

Effluent Quality Assessment

Pilgrim's Pride

(formerly known as Goldkist)

Suwannee County

NPDES #FL0001465

Sampled July 13, 15, and 17, 2009

September 2009

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration

Quality Manual No. 870346G
NELAC Certification No. E31780

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Pilgrim's Pride, U.S. Highway 90 West, Live Oak, Suwannee County, Florida, 32060. NPDES #FL0001465. Effluent samples for bioassay and chemical analyses for this facility were collected on July 13, 2009. Additional samples for the chronic bioassay tests were collected on July 15 and 17, 2009.

Introduction

Pilgrim's Pride is a poultry processing and rendering facility. Wastewater is generated from poultry processing, by-products processing, the hatchery, water treatment plant filtrate, sanitation, and storm water. The facility is currently operating under a Memorandum of Agreement which addresses issues with total nitrogen and conductivity at the facility. (See Appendix F for detailed facility information provided by Brian Kirts of FDEP Northeast District.)

Methods

Samples for bioassay, algal growth potential (AGP) and chemical analyses were collected from the EFF-1 NPDES sampling point for Outfall D-001 on July 13, by Eesa Ali, Brian Kirts and Heather Webber; additional samples for the chronic bioassay analyses were collected from the EFF-1 sampling point on July 15, by Sharon Piltz and Jeremy Parrish; and, on July 17 by Ali Eesa and Sharon Piltz (all sampling personnel from FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

See Appendix A for the completed chain of custody forms.

The freshwater chronic screening 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.floridadep.org/labs/cgi-bin/sop/biosop.asp.

Results and Discussion

- **Toxicity Test Results**
  Tests were performed July 14 - 20, 2009.

  Ceriodaphnia dubia chronic screening bioassay – NOEC = 100% for survival;
  LOEC = 100% for reproduction

  Pimephales promelas chronic screening bioassay – NOEC = 100% for survival;
  NOEC = 100% for growth

  The bioassay samples were chronically toxic to the *Ceriodaphnia dubia* test organisms but did not show toxicity to the *Pimephales promelas* 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 Algal Growth Potential (AGP) in the effluent was 133 A (A – Value reported is the mean of two or more determinations) mg dry weight/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Schultz (1987) found that AGP values above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The ratio of inorganic nitrogen to ortho-phosphate in the

effluent suggests nitrogen limitation. The predicted AGP based on inorganic nitrogen concentrations was 724 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

- **Chemistry Results**
  Total residual chlorine and total ammonia were not detected in any of the bioassay samples in the bioassay laboratory. The effluent's total residual chlorine concentrations measured at the facility on July 13, 15 and 17, were, respectively, 0.003 mg/L, 0.002 mg/L and 0.009 mg/L. These concentrations were in compliance with both the Class III freshwater criterion for residual chlorine and permit conditions (≤0.01 mg/L, 62-302.530 (18), F.A.C. and NPDES Permit #FL0001465). The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.056 mg N/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg N/L.

  Arsenic, copper, nickel and zinc were detected in the effluent at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.). The calculated (based on chemical analyses results (20.7 mg N/L) and flow data for July 13th (1.511 MGD) total nitrogen discharged from the facility (~260 lbs N/day) did not exceed the permitted limit of ≤ 313 lbs N/day. Selenium was detected between the laboratory method detection limits (MDL) and the laboratory practical quantification limits (PQL). Priority organic pollutants, pesticides and fecal coliforms were not detected in the effluent.

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

Conclusion

The effluent samples collected from the EFF-1 NPDES sampling point for Outfall D-001 for this facility on July 13, 15 and 17, 2009, were chronically toxic to the *Ceriodaphnia dubia* test organisms but did not show toxicity to the *Pimephales promelas* test organisms. The effluent AGP result greatly exceeded the "problem" threshold for fresh receiving waters suggesting that nutrient enrichment may be an issue. Effluent water quality samples collected on July 13, 2009, did not violate water quality criteria or permit limits.

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

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), orthophosphate (OP), total nitrogen (TN) and total phosphorus (TP) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of nitrogen to phosphorus for samples collected from the Pilgrim's Pride facility on July 13, 2009.

Pilgrim's Pride							
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Predicted AGP (TN) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	133.0 A	724.1 ± 144.8	2838.0 ± 567.6	786.6 ± 157.3	2967.0 ± 593.4	2.9	3.0

Table 2. Effluent limits, Class III Freshwater Criteria and chemical and microbiological data for samples collected from the Pilgrim's Pride facility on July 13, 2009.

Pilgrim's Pride NPDES #FL0001465	Class III Criteria	Effluent Limits	Effluent	
Organic Constituents (µg/L)				
None Detected	-	-	-	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	60	U
Arsenic	≤ 50	-	1.4	
Cadmium	≤ 0.8 b	-	0.03	U
Calcium (mg/L)	-	-	72.6	
Chromium-III	≤ 268.2 b	-	0.3	U
Copper	≤ 30.5 b	-	6.16	
Iron	≤ 1,000	-	30	U
Lead	≤ 18.6 b	-	0.2	U
Magnesium (mg/L)	-	-	85.2	
Nickel	≤ 168.5 b	-	2.4	
Selenium	≤ 5.0	-	0.33	I
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 387.8 b	-	21	
Nutrients (mg/L)				
Ortho-phosphate	-	Report	6.6	
Total Phosphorus	-	Report	6.9	A
Total Ammonia	-	Report	0.056	
Un-ionized Ammonia	≤ 0.02 s	≤ 0.02 s	≤ 0.02	c
Nitrate and Nitrite	-	Report	19	
Total Kjeldahl Nitrogen	-	≤ 15 a	1.7	
Organic Nitrogen	-	-	1.644	c
Total Nitrogen (limit in lbs N/day)	-	313 ac	20.7 mg N/L	c
Total Nitrogen lbs N/day on July 13, 2009	-	313 ac	~260 lbs N/day	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0 s	≥ 5.0 s	11.1	
pH (SU)	6.0 - 8.5	6.0 - 8.5 s	7.9	
Conductivity (µmhos/cm)	≤ 1,275	Report	1,429	
Temperature (°C)	-	Report	30.1	
Sample Depth (m)	-	-	0.2	
Total Residual Chlorine (mg/L)	≤ 0.01 s	≤ 0.01 s	0.03	UQ£
Chlorophyll *a* (µg/L) - Corrected	-	-	2.3	I
Phaeophytin (µg/L)	-	-	1	U
Total Suspended Solids (mg/L)	-	≤ 20 a	4	U
CBOD, 5 day (mg/L), N - inhibited	-	≤ 15 a	2.8	A
Oils and Greases (mg/L)	≤ 5.0	≤ 5.0 s	1.4	U
Flow (MGD)	-	≤ 1.5 m	1.37	m
Hardness (mg $CaCO_3$)	-	-	532.14	c
Microbiology (Number of colony forming units/100ml)				
Fecal Coliforms @	≤ 400s #	≤ 200 s	2	B

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
b - Value is calculated based on hardness
c - Value is calculated
m - Monthly average
s - Single sample
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
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
@ - Fecal coliform analysis performed by Advanced Environmental 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.)
£ - Total residual chlorine analysis performed in the bioassay laboratory.

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2009-07-13-55
Goldkist

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

Requester: Jennifer Paris
Collected By: EA/BK/HW
Sampling Agency: DEP

Field Report Prepared By: EA
Send Final Report To Tom Kallemeyn

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Pilgrims Pride EFF 1	☐ Comp ☑ Grab Date 7/13/09 Time 1200 Eastern Central	Date Time Eastern Central	A
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 11.06 (J)	Storet Station Number
	Matrix (Include type e.g. Salt, Fresh, etc) IW Effluent	Temp (C) 30.13	pH 7.93	Sample Depth 0.2 ☑ m ☐ ft
	Latitude o ' "	Longitude o ' "	Salinity (PPTh) 0.71 Sp Conductance (umho/cm) 1429	NPDES Number FL0001465
			Comments	

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Pilgrims Pride EFF 1	☐ Comp ☑ Grab Date 7/13/09 Time 1238 Eastern Central	Date Time Eastern Central	A
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth 0.2 ☑ m ☐ ft
	Latitude o ' "	Longitude o ' "	Salinity (PPTh) Sp Conductance (umho/cm)	NPDES Number
			Comments TOX	

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Blanks	☐ Comp ☑ Grab Date 7/13/09 Time 1230 Eastern Central	Date Time Eastern Central	B
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth ☐ m ☐ ft
	Latitude o ' "	Longitude o ' "	Salinity (PPTh) Sp Conductance (umho/cm)	NPDES Number
			Comments	

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

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
E. Ahi	7/13/09	FedEx					2 boxes by BA	7/14/09 10:30 / 9:30a 7.14 cg

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

(J) DO failed CCV. (Collected @ 12:38)

Request Number: 2009-07-13-55

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

ter:

Field Report Prepared By: S.Piltz

Customer: NE-DIST

Collected By: S.Piltz/J.Parrish

Send Final Report To: E. Ali

Project ID:

Sampling Agency: NED

PMAS:

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Gold Kist Final Effluent	☐ Comp ☒ Grab	Date 7/15/09 Time 1000 Central		
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
		0.002	7.00		
	Matrix (Include type e.g. Salt, Fresh, etc) / Temp (C) / pH	Sample Depth ☒ m ☐ ft	0.79 ☒ Salinity (PPTh) 1581 ☒ Sp Conductance (umho/cm)	NPDES Number	
	Effluent/Fresh 30.17 7.77	0.1			
	Latitude o ' " / Longitude o ' "	Comments			

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

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

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

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
	7/15/09	Fed EX	Tahmoures Ebrahimi	07/16/09 9:15	L. Bioassay	7·16·09 1130	GA	

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number:

Event ID *

Goldkist

ter:

Field Report Prepared By: GA

Customer: NE-DIST 2009 07 1355 Collected By: SPIEA

Send Final Report To Stephen Nye

Project ID:

Sampling Agency: DEP

PMAS:

7-17-09

Lab ID *	Location Pilgrims Pride aka Goldkist			☐ Comp ☑ Grab	Collection (begin) Date 7/17/09 Time 1226	Eastern Central	Collection (end) Date Time	Eastern Central	Bottle Group(s)** A
	Field ID EFF1			Tot Res Chlorine (mg/L) 0.009 *	Diss Oxygen (mg/L) 18.72		Storet Station Number		
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C) 30.34	pH 7.76	Sample Depth 0.2 ☑ m ☐ ft	0.73 1477	☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm)	NPDES Number FL0001457		
	Latitude o ' " .	Longitude o ' " .		Comments * TRC reported by facility					
Lab ID *	Location			☐ Comp ☐ Grab	Collection (begin) Date Time	Eastern Central	Collection (end) Date Time	Eastern Central	Bottle Group(s)**
	Field ID			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)		Storet Station Number		
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number		
	Latitude o ' " .	Longitude o ' " .		Comments					
Lab ID *	Location			☐ Comp ☐ Grab	Collection (begin) Date Time	Eastern Central	Collection (end) Date Time	Eastern Central	Bottle Group(s)**
	Field ID			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)		Storet Station Number		
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number		
	Latitude o ' " .	Longitude o ' " .		Comments					
Lab ID *	Location			☐ Comp ☐ Grab	Collection (begin) Date Time	Eastern Central	Collection (end) Date Time	Eastern Central	Bottle Group(s)**
	Field ID			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)		Storet Station Number		
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth ☐ m ☐ ft		☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number		
	Latitude o ' " .	Longitude o ' " .		Comments					

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
GAli	7/17/09	Hand delivered.	Tahmouras Ebrahimi	07/17/07 15:20				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

M Faircloth picked up 3 bacassay bags 1522 7-17-09

Appendix B. Bench Sheets

FDEP Biology Laboratory - Chronic Screen Bench Sheet

Ceriodaphnia dubia

Facility: Pilgrim's Pride formerly Goldkist
Address: US Highway 90 W. Live Oak, FL 32060
County: Suwannee
NPDES Permit #: FL0001465
Contact/District: Brian Kirby / NED

LIMS entry: 7-23-09 ML verified: BA 7-23-09

Diluent/ Batch: 20% DMW / 7.6.09 Test Days Used: 0-2
20% DMW / 7.14.09 Test Days Used: 3-6

