 2011
e.	Submit a final analysis of the findings from the plan of study and submit a proposal for the most feasible option for continued discharge from the facility. Schedule a meeting with DEP NED office to discuss the final analysis.	July 1, 2011
f.	If the final analysis shows that a process change or additional treatment is necessary, submit a design report of the necessary changes at the facility.	January 2, 2012
g.	The Department shall review the proposed design and either deem the design complete or request additional information. Application for a permit modification to the permit may be required.	Within 30 days of design report submittal
h.	Complete construction and begin implementation of approved design changes.	Within 12 months of design approval by the Department
k.	The Permittee shall complete all steps to achieve compliance. Any revisions to the currently-permitted facility including treatment and/or incorporation of Department-approved regulatory relief shall be accomplished by the Department re-opening the permit.	July 1, 2014

Schedule to address chronic toxicity:

	ACTION ITEM	DUE DATE
a.	The plant shall be operational and in compliance with all limits specified in condition I.A.1 of the permit except for specific conductance and toxicity.	July 1, 2010
b.	Submit a Plan of Study (POS), for DEP approval, detailing the characterization of toxicants as the possible source of chronic toxicity to *Ceriodaphnia dubia* according to EPA methods in TIE manual 600/6-91/005F and chronic methods EPA-821-R-02-013.	September 1, 2010
c.	Begin implementing steps detailed in the Department-approved POS to determine the source(s) of chronic toxicity. The steps might include monthly testing of *Ceriodaphnia* for duration of six consecutive months. Retain quarterly routine testing for fish, unless toxic.	January 2, 2011
d.	Submit a preliminary report of the information and data gathered from the POS. Schedule a meeting with DEP NED office to discuss the preliminary findings and whether monthly testing resumes.	October 1, 2011
e.	Submit a final analysis of the findings from the plan of study and submit a proposal for the most feasible option for continued discharge from the facility. Schedule a meeting with DEP NED office to discuss the final analysis.	January 2, 2012
f.	If the final analysis shows that a process change or additional treatment is necessary, submit a design report of the necessary changes at the facility.	March 1, 2012
g.	The Department shall review the proposed design and either deem the design complete or request additional information. Application for a permit modification to the permit may be required.	Within 30 days of design report submittal
h.	Complete construction and begin implementation of approved design changes.	Within 12 months of design approval by the Department
k.	The Permittee shall complete all steps to achieve compliance. Any revisions to the currently-permitted facility including treatment and/or incorporation of Department-approved regulatory relief shall be accomplished by the Department re-opening the permit.	July 1, 2014

Appendix F. (continued)

Facility Mixing Zone Details (if applicable): n/a

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

Date	Parameter and Units	Limit	Result
06/30/11	Unionized Ammonia	0.02 mg/L	0.3706 mg/L

Describe previous FYI and WQBEL study:
The effluent samples collected from the EFF-1 NPDES sampling point for Outfall D-001 for this facility on August 8, 10 and 12, 2011, were not chronically toxic to the *Ceriodaphnia dubia* or the *Pimephales promelas* test organisms. The effluent AGP results were greater than the "problem" thresholds for fresh receiving waters suggesting that it is nutrient enriched. Effluent water quality samples collected on August 8, 2011, did not exceed any applicable water quality standards or limits found in NPDES permit #FL0001465.

Describe previous or current Enforcement Actions (including WLs):
Consent Order 10-3539 was executed 02/03/2011 for toxicity, BOD-5, unionized ammonia, total kjeldahl nitrogen, and total nitrogen exceedances. All corrective actions were completed and the CO was closed on 01/18/12.

Describe any violations or problems noted in previous inspection:

The Final Analysis from the Plan of Study, and quarterly status reports, all required by the AO, had not yet been received at the time of the inspection.

During the sampling event Department personnel noted that the chlorine contact chamber was overwhelmed and that effluent was above the partitions of the chamber causing short circuiting of the chlorine contact chamber. Effluent was also bypassing the de-nitrification filters as a result of high pond levels.

Discuss whether DMR trends within previous five years are improving or declining:
Effluent specific conductance and nitrite + Nitrate appear to be improving.

Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse): n/a

PART II: Sampling Event Information

Date(s) sample collected:	Sampler(s):

Appendix F. (continued)

Temperature (Deg C):	**pH (SU):**
Dissolved Oxygen (mg/L):	**Conductivity (umhos/cm):**
Total Residual Chlorine (mg/L):	**Total Residual Chlorine - after Disinfection (mg/L):**
Method of Chlorination:	**Method of De-chlorination:**
Flow During Sample Collection for each outfall(MGD):	
Mean Flow for each outfall for previous 12 months based on sampling date (If samples are taken on more than one day, indicate Mean Flow for each day):	
Describe Discharge during Sampling Event: ☐ **Continuous** ☐ **Intermittent** ☐ **Seasonal** ☐ **Rainfall Dependent** ☐ **Other, please specify**	
Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:	

Appendix G. EPA End Sheet

The Bioassay of Pilgrim's Pride Processing Plant effluent sampled on August 6, 8, and 10, 2012. 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 FL0001465 11	12 120806	18 B	19 S	20 2

Remarks

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The Priority Pollutants Analysis of Pilgrim's Pride Processing Plant effluent sampled on August 6, 2012. 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 FL0001465 11	12 120806	18 X	19 S	20 2

Remarks

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Biological Analyses of Pilgrim's Pride Processing Plant effluent sampled on August 6, 2012. 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 FL0001465 11	12 120806	18 S	19 S	20 2

Remarks

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