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

Start Date: 7.14.09 Time: 12:30
End Date: 7-20-09 Time: 1400

Organism: *Ceriodaphnia dubia*
Organism Batch #: 24-09
Organism age : <24 hours
Feeding: Prior to Test and Daily
Food: YCT *P. subcapitata*
Food Batch: 1.22.09 2.13.09
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-2009-07-14-76	1200133	7-13-09 / 12:38	7-14-09 / 10:35
Test Day 2	2	TLH-2009-07-16-120	1201337	~~7-15-09 12:25~~ BA	7-16-09 / 11:30
Test Day 4	3	TLH-2009-07-17-75	1201577	7-17-09 / 12:26	7-11-09 / 3:20

Sampled on 7-15-09 @ 10.00 BA

Water Quality Parameters	Field Chlorine (mg/L)			Lab Chlorine (mg/L)			Alkalinity (mg/L as $CaCO_3$)		
Lab Sample #:	~~0.0031 MF~~	2	3	1	2	3	1	2	3
Sample:	~~0.0031 MF~~	0.002	0.009	<0.03	<0.03	<0.03	438	508	454
Diluent/Control:				<0.03	<0.03	<0.03	83	83	81
MF Method:	~~CR Hach~~	~~MF Hach~~	~~MF Hach~~	Hach	Hach	Hach	Hach	Hach	Hach
Measured by:	North Dist	2nd District	personnel	BA	BA	BA	BA	BA	BA
Verified by:	MF	MF	MF	MF	MF	MF	MF	MF	MF
	Conductivity (circle one) (umhos-cm) (mmhos-cm)			Ammonia (mg/L)			Hardness (mg/L as $CaCO_3$)		
Lab Sample #:	1	2	3	1	2	3	1	2	3
Sample:	1445	1522	1477	<0.017	<0.017	<0.017	505	595	541
Diluent/Control:	174	174	176	<0.017	<0.017	<0.017	83	83	87
Method:	Mettler	Mettler	Mettler	Denver	Denver	Denver	Hach	Hach	Hach
Measured by:	BA	BA	MF	MF	MF	MF	BA	BA	BA
Verified by:	MF	MF	BA	BA	BA	BA	MF	MF	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. 26.0 max. 26.5 mean 26.3
Room B246 min. 25.2 max. 25.7 mean 25.5

Test Replicate	Loaded from culture vial
1	A 5
2	A 10
3	A 15
4	A 22
5	A 17
6	B 16
7	B 23
8	B 25
9	B 16
10	B 19

Statistics	
Control % CV:	21.4
Dunnetts PMSD:	19.0%
Reproduction NOEC:	<100%
Survival NOEC:	100%
T-test value	2.88958
T- table value:	1.734
df:	18

Hypothesis t Test

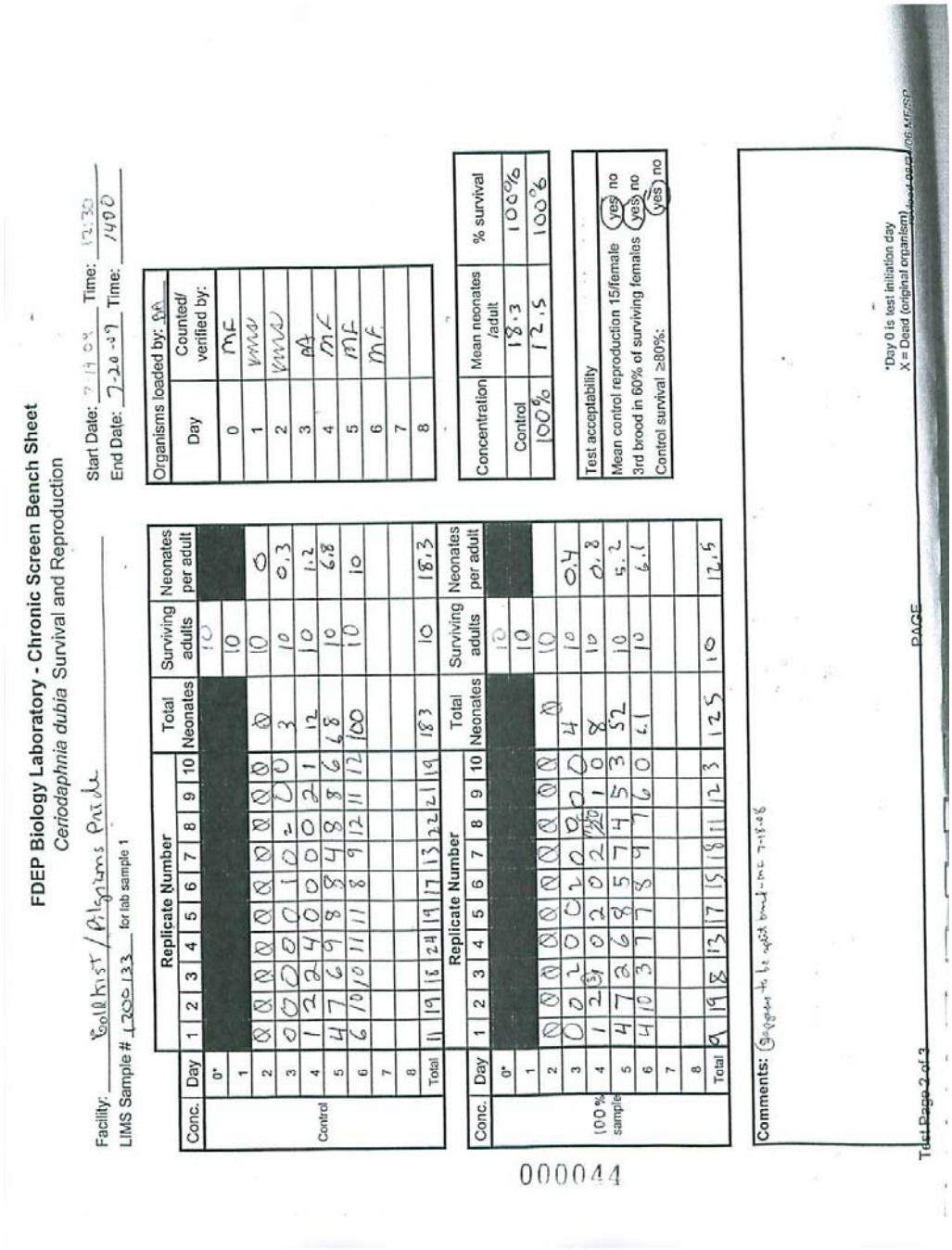
Investigators' signatures

~~Dave Abbe~~
Marshall Faircloth
Jane David
Kim M Spencer

Anita Wolfe
REVIEWER

Comments: Sample 2 sampled on 7-15-09 @ 10.00 BA 7-20-09

Appendix B. (continued)



FDEP Biology Laboratory - Chronic Screen Bench Sheet
Ceriodaphnia dubia Survival and Reproduction

Facility: Toolkist / Pilgrims Pride
LIMS Sample # 120c133 for lab sample 1

Start Date: 7/14/09 Time: 12:30
End Date: 7-20-09 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	X	X	X	X	X	X	X	X	X	X	0	10	0
	3	0	0	0	0	1	0	2	0	0	0	3	10	0.3
	4	1	2	2	4	0	0	0	0	2	1	12	10	1.2
	5	4	7	6	9	8	8	4	8	8	6	68	10	6.8
	6	6	10	10	11	11	8	9	12	11	12	100	10	10
	7													
	8													
	Total	11	19	18	24	19	17	13	22	21	19	183	10	18.3

Conc.	Day	Replicate Number 1	2	3	4	5	6	7	8	9	10	Total Neonates	Surviving adults	Neonates per adult
100% sample	0*												10	
	1												10	
	2	X	X	X	X	X	X	X	X	X	X	0	10	0
	3	0	0	2	0	2	0	2	0	0	0	4	10	0.4
	4	1	2	3	0	2	0	2	2	1	0	8	10	0.8
	5	4	7	3	6	8	5	7	4	5	3	52	10	5.2
	6	4	10	3	7	7	8	9	7	6	0	61	10	6.1
	7													
	8													
	Total	9	19	8	13	17	15	18	11	12	3	125	10	12.5

Organisms loaded by: BA		
	Day	Counted/ verified by:
	0	MF
	1	WWW
	2	WWW
	3	BA
	4	MF
	5	MF
	6	MF
	7	
	8	

Concentration	Mean neonates /adult	% survival
Control	18.3	100%
100%	12.5	100%

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

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

Comments: Organisms in 1L water bowl - inc 7-18-09

Test Page 2 of 3 PAGE

000044

Appendix B. (continued)

FDEP Biology Laboratory - Chronic Screen Bench Sheet

Ceriodaphnia dubia Parameters

Facility: Pilgrim's Pride

LIMS Sample # : 1200133 for lab sample 1

Circle µmhos-cm or mmhos-cm

Test Day ↓		Concentration	New Sample: Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)	Old Sample: Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos/cm) (mmhos/cm)
Day 0	sample: Control		M	7.9	24.3	7.4	174					
	1	100%	M	8.0	26.0	8.0	1445					
	Measured by:			BA	BA	BA	BA					
	Recorded by:			BA	BA	BA	BA					
Day 1	sample: Control		M	7.8	24.0	7.7	171	M	7.9	24.0	7.1	~~0~~ 187
	1	100%	M	8.1	24.0	7.8	1385	M	8.7	24.0	7.3	1430
	Measured by:			BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:			BA	BA	BA	BA		BA	BA	BA	BA
Day 2	sample: Control		M	7.8	24.4	7.7	174	M	8.1	24.3	7.8	181
	2	100%	M	8.0	26.0	8.4	1522	M	8.7	24.2	7.4	* ~~185~~ 1359 KM
	Measured by:			BA	BA	BA	BA		KMM	KMM	KMM	KMM
	Recorded by:			BA	BA	BA	BA		KMM	KMM	KMM	KMM
Day 3	sample: Control		M	7.8	24.2	7.4	177	M	7.8	24.0	7.4	~~84~~ 198
	2	100%	M	7.9	24.7	7.6	1532	M	8.8	24.2	7.4	1471
	Measured by:			BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:			BA	BA	BA	BA		BA	BA	BA	BA
Day 4	sample: Control		M	8.1	24.2	7.7	176	M	8.0	24.7	7.7	180
	3	100%	M	7.9	24.5	7.7	1477	M	8.6	24.6	7.7	1488
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 5	sample: Control		M	8.2	24.3	7.8	176	M	8.2	24.7	8.2	192
	3	100%	M	8.1	24.4	7.9	1416	M	8.3	24.8	8.3	1408
	Measured by:			MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:			MF	MF	MF	MF		MF	MF	MF	MF
Day 6	sample: Control		M		~~24.3~~ MF	not needed	~~17~~ MF	M	7.9	25.2	7.7	178
	3		M		24.1 MF	not metered		M	8.7	25.2	7.7	1383
	Measured by:								MF	MF	MF	MF
	Recorded by:								MF	MF	MF	MF
Day 7	sample: Control		M					M				
	3		M					M				
	Measured by:											
	Recorded by:											
Day 8	sample: Control							M				
	3							M				
	Measured by:											
	Recorded by:											

Comments:

*ENTERED VALUE IN WRONG CELL KMM

A - MF entered DO in pH space MF 7-19-06

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

Test Page 3 of 3 PAGE 000045 revised 08/24/06 MF/SP

FDEP Biology Laboratory - Chronic Bioassay Bench Sheet

Pimphales promelas or Menidia beryllina

Facility: Pilgrims Pride formerly Gold Kist
Address: US Highway 90 W. Live Oak, FL 32060
County: Suwannee
NPDES Permit #: FL 0001465
Contact/District: Brian Ickes / NED

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: 7.14.09 Time: 13:30
End Date: 7.21.09 Time: 1100

Diluent/ Batch:
MHW / 7.14.09 Test Days Used: 0-2
MHW / 7.16.09 Test Days Used: 3-7
ASW / Test Days Used:
ASW / Test Days Used:

Organism Batch # : 7.14.09
Feeding Prior to Test and Daily Artemia Lot # : 38438
Chamber size : 1000 ml
Test volume : 500 ml

Organism age : < 1 days

Artemia Batch #		Day 3	99-09
Day 0	96-09	Day 4	100-09
Day 1	97-09	Day 5	101-09
Day 2	98-09	Day 6	102-09

LIMS:	Date	Initials
Entry:	7.23.09	MF
Verification:	7.23.09	BA

Sample Received	Lab Sample #	LIMS Job #	LIMS Sample #	Collection Date/Time	Received Date/Time
Test Day 0	1	TLH-2009-07-14-76	1200133	7.13.09 / 12:38	7.14.09 / 1035
Test Day 2	2	TLH-2009-07-16-120	1201337	7.15.09 / 10:00	7.16.09 / 1130
Test Day 4	3	TLH-2009-07-17-76	1201577	7.17.09 / 1226	7.17.09 / 1520

Water Quality Parameters	Batch #	7.14.09 MHW / ASW	7.16.09 MHW / ASW	NA Sample 1	NA Sample 2	NA Sample 3	Other:	Measured by: *	Verified by:
Field Total Residual Cl_2 (mg/L):		NA	NA	0.003 MF	0.002	0.009		SP/EA/KH	MF
Lab Total Residual Cl_2 (mg/L):		<0.03	<0.03	<0.03	<0.03	<0.03		BA	
Alkalinity (mg/L as $CaCO_3$):		88	84	438	508	454		BA	
Hardness (mg/L as $CaCO_3$):		108	97	505	595	589		BA	
Total Ammonia (mg/L as N):		<0.017	<0.017	<0.017	<0.017	<0.017		MF	BA
Conductivity: umhos mmhos:		331	337	1422	1485	1470		BA/ICOS	BA/ICOS
Salinity (ppth):		—	—	—	—	—		—	—

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: (if used)
Incubator # 2 min. 26.0 max. 26.5 mean 26.3
Water bath # ____ min. ____ max. ____ mean ____
Room B246 min. 25.1 max. 25.7 mean 25.4

Test Incubated in: ☑ Incubator #: 2
☐ Waterbath #: ____

Investigators' signatures
Jana David
Marshall Faircloth
Beck Abraham
Kim M Spencer
REVIEWER Loretta Wolfe

Statistics	
Control %cv:	12.97
Dunnetts PMSD:	14.2
Survival NOEC:	100%
Survival LOEC:	NA
Growth NOEC:	100%
Growth LOEC:	NA

Homosc elastic t Test

Comments: * See field sheets - Sampling were S. Pi T3, J. Parrish Leon Ali, H. Webber, B. Kirk

revised 7/15/08 MF

Appendix B. (continued)

FDEP Biology Laboratory - Chronic Screen Bench Sheet

Pimphales promelas or Menidia beryllina Survival

Facility: Pilgrims Pride

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

LIMS Sample Number: 12.00133 for lab sample #1

Start Date: 7.19.09 Time: 13:30

End Date: 7.26.09 Time: 1100

		TEST DAY							
Concentration	Replicate	0	1	2	3	4	5	6	7
Control	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	10	10
	D	10	10	10	10	10	10	10	10
100% sample concentration	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	10	10
	D	10	10	10	10	10	10	10	10
Control	A	10							
	B	10							
	C	10							
	D	10							
% sample concentration	A	10							
	B	10							
	C	10							
	D	10							
Loaded by: BA	Checked by:		BA	JD	JD	BA	MF	JD	JD
Verified by: JD									

Comments:

Test Page 2 of 5

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Appendix B. (continued)



Biology Laboratory Chronic Screening Bioassay Benchsheet

Parameters

P. promelas SOP TA-07_09 *M. beryllina* SOP TA-07_14

Sample Source: Pilgrims Pride

LIMS Sample #: 12001133 (for Lab sample #1)

Test Day		Conc.	Old Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)	Salinity ppth	New Sample: Test Rep.	pH (su)	Temp (°C)	DO (mg/L)	Cond (µmhos/cm) (mmhos/cm)	Salinity ppth
Day 0	sample:	Control							A	7.6	24.0	7.6	331	—
	1	100%							A	8.1	26.0	7.8	1422	—
	Measured by:									BA	BA	BA	BA	BA
	Recorded by:									BA	BA	BA	BA	BA
Day 1	sample:	Control	B	7.7	24.0	7.3	344	~~3~~ BA	B	7.6	24.0	7.8	371	~~3~~
	1	100%	B	8.5	24.2	7.3	1430	—	B	8.2	24.0	7.7	1409	—
	Measured by:			BA	BA	BA	BA	— BA		BA	BA	BA	BA	—
	Recorded by:			BA	BA	BA	BA	—		BA	BA	BA	BA	—
Day 2	sample:	Control	C	7.6	24.1	6.3	340	—	C	7.6	24.9	7.3	362	—
	2	100%	C	8.4	24.3	6.1	1410	—	C	8.1	26.0	7.6	1485	—
	Measured by:			JD	JD	JD	JD	—		KMS	BA	KMS	KMS	—
	Recorded by:			JD	JD	JD	JD	—		KMS	BA	KMS	KMS	—
Day 3	sample:	Control	D	7.3	24.4	6.6	337	—	D	8.0	24.0	7.3	341	—
	2	100%	D	8.3	24.1	5.6	1455	—	D	8.1	24.1	7.3	1519	—
	Measured by:			JD	JD	JD	JD	JD		JD	JD	JD	JD	—
	Recorded by:			JD	JD	JD	JD	JD		JD	JD	JD	JD	—
Day 4	sample:	Control	A	7.6	24.0	5.8	340	~~340~~ BA	A	7.8	24.0	7.8	331	—
	3	100%	A	8.3	24.0	5.4	1507	—	A	8.0	24.0	7.4	1470	—
	Measured by:			BA	BA	BA	BA	—		BA	BA	BA	BA	—
	Recorded by:			BA	BA	BA	BA	—		BA	BA	BA	BA	—
Day 5	sample:	Control	B	8.1	25.0	7.6	340	—	B	8.1	24.9	7.9	321	—
	3	100%	B	8.5	25.8	7.0	1464	—	B	8.2	24.9	7.8	1428	—
	Measured by:			MF	MF	MF	MF	MF BA		MF	MF	MF	MF	—
	Recorded by:			MF	MF	MF	MF	MF BA		MF	MF	MF	MF	—
Day 6	sample:	Control	C	7.8	24.2	5.7	323	—	C	~~8.1~~	24.7	7.2	350	—
	3	100%	C	8.3	24.2	5.1	1456	—	C	8.1	26.0	6.6	1437	—
	Measured by:			JD	JD	JD	JD	—		KMS	KMS	KMS	KMS	—
	Recorded by:			JD	JD	JD	JD	—		KMS	KMS	KMS	KMS	—
Day 7	sample:	Control	D	8.4	24.0	6.7	350	—						
	3	100%	D	8.4	24.2	6.6	1439	—						
	Measured by:			JD	JD	JD	JD	—						
	Recorded by:			JD	JD	JD	JD	—						

Test Rep. = Replicate Record Salinity < 1 if freshwater Circle µmhos-cm or mmhos-cm

Comments:

revised 7/15/08 mf

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Appendix B. (continued)

FDEP Biology Laboratory - Chronic Screen Bench Sheet

Facility: Pilgrims Pride dw 7/31/09

LIMS Sample Number: 1200133 for lab sample #1

Concentration	Replicate	Pan #	Pan wt. (g)	Pan + Fish (g)	Fish wt. (g)	Original # Fish	Mean wt. (mg)
			mean wt = fish wt divided by 10 convert g to mg: move decimal 3 places to right				
Control	A	1	0.02191	0.02681	0.00490	10	.490
	B	2	0.02405	0.03001	0.00596	10	.596
	C	3	0.02348	0.02998	0.00650	10	.650
	D	4	0.02381	0.03040	0.00659	10	.659
100% sample	A	5	0.02367	0.02980	0.00613	10	.613
	B	6	0.02169	0.02850	0.00681	10	.681
	C	7	0.02173	0.02878	0.00705	10	.705
	D	8	0.02130	0.02817	0.00687	10	.687
Control	A					10	
	B					10	
	C					10	
	D					10	
% sample	A					10	
	B					10	
	C					10	
	D					10	
	Weighed by initials:		JD	JD			

Growth	%CV	PMSD
Control	12.97%	14.2

Growth	Table	Calculated	dF
T-test	1.94300	~~1.66297~~ 1.66297	6

Drying	OVR 2
Temperature °C:	45
Hours:	8

S-weight ID: BIO-S-WEIGHTS-01

Balance ID: OHAUS 250D SER. 1125481084

Tare Weighing Date:		Final Weighing Date: 7.23.09 JD	Measured Value (g)		S-weight Value (g)
Tare Pan 1 after Pan 5 (g)	0.02191 @ 0.02151	S-weights	0.01	@	0.01
Tare Pan 1 after Pan 8 (g)	0.02151 @ 0.02191	at tare	0.05003	@	0.05
Final Pan 1 after Pan 5 (g)	0.02681 @ 0.02681	S-weights	0.01999	@	0.02
Final Pan 1 after Pan 8 (g)	0.02682 @ 0.02681	at final	0.05003	@	005

Comments:

Test Page 4 of 5

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revised 07/15/08 MF

Bioassay Instrument ID

Test ID: Pilgrim's Pride Dates: 7-14-09 – 7-21-09

METER / DEVICE	ID	SOP	Parameter	Method	√used
YSI Model 58 Dissolved Oxygen Meter	90H018262	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	✓
Thermometer (DO probe)	YSI 5750 SN 05J1720	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	✓
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)

Filled out by B.A.

V 1.1 6/12/08 MF

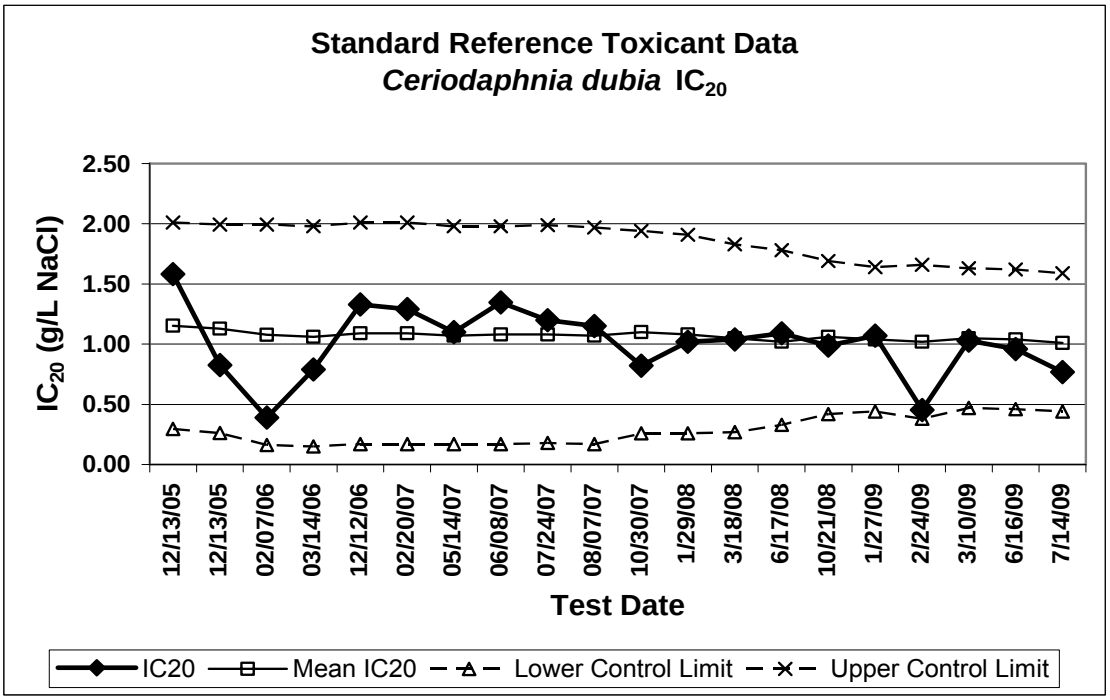
Appendix C. SRT Bench Sheets and Statistical Analysis

Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	IC20	Mean IC20	Std Dev	Lower Control Limit	Upper Control Limit
08/09/05	1.58	1.15	0.43	0.30	2.01
12/13/05	0.83	1.13	0.43	0.26	1.99
02/07/06	0.39	1.08	0.46	0.16	1.99
03/14/06	0.79	1.06	0.46	0.15	1.98
12/12/06	1.33	1.09	0.46	0.17	2.01
02/20/07	1.29	1.09	0.46	0.17	2.01
05/14/07	1.10	1.07	0.45	0.17	1.98
06/08/07	1.35	1.08	0.45	0.17	1.98
07/24/07	1.20	1.08	0.45	0.18	1.99
08/07/07	1.15	1.07	0.45	0.17	1.97
10/30/07	0.82	1.10	0.42	0.26	1.94
1/29/08	1.02	1.08	0.41	0.26	1.91
3/18/08	1.04	1.05	0.39	0.27	1.83
6/17/08	1.09	1.02	0.36	0.33	1.78
10/21/08	0.99	1.06	0.32	0.42	1.69
1/27/09	1.07	1.04	0.30	0.44	1.64
2/24/09	0.45	1.02	0.32	0.38	1.66
3/10/09	1.03	1.05	0.29	0.47	1.63
6/16/09	0.96	1.04	0.29	0.46	1.62
7/14/09	0.77	1.01	0.29	0.44	1.59

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



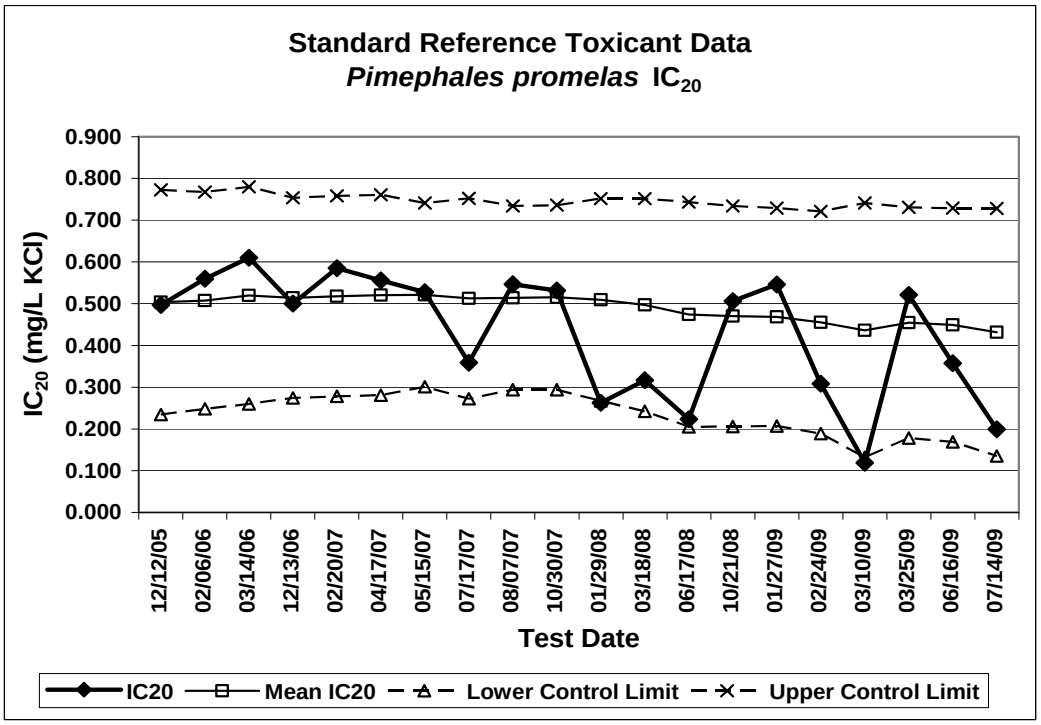
Appendix C. (continued)

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	IC20	Mean IC20	Std Dev	Lower Control Limit	Upper Control Limit
12/12/05	0.497	0.503	0.13	0.234	0.772
02/06/06	0.559	0.508	0.13	0.248	0.767
03/14/06	0.610	0.520	0.13	0.260	0.780
12/13/06	0.501	0.514	0.12	0.274	0.754
02/20/07	0.585	0.518	0.12	0.278	0.758
04/17/07	0.556	0.521	0.12	0.281	0.761
05/15/07	0.528	0.521	0.11	0.301	0.741
07/17/07	0.358	0.513	0.12	0.273	0.753
08/07/07	0.547	0.514	0.11	0.294	0.734
10/30/07	0.531	0.515	0.11	0.294	0.736
01/29/08	0.263	0.509	0.12	0.267	0.752
03/18/08	0.317	0.497	0.13	0.242	0.752
06/17/08	0.223	0.474	0.13	0.205	0.743
10/21/08	0.506	0.470	0.13	0.206	0.734
01/27/09	0.546	0.468	0.13	0.207	0.729
02/24/09	0.308	0.455	0.13	0.189	0.721
03/10/09	0.119	0.437	0.15	0.132	0.741
03/25/09	0.521	0.455	0.14	0.178	0.731
06/16/09	0.357	0.449	0.14	0.169	0.729
07/14/09	0.199	0.432	0.15	0.135	0.728

Means are from all SRT tests, up to 20 tests..
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev



FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia

Diluent/ Batch: 20% DMW / 7.6.09 Test Days Used: 0 - 2
20% DMW / 7.14.09 Test Days Used: 3 - 5
Toxicant/ Batch: NaCl / 7.14.09

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

Organism: *Ceriodaphnia dubia*
Organism Batch #/ Age: 24.09 / <24 hr.
Feeding: Prior to Test and Daily
Food: ☑ YCT ☐ *P. subcapitata*
Food Batch: 1-22.09 2.13.09
Chamber size: 30 mL
Test Volume: 20 mL

Start Date: 7.14.09 Time: 11:00
End Date: 7-20-09 Time: 1445

Water Quality Parameters	Batch: 7.6.09 20% DMW	7.14.09 20% DMW	Other	Measured by:	Verified by:
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03		BA	MF
Alkalinity (mg/L as $CaCO_3$):	83	81		BA	MF
Hardness (mg/L as $CaCO_3$):	83	87		BA	MF
Total Ammonia (mg/L as N):	<0.017	<0.017		MF	BA
Conductivity (umhos-cm) mmhos-cm :	174	179		BA	MF

Results	
Control % CV:	26.19 %
Dunnetts PMSD:	27.2 %
Reproduction NOEC:	0.59 g/L
Reproduction LOEC:	0.89 g/L
Survival NOEC:	1.3 g/L
Survival LOEC:	2.0 g/L
IC_{P20}:	0.768 g/L
IC_{P25}:	0.812 g/L

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

Loaded by:

Test Replicate	Loaded from culture vial
1	A5
2	A10
3	A15
4	A22
5	A17
6	B16
7	B23
8	B25
9	B16
10	BH

Comments:
~~#198603 MMF~~
-Sample # not applicable
-BA

Investigators' signatures

Bruce Nuzzo
Marshall Faircloth
Jamie Daniels
Kim M Spencer

Loretta Wolfe
REVIEWER

Test Incubated in: Incubator: # 2
Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min. 26.0 max. 26.5 mean 26.3
Room B246 ____ min. 25.2 max. 25.7 mean 25.5
Test min.____ max.____ mean____

Appendix C. (continued)

Ceriodaphnia dubia Survival and Reproduction

Start Date: 7/1/09 Time: 1100 Loaded by: AA
End Date: 7-20-09 Time: 1445 Verified by: MF

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	0	0	0	0	3	0	0	0	0	3	10	0.3
	4	2	2	3	2	0	0	3	2	2	0	16	10	1.6
	5	4	6	8	6	6	6	6	6	6	3	57	10	5.7
	6	9	8	10	9	0	9	7	11	11	10	84	10	8.4
	7													
	8													
	Total	15	16	21	17	6	18	16	19	19	13	160	10	16.0
0.59 ppth	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	0	0	0	0	0	10	0
	4	2	2	2	2	0	2	2	2	2	2	18	10	1.8
	5	6	5	5	4	5	6	5	8	5	5	54	10	5.4
	6	10	8	10	9	11	10	9	11	9	10	97	10	9.7
	7													
	8													
	Total	18	15	17	15	16	18	16	21	16	17	169		16.9
0.89 ppth	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	0	0	0	0	0	10	0
	4	1	2	3	1	2	2	1	0	2	0	14	10	1.4
	5	4	6	6	4	5	4	5	2	5	7	48	10	4.8
	6	0	10	8	0	0	8	0	2	12	7	47	10	4.7
	7													
	8													
	Total	5	18	17	5	7	14	6	4	19	14	109	10	10.9

Comments:

000014

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
1.3 ppth	0												10	
	1												10	
	2	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	10	0
	3	0	0	0	0	0	0	0	0	0	0	0	10	0
	4	Ø	0	0	0	0	2	0	0	0	0	2	10	0.2
	5	0	4	4	3	2	7	5	3	0	4	32	10	3.2
	6	2	0	6	4	6	9	5	7	0	6	45	10	4.5
	7													
	8													
	Total	2	4	10	7	8	18	10	10	0	10	79	10	7.9
2.0 ppth	0												10	
	1		X			X	X			X			6	
	2	0	|	X	X	|	|	X	X	|	Ø	1	0
	3	0	|	|	|	|	|	|	|	|	0	Ø	1	0
	4	0	|	|	|	|	|	|	|	|	0	Ø	1	0
	5	0X	|	|	|	|	|	|	|	|	0	Ø	Ø	0
	6	|	|	|	|	|	|	|	|	|	0	0	0	0
	7	|	|	|	|	|	|	|	|	|	|			
	8	|	|	|	|	|	|	|	|	|	|			
	Total	0	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	0	0	0	0
3.0 ppth	0												10	
	1	X	X	X	X	X	X	X	X	X	X		Ø	
	2	|	|	|	|	|	|	|	|	|	|	Ø	|	0
	3	|	|	|	|	|	|	|	|	|	|	|	|	0
	4	|	|	|	|	|	|	|	|	|	|	|	|	0
	5	|	|	|	|	|	|	|	|	|	|	|	|	0
	6	|	|	|	|	|	|	|	|	|	|	|	|	0
	7	|	|	|	|	|	|	|	|	|	|	|	|	
	8	|	|	|	|	|	|	|	|	|	|	|	|	
	Total	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	0

Comments:

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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	24.0	7.8	0.174					
	0.59 ppth	M	7.8	24.0	7.5	1.32					
	0.89 ppth	M	7.8	24.1	7.4	1.89					
	1.3ppth	M	7.8	24.0	7.4	2.71					
	2.0 ppth	M	7.9	24.0	7.4	3.90					
	3.0 ppth	M	7.9	24.0	7.4	5.66					
	Measured by:		BA	BA	BA	BA					
	Recorded by:		BA	BA	BA	BA					
Day 1	Control	M	8.2	24.0	7.8	0.175	A	7.8	24.0	7.0	0.186
	0.59 ppth	M	8.2	24.0	7.8	1.37	A	7.8	24.0	7.1	1.39
	0.89 ppth	M	8.2	24.0	7.7	1.93	A	7.9	24.0	7.0	2.00
	1.3ppth	M	8.2	24.0	7.7	2.77	A	7.9	24.0	7.0	2.92
	2.0 ppth	M	8.2	24.0	7.8	3.87	A	8.1	24.1	7.1	3.99
	3.0 ppth	M					A	8.0	24.0	7.0	5.72
	Measured by:		BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA
Day 2	Control	M	8.0	24.0	7.7	0.173	A	8.0	24.2	7.8	0.217
	0.59 ppth	M	7.9	24.2	7.8	1.28	A	7.9	24.1	7.7	1.42
	0.89 ppth	M	7.9	24.3	7.7	1.83	A	8.0	24.1	7.8	2.05
	1.3ppth	M	7.9	24.2	7.7	2.65	A	8.0	24.0	7.8	2.83
	2.0 ppth	M	7.9	24.3	7.7	3.80	A	8.0	24.1	7.7	4.01
	3.0 ppth	M									
	Measured by:		BA	BA	BA	BA					
	Recorded by:		BA	BA	BA	BA					
Day 3	Control	M	7.8	24.0	7.5	0.179	A	7.8	24.0	7.4	0.190
	0.59 ppth	M	7.8	24.3	7.4	1.32	A	7.8	24.0	7.4	1.39
	0.89 ppth	M	7.8	24.4	7.4	1.91	A	7.8	24.0	7.4	2.02
	1.3ppth	M	7.8	24.4	7.4	2.72	A	7.8	24.0	7.3	2.93
	2.0 ppth	M	7.8	24.5	7.4	3.91	A	7.9	24.0	7.3	3.90
	3.0 ppth	M									
	Measured by:		BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA

Comments:

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

000016

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Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Bench Sheet

Ceriodaphnia dubia Parameters

Test Day		New Sample				Conductivity	Old Sample				Conductivity
↓	Conc.	Replicate	pH (su)	Temp (°C)	DO (mg/L)	(µmhos/cm) (mmhos/cm)	Replicate	pH (su)	Temp (°C)	DO (mg/L)	(µmhos/cm) (mmhos/cm)
Day 4	Control	M	8.0	24.5	7.7	0,176	A	8.0	24.6	7.8	0,185
	0.59 ppth	M	8.2	24.6	7.8	1.28	A	8.1	24.7	7.8	1.36
	0.89 ppth	M	8.2	24.7	7.8	1.78	A	8.1	24.6	7.8	2.04
	1.3ppth	M	8.1	24.7	7.8	2.54	A	8.1	24.8	7.8	2.73
	2.0 ppth	M	8.1	24.6	7.7	4.08	A	8.1	24.8	7.6	3.88
	3.0 ppth	M									
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 5	Control	M	8.2	24.2	8.0	0,176	A	8.3	25.1	8.1	0,196
	0.59 ppth	M	8.2	24.4	8.0	1,24	A	8.2	24.8	8.1	1.35
	0.89 ppth	M	8.2	24.3	7.9	1.75	A	8.2	24.8	8.1	1,93
	1.3ppth	M	8.2	24.3	8.0	2.50	A	8.2	24.8	8.0	2.82
	2.0 ppth	M					A	8.1	24.7	8.0	3.99
	3.0 ppth	M									
	Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
	Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
Day 6	Control	M					A	8.3	24.1	7.9	0,190
	0.59 ppth	M					A	8.2	24.3	7.7	1.29
	0.89 ppth	M					A	8.2	24.2	7.6	1.90
	1.3ppth	M					A	8.2	24.1	7.6	2.65
	2.0 ppth	M					Strong MF smell				
	3.0 ppth	M									
	Measured by:							MF	MF	MF	MF
	Recorded by:							MF	MF	MF	MF
Day 7	Control	M									
	0.59 ppth	M									
	0.89 ppth	M									
	1.3ppth	M									
	2.0 ppth	M									
	3.0 ppth	M									
	Measured by:										
	Recorded by:										
Day 8	Control	M									
	0.59 ppth	M									
	0.89 ppth	M									
	1.3ppth	M									
	2.0 ppth	M									
	3.0 ppth	M									
	Measured by:										
	Recorded by:										

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

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Appendix C. (continued)

Bioassay Instrument ID

Test ID: Chronic C. dubia SRT Dates: 7-14-07 - 7-20-07

METER / DEVICE	ID	SOP	Parameter	Method	√used
YSI Model 58 Dissolved Oxygen Meter	90H0118262	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	✓
Thermometer (DO probe)	YSI 5750 SN 05J1720	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	✓
Hach Pocket Colorimeter II	050500026378	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 B. Alexander (by M. Feinhardt)

V 1.1 6/12/08 MF

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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/7.14.09 Test Days Used: 0 2

Diluent/ Batch: MHW/7.16.09 Test Days Used: 3 5

Toxicant/ Batch # : KCl/7.14.09

Artemia Lot # : 38138

Start Date: 7.14.09 09 BA Time: 1300

End Date: 7.21.09 Time: 1100

Organism Batch #/ Age: 7.14.09 / <24hrs

Artemia Batch #	Day 2 98-09	Day 5 101-09
Day 0 96-09	Day 3 99-09	Day 6 102-09
Day1 97-09	Day 4 100-09	

Chamber size : 1000 ml

Test volume : 500 ml

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 7.14.09	Diluent 7.16.09 (or other)	Method	Measured by	Verified by
Total Residual Cl_2 (mg/L):	<0.03	<0.03	HACH	BA	JD
Alkalinity (mg/L as $CaCO_3$):	88	84	HACH	BA	JD
Hardness (mg/L as $CaCO_3$):	108	97	HACH	BA	JD
Total Ammonia (mg/L as N):	<0.07	<0.07	DENVER	MF	BA
Conductivity (µmhos-cm, mmhos-cm):	331	337	METTLER	JD	BA

Statistics	
Growth NOEC:	0.125 g/L
Growth LOEC:	0.25 g/L
Growth IC_{20}:	0.199 g/L
Growth IC_{25}:	0.241 g/L
Ctrl % CV:	13.5 %
Dunnetts PMSD:	16.3%
Survival NOEC:	0.5 g/L
Survival LOEC:	1 g/L

Test incubated in : ☑ Incubator # 2

☐ Waterbath #____

Light Intensity : 50 - 100 ft. candles

Photoperiod : 16 light 8 dark

Temperature Range °C:

Incubator # 2 min. 26.0 max. 26.5 mean 26.3

Water bath # ____ min.____ max.____ mean____

Room B246 min. 25.1 max. 25.7 mean 25.4

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

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

Investigators' signatures

James Daniels

Marshall Faircloth

Dave Alcock

Kim M Spencer

Loretta Wolfe

REVIEWER

Comments:

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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: ~~ug/L~~ g/L (circle one)

BA

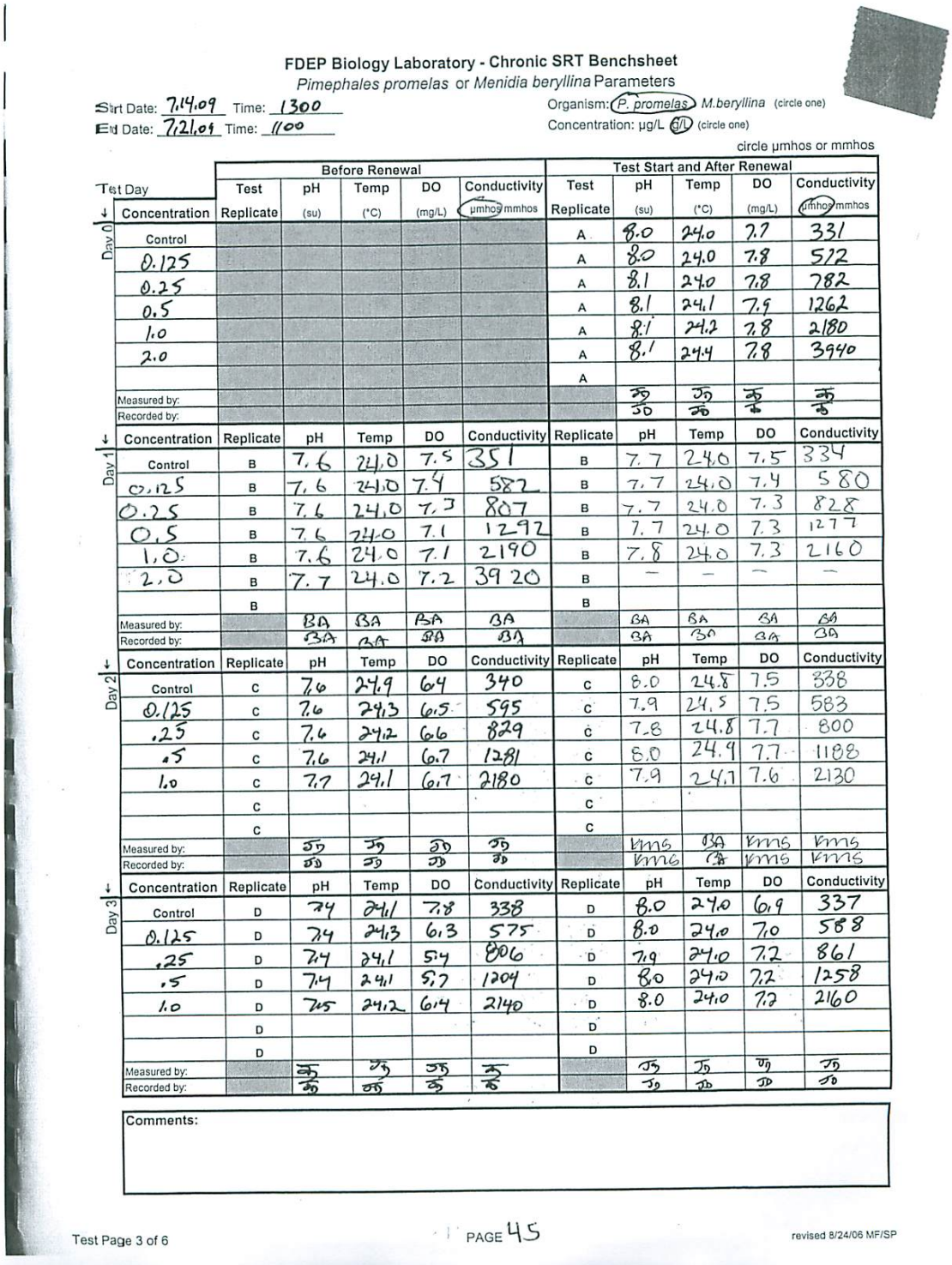
Concentration	Replicate	Chamber	TEST DAY 0	1	2	3	4	5	6	7
Control	A		10	10	10	10	10	10	10	10
	B		10	10	10	10	10	10	10	10
	C		10	10	10	10	10	10	10	10
	D		10	10	10	10	10	10	10	10
0.125	A		10	10	10	10	10	10	10	10
	B		10	10	10	10	10	10	10	10
	C		10	10	10	10	10	10	9 1D	8 1D
	D		10	10	10	10	10	10	9 1D	9
0.25	A		10	10	10	10	10	10	10	10
	B		10	10	10	10	10	10	10	10
	C		10	10	10	10	9 1D	9	9	9
	D		10	10	10	10	10	10	10	10
0.5	A		10	10	10	10	10	10	10	10
	B		10	9 1D	9	8 1D	8	8	7 1D	7
	C		10	10	10	10	10	10	10	10
	D		10	10	10	10	10	10	10	10
1.0	A		10	3 7D	2 1D	2	1 1D	0 1D	—	—
	B		10	2 8D	0 2D	—	—	—	—	—
	C		10	2 8D	1 1D	1	1	0 1D	—	—
	D		10	2 8D	2	2	2	2	1 1D	1
2.0	A		10	0 10D	—	—	—	—	—	—
	B		10	0 10D	—	—	—	—	—	—
	C		10	0 10D	—	—	—	—	—	—
	D		10	0 10D	—	—	—	—	—	—
	A		10							
	B		10							
	C		10							
	D		10							
Loaded by (0 hr): BA		Checked by:		BA	JD	JD	BA	MF	JD	JD
Verified by (0 hr): JD										
		Concentrations prepared by:		JD	JD	JD	JD	JD	JD	—

Comments:

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Appendix C. (continued)



FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or *Menidia beryllina* Parameters

Start Date: 7.14.09 Time: 1300

End Date: 7.21.09 Time: 1100

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

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

circle µmhos or mmhos

Test Day		Before Renewal					Test Start and After Renewal				
	Concentration	Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos) mmhos	Test Replicate	pH (su)	Temp (°C)	DO (mg/L)	Conductivity (µmhos) mmhos
Day 0	Control						A	8.0	24.0	7.7	331
	0.125						A	8.0	24.0	7.8	512
	0.25						A	8.1	24.0	7.8	782
	0.5						A	8.1	24.1	7.9	1262
	1.0						A	8.1	24.2	7.8	2180
	2.0						A	8.1	24.4	7.8	3940
							A				
	Measured by:							JD	JD	JD	JD
	Recorded by:							JD	JD	JD	JD
	Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 1	Control	B	7.6	24.0	7.5	351	B	7.7	24.0	7.5	334
	0.125	B	7.6	24.0	7.4	582	B	7.7	24.0	7.4	580
	0.25	B	7.6	24.0	7.3	807	B	7.7	24.0	7.3	828
	0.5	B	7.6	24.0	7.1	1292	B	7.7	24.0	7.3	1277
	1.0	B	7.6	24.0	7.1	2190	B	7.8	24.0	7.3	2160
	2.0	B	7.7	24.0	7.2	3920	B	—	—	—	—
		B					B				
	Measured by:		BA	BA	BA	BA		BA	BA	BA	BA
	Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA
	Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 2	Control	C	7.6	24.9	6.4	340	C	8.0	24.8	7.5	338
	0.125	C	7.6	24.3	6.5	595	C	7.9	24.5	7.5	583
	.25	C	7.6	24.2	6.6	829	C	7.8	24.8	7.7	800
	.5	C	7.6	24.1	6.7	1281	C	8.0	24.9	7.7	1188
	1.0	C	7.7	24.1	6.7	2180	C	7.9	24.7	7.6	2130
		C					C				
		C					C				
	Measured by:		JD	JD	JD	JD		VMS	BA	VMS	VMS
	Recorded by:		JD	JD	JD	JD		VMS	CB	VMS	VMS
	Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 3	Control	D	7.4	24.1	7.8	338	D	8.0	24.0	6.9	337
	0.125	D	7.4	24.3	6.3	575	D	8.0	24.0	7.0	588
	.25	D	7.4	24.1	5.4	806	D	7.9	24.0	7.2	861
	.5	D	7.4	24.1	5.7	1204	D	8.0	24.0	7.2	1258
	1.0	D	7.5	24.2	6.4	2140	D	8.0	24.0	7.2	2160
		D					D				
		D					D				
	Measured by:		JD	JD	JD	JD		JD	JD	JD	JD
	Recorded by:		JD	JD	JD	JD		JD	JD	JD	JD

Comments:

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Appendix C. (continued)

FDEP Biology Laboratory - Chronic SRT Benchsheet

Pimephales promelas or *Menidia beryllina* Parameters

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

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

circle µmhos or mmhos

Test Day		Before Renewal					After Renewal				
	Test	pH	Temp	DO	Conductivity	Test	pH	Temp	DO	Conductivity
↓ Concentration	Replicate	(su)	(°C)	(mg/L)	(µmhos) mmhos	Replicate	(su)	(°C)	(mg/L)	(µmhos) mmhos
Day 4 Control	A	7.6	24.3	5.9	339	A	7.7	24.2	7.6	343
0.125	A	7.6	24.3	6.1	588	A	7.7	24.0	7.7	571
0.25	A	7.6	24.4	5.9	860	A	7.7	24.0	7.6	819
0.50	A	7.6	24.1	5.3	1270	A	7.7	24.0	7.5	1272
1.0	A	7.6	24.0	5.5	2150	A	7.7	24.0	7.4	2170
	A					A				
	A					A				
Measured by:		BA	BA	BA	BA		BA	BA	BA	BA
Recorded by:		BA	BA	BA	BA		BA	BA	BA	BA
↓ Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 5 Control	B	8.0	25.0	6.9	338	B	8.0	24.8	7.6	331
0.125	B	7.9	25.1	6.9	574	B	8.0	24.8	7.6	561
0.25	B	7.9	25.1	6.9	825	B	8.0	24.8	7.6	798
0.50	B	7.9	25.3	7.0	1269	B	8.0	24.9	7.5	1249
1.0	MF/C	8.0	25.0	7.0	2190	MF/D	8.0	25.0	7.5	2090
	B					B				
	B					B				
Measured by:		MF	MF	MF	MF		MF	MF	MF	MF
Recorded by:		MF	MF	MF	MF		MF	MF	MF	MF
↓ Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 6 Control	C	7.7	24.1	5.6	327	C	7.5	24.6	6.9	350
0.125	C	7.6	24.1	5.7	565	C	7.6	24.4	7.0	559
0.25	C	7.6	24.2	5.7	812	C	7.8	24.5	6.7	752
0.5	C	7.6	24.3	5.5	1269	C	7.8	24.5	6.9	1212
1.0	SD/D	7.7	24.4	5.8	2130	D	7.9	24.6	7.5	2090
	C					C				
	C					C				
Measured by:		SD	SD	SD	SD		kmm	kmm	kmm	kmm
Recorded by:		SD	SD	SD	SD		kmm	kmm	kmm	kmm
↓ Concentration	Replicate	pH	Temp	DO	Conductivity	Replicate	pH	Temp	DO	Conductivity
Day 7 Control	D	7.9	24.4	5.3	331	D				
0.125	D	7.8	24.5	5.4	580	D				
.25	D	7.8	24.3	5.5	779	D				
.5	D	7.8	24.3	5.7	1277	D				
1.0	D	7.9	24.4	6.0	2170	D				
	D					D				
	D					D				
Measured by:		JD	JD	JD	JD					
Recorded by:		JD	JD	JD	JD					

Comments:

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revised 8/24/06 MF/SP

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)
Control	A	9	0.02073	0.02942	0.00869	10	.869
	B	10	0.02411	0.03187	0.00776	10	.776
	C	11	0.02206	0.02928	0.00722	10	.722
	D	12	0.02164	0.02791	0.00627	10	.627
.125	A	13	0.02255	0.02971	0.00716	10	.716
	B	14	0.02152	0.02849	0.00697	10	.697
	C	15	0.02245	0.02782	0.00537	10	.537
	D	16	0.02129	0.02837	0.00708	10	.708
.25	A	17	0.02220	0.02715	0.00495	10	.495
	B	18	0.02057	0.02675	0.00618	10	.618
	C	19	0.02340	0.02865	0.00525	10	.525
	D	20	0.02353	0.02929	0.00576	10	.576
.5	A	21	0.02294	0.02842	0.00548	10	.548
	B	22	0.02255	0.02690	0.00435	10	.435
	C	23	0.02070	0.02587	0.00517	10	.517
	D	24	0.02279	0.02897	0.00618	10	.618
1.0	A	—				10	
	B	—				10	
	C	—				10	
	D	25	0.02069	0.02115	0.00046	10	.046
	A					10	
	B					10	
	C					10	
	D					10	
	A					10	
	B					10	
	C					10	
	D					10	
		Weighed by:	JS	JS			

Comments:

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

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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: 7.2.09 Weighed by: JD

	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	0.02191	@ 0.02191
after Pan 10	0.02191	@ 0.02191
after Pan 15	0.02191	@ 0.02191
after Pan 20	0.02192	@ 0.02191
after Pan 25	0.02191	@ 0.02191
after Pan 30		@
after Pan 35		@
after Pan 40		@
after Pan 45		@
after Pan 48		@

	Measured Value	S-weight Value
S-weights	0.01	@ 0.01
	0.05003	@ 0.05

Balance: Ohaus 250D Ser# 1125481084

S-Weights: BIO-S-Weights-01

Fish + Pan Weights Date: 7.23.09 Weighed by: JD

	Pan 1 wt.	Pan 1 initial wt.
after Pan 5	0.02943	@ 0.02942
after Pan 10	0.02941	@ 0.02942
after Pan 15	0.02940	@ 0.02942
after Pan 20	0.02941	@ 0.02942
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	0.01551	@ 0.02
	0.05003	@ 0.05

Drying Oven ID: VWR #2

Temperature °C: 95

Drying Hours: 8

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

Comments:

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revised 7/16/08 MF

Bioassay Instrument ID

Test ID: Chronic SRT Pimephales promelas Dates: 7-14/7-21-09

METER / DEVICE	ID	SOP	Parameter	Method	√used
YSI Model 58 Dissolved Oxygen Meter	90H018262	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	✓
Thermometer (DO probe)	YSI 5750 SN 05J1720	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	✓
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 Bruce alexander 7-21-09

V 1.1 6/12/08 MF

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Appendix C. (continued)

Ceriodaphnia Survival and Reproduction Test-Reproduction

Start Date:	7/14/2009 12:30	Test ID:	cdpilg709	Sample ID:	FL0001465-NPDES Permit #
End Date:	7/20/2009 14:00	Lab ID:	DEP TOXLAB-FDEP Biology To	Sample Type:	EFF2-Industrial
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	CD-Ceriodaphnia dubia
Comments:	Ceriodaphnia dubia chronic screening bioassay for Pilgrims Pride / Gol				

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	11.000	19.000	18.000	24.000	19.000	17.000	13.000	22.000	21.000	19.000
100	9.000	19.000	8.000	13.000	17.000	15.000	18.000	11.000	12.000	3.000

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
D-Control	18.300	1.0000	18.300	11.000	24.000	21.405	10			
*100	12.500	0.6831	12.500	3.000	19.000	39.956	10	2.890	1.734	3.481

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.962835	0.868	-0.51245	-0.20932
F-Test indicates equal variances (p = 0.48)	1.625634	6.54109		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates significant differences Treatments vs D-Control	3.480629	0.190198	168.2	20.14444	0.009762	1, 18

Larval Fish Growth and Survival Test-7 Day Growth

Start Date:	7/14/2009 13:30	Test ID:	pilgppc709	Sample ID:	FL0001465-NPDES Permit #
End Date:	7/21/2009 11:00	Lab ID:	DEP TOXLAB-FDEP Biology To	Sample Type:	EFF2-Industrial
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	PP-Pimephales promelas
Comments:	P. promelas chronic screening bioassay for Pilgrim's Pride / Gold Kist				

Conc-%	1	2	3	4
D-Control	0.4900	0.5960	0.6500	0.6590
100	0.6130	0.6810	0.7050	0.6870

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
D-Control	0.5988	1.0000	0.5988	0.4900	0.6590	12.969	4			
100	0.6715	1.1215	0.6715	0.6130	0.7050	6.003	4	-1.663	1.943	0.0850

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.898634	0.749	-1.1057	0.609932
F-Test indicates equal variances (p = 0.31)	3.710923	47.46723		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences Treatments vs D-Control	0.085009	0.141977	0.010585	0.003828	0.147379	1, 6

Appendix C. (continued)

Start Date:	7/14/2009 11:00	Test ID:	cdsrt71409	Sample ID:	REF-Ref Toxicant
End Date:	7/20/2009 16:45	Lab ID:	DEP TOXLAB-FDEP Biology To	Sample Type:	NACL-Sodium chloride
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	CD-Ceriodaphnia dubia
Comments:	C. dubia chronic SRT for goldkist				

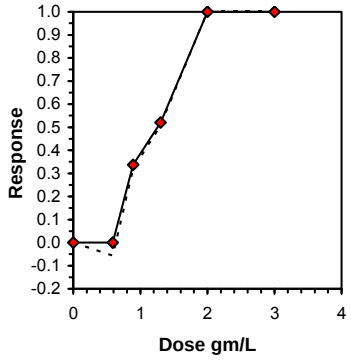
Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	15.000	16.000	21.000	17.000	6.000	18.000	16.000	19.000	19.000	13.000
0.59	18.000	15.000	17.000	15.000	16.000	18.000	16.000	21.000	16.000	17.000
0.89	5.000	18.000	17.000	5.000	7.000	14.000	6.000	4.000	19.000	14.000
1.3	2.000	4.000	10.000	7.000	8.000	18.000	10.000	10.000	0.000	10.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

			Transform: Untransformed					Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Mean	N-Mean
D-Control	16.000	1.0000	16.000	6.000	21.000	26.187	10	16.450	1.0000
0.59	16.900	1.0563	16.900	15.000	21.000	10.603	10	16.450	1.0000
0.89	10.900	0.6813	10.900	4.000	19.000	55.461	10	10.900	0.6626
1.3	7.900	0.4938	7.900	0.000	18.000	64.393	10	7.900	0.4802
2	0.000	0.0000	0.000	0.000	0.000	0.000	10	0.000	0.0000
3	0.000	0.0000	0.000	0.000	0.000	0.000	10	0.000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.983419	0.919	-0.06923	0.076664
Bartlett's Test indicates equal variances (p = 0.01)	10.79846	11.34487		

Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL		Skew
IC05	0.6345	0.0805	0.3085	0.7064	-3.0969
IC10	0.6789	0.0600	0.5980	0.8384	0.3899
IC15	0.7234	0.0673	0.6467	0.9240	1.4815
IC20	0.7678	0.0787	0.6843	0.9751	1.2398
IC25	0.8123	0.0909	0.7142	1.0410	1.0821
IC40	1.0308	0.1650	0.8036	1.3390	0.4425
IC50	1.2556	0.1695	0.8639	1.4491	-0.6158



Appendix C. (continued)

Start Date:	7/14/2009 13:00	Test ID:	ppcsrt709	Sample ID:	REF-Ref Toxicant
End Date:	7/21/2009 23:00	Lab ID:	DEP TOXLAB-FDEP Biology To	Sample Type:	KCL-Potassium chloride
Sample Date:		Protocol:	EPAF 94-EPA/600/4-91/002	Test Species:	PP-Pimephales promelas

Comments: P. promelas SRT concurrent with Pilgrim's Pride July 2009

Conc-gm/L	1	2	3	4
D-Control	0.8690	0.7760	0.7220	0.6270
0.125	0.7160	0.6970	0.5370	0.7080
0.25	0.4950	0.6180	0.5250	0.5760
0.5	0.5480	0.4350	0.5170	0.6180
1	0.0000	0.0000	0.0000	0.0460
2	0.0000	0.0000	0.0000	0.0000

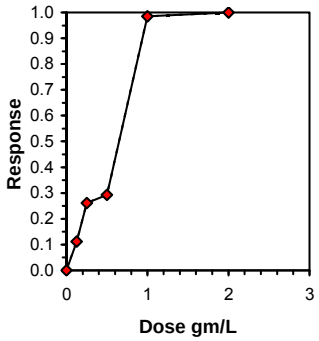
			Transform: Untransformed					Isotonic	
Conc-gm/L	Mean	N-Mean	Mean	Min	Max	CV%	N	Mean	N-Mean
D-Control	0.7485	1.0000	0.7485	0.6270	0.8690	13.524	4	0.7485	1.0000
0.125	0.6645	0.8878	0.6645	0.5370	0.7160	12.845	4	0.6645	0.8878
0.25	0.5535	0.7395	0.5535	0.4950	0.6180	9.841	4	0.5535	0.7395
0.5	0.5295	0.7074	0.5295	0.4350	0.6180	14.325	4	0.5295	0.7074
1	0.0115	0.0154	0.0115	0.0000	0.0460	200.000	4	0.0115	0.0154
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	4	0.0000	0.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.961985	0.868	-0.40717	0.009454
Bartlett's Test indicates equal variances (p = 0.29)	4.971195	13.2767		

Linear Interpolation (200 Resamples)

Point	gm/L	SD	95% CL(Exp)		Skew
IC05*	0.0557	0.0415	0.0062	0.2207	0.8351
IC10*	0.1114	0.0429	0.0124	0.2625	0.3156
IC15	0.1568	0.0520	0.0248	0.3052	1.6930
IC20	0.1990	0.0868	0.0391	0.6948	1.8925
IC25	0.2411	0.1283	0.0534	0.7186	0.7065
IC40	0.5776	0.0383	0.4636	0.6640	-1.3355
IC50	0.6499	0.0285	0.5551	0.7214	-0.2957

* indicates IC estimate less than the lowest concentration



Appendix D. Test Organism Receipts

1300 Blue Spruce Drive, Suite C
Fort Collins, Colorado 80524

AQUATIC BIO SYSTEMS ABS INC.

Toll Free: 800/331-5916
Tel: 970/484-5091 Fax:970/484-2514

ORGANISM HISTORY

DATE: 7/13/09

SPECIES: *Pimephales promelas*

AGE: N/A

LIFE STAGE: Embryo

HATCH DATE: 7/13/09

BEGAN FEEDING: N/A

FOOD: N/A

Water Chemistry Record:	Current	Range
TEMPERATURE:	24°C	--
SALINITY/CONDUCTIVITY:	--	--
TOTAL HARDNESS (as $CaCO_3$):	126 mg/l	--
TOTAL ALKALINITY (as $CaCO_3$):	90 mg/l	--
pH:	8.47	--

Comments:

Facility Supervisor

Appendix E. Chemical Analyses performed on the effluent from the Pilgrim's Pride Facility Outfall D-001, sampled on July 13, 2009.

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:00	Effluent	AGP/LN	Algal Growth Potential	133	A	mg DryWt/L	0.3	0.9
7/13/2009 12:00	Effluent	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	2.8	A	mg/L	0.2	2
7/13/2009 12:00	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1	U	ug/L	1	3
7/13/2009 12:00	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	2.3	I	ug/L	1.4	4.2
7/13/2009 12:00	Effluent	Overflow	Fecal Coliforms-Membrane Filter	2	B	#/100 mL	2	
7/13/2009 12:00	Effluent	Metals	Copper	6.16		ug/L	0.5	0.5
7/13/2009 12:00	Effluent	Metals	Chromium	0.3	U	ug/L	0.3	1.2
7/13/2009 12:00	Effluent	Metals	Calcium	72.6		mg/L	0.075	0.3
7/13/2009 12:00	Effluent	Metals	Iron	30	U	ug/L	30	120
7/13/2009 12:00	Effluent	Metals	Zinc	21		ug/L	5	20
7/13/2009 12:00	Effluent	Metals	Aluminum	60	U	ug/L	60	240
7/13/2009 12:00	Effluent	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
7/13/2009 12:00	Effluent	Metals	Lead	0.2	U	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Metals	Silver	0.025	U	ug/L	0.025	0.1
7/13/2009 12:00	Effluent	Metals	Magnesium	85.2		mg/L	0.04	0.16
7/13/2009 12:00	Effluent	Metals	Selenium	0.33	I	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Metals	Nickel	2.4		ug/L	0.25	1
7/13/2009 12:00	Effluent	Metals	Arsenic	1.4		ug/L	0.25	1
7/13/2009 12:00	Effluent	Nutrients	Specific_Conductance	1390		umhos/cm	2	8
7/13/2009 12:00	Effluent	Nutrients	Kjeldahl Nitrogen	1.7		mg N/L	0.16	0.4
7/13/2009 12:00	Effluent	Nutrients	Ammonia-N	0.056		mg N/L	0.01	0.02
7/13/2009 12:00	Effluent	Nutrients	NO2NO3-N	19		mg N/L	0.4	1
7/13/2009 12:00	Effluent	Nutrients	O-Phosphate-P	6.6		mg P/L	0.4	1
7/13/2009 12:00	Effluent	Nutrients	TSS	4	U	mg/L	4	16
7/13/2009 12:00	Effluent	Nutrients	Total-P	6.9	A	mg P/L	0.08	0.2
7/13/2009 12:00	Effluent	Overflow	Oil and Grease	1.4	U	mg/L	1.4	5
7/13/2009 12:00	Effluent	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Heptachlor	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Chlordane	0.2	U	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Pesticides	DDT-p,p'	0.03	U	ug/L	0.03	0.12
7/13/2009 12:00	Effluent	Pesticides	Toxaphene	0.75	U	ug/L	0.75	3

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:00	Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
7/13/2009 12:00	Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
7/13/2009 12:00	Effluent	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
7/13/2009 12:00	Effluent	Pesticides	DDE-p,p'	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Delta-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Endosulfan I	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Gamma-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Fonofos	0.1	UJ	ug/L	0.1	0.4
7/13/2009 12:00	Effluent	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
7/13/2009 12:00	Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
7/13/2009 12:00	Effluent	Pesticides	Endosulfan Sulfate	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Methoxychlor	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
7/13/2009 12:00	Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
7/13/2009 12:00	Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
7/13/2009 12:00	Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
7/13/2009 12:00	Effluent	Pesticides	Aldrin	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Endrin	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
7/13/2009 12:00	Effluent	Pesticides	DDD-p,p'	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Dieldrin	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Heptachlor Epoxide	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
7/13/2009 12:00	Effluent	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
7/13/2009 12:00	Effluent	Pesticides	Endosulfan II	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Endrin Aldehyde	0.02	U	ug/L	0.02	0.08
7/13/2009 12:00	Effluent	Pesticides	Bromacil	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Pesticides	Butylate	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:00	Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
7/13/2009 12:00	Effluent	Pesticides	Alpha-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Beta-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:00	Effluent	Pesticides	Fenamiphos	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:00	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	UJ	ug/L	39	160
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Acenaphthylene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Chrysene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Dimethyl phthalate	9.8	U	ug/L	9.8	39
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Isophorone	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Phenanthrene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	59
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzidine	98	U	ug/L	98	390
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Naphthalene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	7.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Fluoranthene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Fluorene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	9.8	U	ug/L	9.8	39
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Hexachlorobenzene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	7.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2-Nitrophenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Acenaphthene	0.98	U	ug/L	0.98	3.9

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	59
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Diethyl phthalate	0.98	UJ	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Pyrene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	7.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Anthracene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Phenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	15	UJ	ug/L	15	59
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	2-Chlorophenol	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	4.9	U	ug/L	4.9	20
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	4.9	UJ	ug/L	4.9	20
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	0.98	UJ	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.98	U	ug/L	0.98	3.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	7.9
7/13/2009 12:00	Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
7/13/2009 12:00	Effluent	Field Parameter	Dissolved Oxygen	11.06		mg/L		
7/13/2009 12:00	Effluent	Field Parameter	Temperature	30.13		C		
7/13/2009 12:00	Effluent	Field Parameter	pH	7.93				
7/13/2009 12:00	Effluent	Field Parameter	Sample Depth	0.2		m		
7/13/2009 12:00	Effluent	Field Parameter	Specific Conductance	1429		umhos/cm		
7/13/2009 12:38	Tox sample	Toxicology	Bioassay-Chronic-Scrn-FW-C.dubia, NOEC	100	K	NOEC		
7/13/2009 12:38	Tox sample	Toxicology	Bioassay-Chronic-Scrn-FW-Fish, NOEC	100		NOEC		
7/13/2009 12:30	Blank	Metals	Nickel	0.25	U	ug/L	0.25	1
7/13/2009 12:30	Blank	Metals	Selenium	0.2	U	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Metals	Iron	30	U	ug/L	30	120
7/13/2009 12:30	Blank	Metals	Aluminum	60	U	ug/L	60	240

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:30	Blank	Metals	Zinc	5	U	ug/L	5	20
7/13/2009 12:30	Blank	Metals	Arsenic	0.25	U	ug/L	0.25	1
7/13/2009 12:30	Blank	Metals	Lead	0.2	U	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Metals	Calcium	0.075	U	mg/L	0.075	0.3
7/13/2009 12:30	Blank	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
7/13/2009 12:30	Blank	Metals	Copper	0.5	U	ug/L	0.5	0.5
7/13/2009 12:30	Blank	Metals	Chromium	0.3	U	ug/L	0.3	1.2
7/13/2009 12:30	Blank	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
7/13/2009 12:30	Blank	Metals	Silver	0.025	U	ug/L	0.025	0.1
7/13/2009 12:30	Blank	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
7/13/2009 12:30	Blank	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
7/13/2009 12:30	Blank	Nutrients	Total-P	0.004	U	mg P/L	0.004	0.01
7/13/2009 12:30	Blank	Nutrients	TSS	4	U	mg/L	4	16
7/13/2009 12:30	Blank	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
7/13/2009 12:30	Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
7/13/2009 12:30	Blank	Overflow	Oil and Grease	1.4	U	mg/L	1.4	5
7/13/2009 12:30	Blank	Pesticides	Ametryn	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Endosulfan II	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Pesticides	Simazine	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	DDD-p,p'	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Butylate	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
7/13/2009 12:30	Blank	Pesticides	Metolachlor	0.51	U	ug/L	0.51	2
7/13/2009 12:30	Blank	Pesticides	Beta-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	Chlordane	0.2	U	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	DDT-p,p'	0.031	U	ug/L	0.031	0.12
7/13/2009 12:30	Blank	Pesticides	Dieldrin	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Endrin Aldehyde	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	Methoxychlor	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Toxaphene	0.77	U	ug/L	0.77	3.1
7/13/2009 12:30	Blank	Pesticides	Atrazine	0.051	U	ug/L	0.051	0.2

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:30	Blank	Pesticides	Diazinon	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
7/13/2009 12:30	Blank	Pesticides	Alpha-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	Endrin	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Gamma-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	Heptachlor	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	Alachlor	0.61	U	ug/L	0.61	2.4
7/13/2009 12:30	Blank	Pesticides	Bromacil	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	Naled	0.82	U	ug/L	0.82	3.3
7/13/2009 12:30	Blank	Pesticides	Phorate	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Aldrin	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	DDE-p,p'	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Delta-BHC	0.01	U	ug/L	0.01	0.04
7/13/2009 12:30	Blank	Pesticides	Chlorpyrifos Ethyl	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Pesticides	Ethion	0.051	U	ug/L	0.051	0.2
7/13/2009 12:30	Blank	Pesticides	Fenamiphos	0.2	UJ	ug/L	0.2	0.8
7/13/2009 12:30	Blank	Pesticides	Fonofos	0.1	UJ	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Pesticides	Metalaxyl	0.26	U	ug/L	0.26	1
7/13/2009 12:30	Blank	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Pesticides	Endosulfan I	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Endosulfan Sulfate	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Heptachlor Epoxide	0.02	U	ug/L	0.02	0.08
7/13/2009 12:30	Blank	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
7/13/2009 12:30	Blank	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
7/13/2009 12:30	Blank	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	11	U	ug/L	11	43
7/13/2009 12:30	Blank	Priority Organic Pollutants	2-Nitrophenol	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Anthracene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Isophorone	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	65
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	1.1	U	ug/L	1.1	4.3

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:30	Blank	Priority Organic Pollutants	Dimethyl phthalate	11	U	ug/L	11	43
7/13/2009 12:30	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.2	U	ug/L	2.2	8.6
7/13/2009 12:30	Blank	Priority Organic Pollutants	Pyrene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	43	UJ	ug/L	43	170
7/13/2009 12:30	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Chrysene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Diethyl phthalate	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Hexachlorobutadiene	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	Naphthalene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2-Chlorophenol	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Acenaphthene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	16	U	ug/L	16	65
7/13/2009 12:30	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	1.1	UJ	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Fluorene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Nitrobenzene	2.2	U	ug/L	2.2	8.6
7/13/2009 12:30	Blank	Priority Organic Pollutants	Pentachlorophenol	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	16	U	ug/L	16	65
7/13/2009 12:30	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	5.4	U	ug/L	5.4	22
7/13/2009 12:30	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	5.4	UJ	ug/L	5.4	22
7/13/2009 12:30	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Hexachlorobenzene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2.2	U	ug/L	2.2	8.6
7/13/2009 12:30	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzo(a)pyrene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2-Chloronaphthalene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.2	U	ug/L	2.2	8.6

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
7/13/2009 12:30	Blank	Priority Organic Pollutants	Acenaphthylene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzidine	110	U	ug/L	110	430
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Phenanthrene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Benzo(a)anthracene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Fluoranthene	1.1	U	ug/L	1.1	4.3
7/13/2009 12:30	Blank	Priority Organic Pollutants	Hexachloroethane	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.2	U	ug/L	3.2	13
7/13/2009 12:30	Blank	Priority Organic Pollutants	Phenol	1.1	U	ug/L	1.1	4.3
7/15/2009 10:00	Tox #2	Field Parameter	Specific Conductance	1581		umhos/cm		
7/15/2009 10:00	Tox #2	Field Parameter	pH	7.77				
7/15/2009 10:00	Tox #2	Field Parameter	Temperature	30.17		C		
7/15/2009 10:00	Tox #2	Field Parameter	Sample Depth	0.1		m		
7/15/2009 10:00	Tox #2	Field Parameter	Dissolved Oxygen	7		mg/L		
7/17/2009 12:26	Tox #3	Field Parameter	Sample Depth	0.2		m		
7/17/2009 12:26	Tox #3	Field Parameter	Specific Conductance	1477		umhos/cm		
7/17/2009 12:26	Tox #3	Field Parameter	pH	7.78				
7/17/2009 12:26	Tox #3	Field Parameter	Total Residual Chlorine	0.009		mg/L		
7/17/2009 12:26	Tox #3	Field Parameter	Dissolved Oxygen	16.72		mg/L		
7/17/2009 12:26	Tox #3	Field Parameter	Temperature	30.34		C		

Appendix F. Facility Summary

State of Florida
Department of Environmental Protection
Facility Introduction & Summary

PART I: Information gathered prior to sampling event	
Prepared By: Brian Kirts	Contact Number: 904-807-3340
Facility Name (as it appears on permit): Pilgrim's Pride	Former Names: Goldkist
NPDES Permit Number: FL0001465	Permit Expiration Date: 4/20/2008 (permit application in house)
Physical Address: U.S. Highway 90 West Live Oak, FL 32060	
District: NED	County: Suwannee
Function of Facility: Gold Kist is a poultry processing and rendering facility. Wastewater is generated from poultry processing, by-products processing, the hatchery, sanitary wastewater, water treatment plant filtrate, sanitation, and storm water.	
Facility Type: Industrial Wastewater	Permitted Capacity (MGD): 1.5 MGD Monthly average and 1.7 MGD Daily Max
Mean Flow for previous 12 months for all EXTERNAL outfalls listed in permit (list date range including months): 1.4MGD for D-001	
If applicable, Mean Flow for previous 12 months for REUSE outfall(s) (list date range including months): NA	
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): **D-001 at Latitude 30 degrees 21'56''N Longitude 83 Degrees 11'30"W**
Description of Permitted Outfall(s): **D-001 to the Suwannee River**
Description of Treatment Process (if multiple discharge points, include a detailed map or diagram of facility): **Primary and secondary screening, chemical coagulation/flocculation, dissolved air floatation, a 15MG lined covered anaerobic lagoon/flow equalization basin, activated sludge, secondary clarification, stabilization/storage pond, pH adjustment, sand filtration, chlorination/dechlorination, aerobic digestion and land application of the digested sludge by spray irrigation**

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	1.70	----	1.50			Continuous	Totalizer/Recorder	EFF-1	
BOD5-day	mg/L	Report	----	----			Monthly	24-hour composite	Influent	
BOD5-day	mg/L	24.3	15.0	18.0			Weekly	24-hour composite	EFF-1	
BOD5-day	Lbs/day	211	----	156			Weekly	Calculated, See Part I.A.9	EFF-1	
TSS	mg/L	Report	----	----			Monthly	24-hour composite	Influent	
TSS	mg/L	46.2	20.0	25.5			Weekly	24-hour composite	EFF-1	
TSS	Lbs/day	401	----	221			Weekly	Calculated, See Part I.A.9	EFF-1	
TKN	mg/L	15	----	10.0			Weekly	24-hour composite	EFF-1	
TKN	Lbs/day	130	----	87			Weekly	Calculated, See Part I.A.9	EFF-1	
TKN	mg/L	Report	----	----			Monthly	Grab	SWD-1 and SWU-1	
Total Ammonia as N	mg/L	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
Total Ammonia as N	mg/L	Report	----	----			Monthly	Grab	SWD-1 and SWU-1	
Temperature	Degrees C	Report	----	----			Weekly	Grab	EFF-1	
Temperature	Degrees C	Report	----	----			Monthly	Grab	SWD-1 and SWU-1	
Unionized Ammonia as NH3	mg/L	0.02	----	----			Weekly	Calculated, See Part I.A.3.	EFF-1	
Unionized Ammonia as NH3	mg/L	Report	----	----			Monthly	Calculated, See Part I.A.3.	SWD-1 and SWU-1	
Dissolved Oxygen	mg/L	5.0 daily/min		5.0 (min)			Weekly	Grab	EFF-1	
Dissolved Oxygen	mg/L	Report (daily min)	----	----			Monthly	Grab	SWD-1 and SWU-1	
Total Nitrogen as N	mg/L	Report	Report	Report			Weekly	24 hour composite	EFF-1	
Total Nitrogen as N	lb/day	Report	313.0	Report			Weekly	Calculated	EFF-1	
Total Nitrogen as N	mg/L	Report	----	Report			Monthly	Grab	SWD-1 and SWU-1	
Nitrate+Nitrite (NO3) as N	mg/L	Report		Report			Weekly	Grab	EFF-1	
Nitrate+Nitrite (NO3) as N	mg/L	Report	----	Report			Monthly	Grab	SWD-1 and 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
Total Phosphorus as P	mg/L	Report	----	Report			Monthly	24 hour composite	EFF-1	
Total Phosphorus as P	mg/L	Report	----	Report			Monthly	Grab	SWD-1 and SWU-1	
Oil and Grease	mg/L	5.0		5.0			Weekly	Grab	EFF-1	
Total Residual Chlorine	mg/L	0.01	----				Weekly	Grab	EFF-1	
Fecal Coliform	#/100mL	200	----				Weekly	Grab	EFF-1	
***Specific Conductance	umho/cm	Report		Report			Every 2 Weeks	24-hour composite	EFF-1	
pH	S.U.	6.0/8.5		6.0/8.5			Weekly	Grab	EFF-1	
pH	S.U.	Report		Report			Monthly	Grab	SWD-1 and SWU-1	
**Biological Integrity						Report	Annually	See Part I.A.12	Request a location for DEP Approval	
Acute Whole Effluent Toxicity	%	The LC50 shall not be less than 100% effluent					Quarterly	24-hour composite	EFF-1	

Appendix F. (continued)

PART I: Continued										
List <u>current</u> 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**	**%**	**The NOEC shall not be less than 100% effluent.**					**** Quarterly**	**24-hour composite**	**EFF-1**	

Appendix F. (continued)

PART I: Continued

Receiving Waters:	Classification (indicate whether fresh or marine):
Suwannee River	Class III Outstanding Florida Surface Water (Fresh)

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

The permittee shall conduct 96-hour acute static-renewal toxicity tests using *Ceriodaphnia dubia* (water flea) and *Cyprinella leedsi* (bannerfin shiner). All tests shall be conducted using a 24-hour composite sample. The toxicity tests specified above shall be conducted using a control (0% effluent) and a test concentration of 100% final effluent. These tests are referred to as "routine" tests. No salinity adjustment

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

Memorandum of Agreement

Submit detailed anoxic system design plan for reduction of Total N to approximately 50 percent
Completion of installation of anoxic system for the total N removal of 50%
Submit plan for achieving total N reduction to a annual average of 313 lb/N
Submit land application feasibility study
Complete construction of total N reduction system
Achieve total N reduction to 313 lb/N annual average
Submit Suwannee River Biointegrity Plan. Monitoring shall begin no later than 6/6/2006
Facility shall comply with specific conductivity limits
Facility shall submit annual progress reports to achieve compliance

Facility Mixing Zone Details (if applicable):
NA

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

Date	Parameter and Units	Limit	Result
Nov 2008	Routine Test 7 Day	100	<100
Dec 2008	Ceriodaphnia Test %	100	50
	Additional Test 7 day		
August 2008	Ceriodaphnia test %	1.52	1.50
	Daily Flow MGD		

Describe previous or current Enforcement Actions (including WLs):

Previous inspection letter was found to be significantly out of compliance due to facilities inability to meet specific conductance requirements. The facility has since been CWOED with the condition that the facility continues to seek ways to meet specific conductance requirements.

Describe any violations or problems noted in previous inspection:

Failing to meet toxicity requirements
DO calibrations records not being maintained
lot numbers and expiration dates for buffers were not being recorded
BMP's need to be better communicated with employees
generators not tested on a routine basis
solids discharging over clarifier weir
SCBA not available for disinfection

Appendix F. (continued)

Discuss whether DMR trends within previous five years are improving or declining:
Additional Comments (this should include a trend of the Effluent, i.e. if the facility is now Reuse):

PART II: Sampling Event Information	
Date(s) sample collected:	**Sampler(s):**
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**	

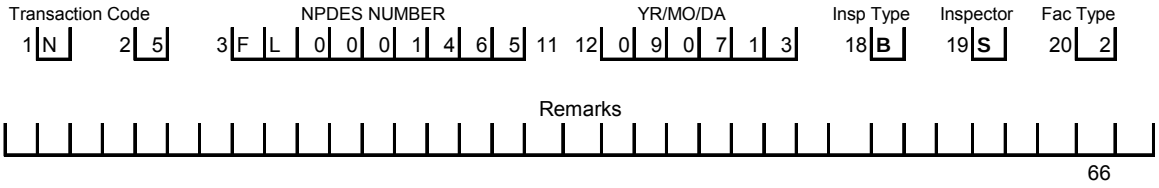
Appendix F. (continued)

Describe any conditions, difficulties or abnormal events that occurred during the sample collection and any other additional comments here:

Appendix G. EPA End Sheet

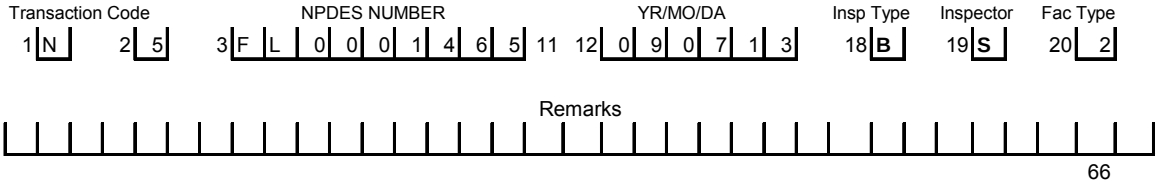
The Bioassay of the Pilgrims Pride facility effluent sampled on July 13, 15 and 17, 2009. NPDES #FL0001465.

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



The Priority Pollutants Analysis of the Pilgrims Pride facility effluent sampled on July 13, 2009. NPDES #FL0001465.

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



Biological Analyses of the Pilgrims Pride facility effluent sampled on July 13, 2009. NPDES #FL0001465.

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

