EXHIBIT

J

FOLDER

3

Pt. 2

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 11/10/08 To 11/16/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert M. La Bruzzo 12/04/08
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 11/17/08 To 11/23/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert M. Fabrizio 12/04/08
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 11/24/08 To 11/30/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert F. Bruggeo 12/04/08
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 12/1/08 To 12/7/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Scholtz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert Va Bunzo 09-01-05
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 12/8/08 To 12/14/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Scholtz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Roberto Bruzzo 09-01-05
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 12/15/08 To 12/21/08

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert La Bruzzo 09-01-05
Signature of Principal Officer or Authorized Agent / Date

TOXICITY TEST
FOR
OMEGA PROTEIN
Outfall 002
Q4 2008

Submitted to:

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

December 19, 2008

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Tina Paugh (Laboratory Manager)

BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg,VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

December 19, 2008

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Dear Mr. Schultz:

Enclosed are the results of the toxicity test which Biological Monitoring, Inc. (BMI) recently performed for Omega Protein. The following table summarizes your results:

SAMPLE	TEST	RESULTS	Pass/Fail*	Next Step (if any)
Outfall 002	SA Mb	LC50 > 100% TUa < 1.0	Pass	N/A

* Pass = Test results were in compliance with biological monitoring requirements or produced Toxic Unit (TU) values that were equal to or below the appropriate WET limits.

* Fail = Test results were not in compliance with biological monitoring requirements or produced TU values that were above the appropriate WET limits.

BMI thanks you for the opportunity to provide your group with our services.

Sincerely,

Tina Paugh
Laboratory Manager

enc: as stated

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP120308-1

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Static Acute

Organism Age at Start of Test: 4 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Date and Time: From 12/01/08 @ 1300 to 12/02/08 @ 1300

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily live rinsed Artemia

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/03/08

Time: 1600

End of Test: Date: 12/05/08

Time: 1620

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #: VA0003867**		
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)		**Date**	**Time**
Experiment ID	OMP120308-1	**Start Test**	12/03/08	1600
Sample Tested	Outfall 002	**End Test**	12/05/08	1620

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	24	25	6.82	5.19	4.45	8.43	7.85	7.67	25	25	100
6.25	25	24	25	6.85	4.73	4.64	8.28	7.92	7.78	25	25	100
12.5	25	24	25	6.89	4.75	4.85	8.30	7.98	7.87	25	25	100
25	25	24	25	6.96	5.51	5.44	8.31	8.13	8.08	25	25	95
50	25	24	25	7.17	6.23	5.78	8.23	8.22	8.24	25	25	100
100	25	24	25	8.21	6.89	5.82	8.12	8.30	8.43	25	25	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100%	1.0	N/A

COMMENTS: Raw sample OMP120308 was salinated to 25ppt with Crystal Sea Bioassay Mix.

BIOLOGICAL MONITORING, INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMP111708-1~~ OMP120308-1 CRP
Effluent/Sample: OMP120308
NPDES#: VA0003867
Sample Container: PE
Client: Omega Protein
Project Scientist: C. Pharyh, J. Berezuzig
Outfall/Station No. 002
QC Officer: WM

Sample Type:
Grab: ____
Collection Date: ____ Time: ____
Composite: X
Collected From: Date: 12/1/08 Time: 1300
Collected To: Date: 12/2/08 Time: 1300

Test Organism:
Species: M. bahia
Source: MBL
Batch#: MBL-120208-3
Age: 4 days
No. of organisms/con. 20

Test Mode: Static Acute
Test Start Date: CRP ~~11/19/08~~ 12/3/08 Time: 1600
Test End Date: 12/5/08 Time: 1620
Test Temperature: 25 ±1°C
Dilution Water Used: SS
Test Duration: 48 hr
Waterbath/Shelf#: 2/3
Temp. of Org. Stock Solution: 25°C

Con. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.82	5.19	4.45			8.43	7.85	7.67			25	25	25			25	24	25		
	B	10	10	10																						
6.25	A	10	10	10			6.85	4.73	4.64			8.28	7.92	7.78			25	25	25			25	24	25		
	B	10	10	10																						
12.5	A	10	10	10			6.89	4.75	4.85			8.30	7.98	7.87			25	25	25			25	24	25		
	B	10	10	10								~~8.57~~ CRP														
25	A	10	*	9			6.96	5.51	5.44			8.31	8.13	8.08			25	25	25			25	24	25		
	B	10	*	10								8.[illegible]														
50	A	10	*	10			7.17	6.23	5.78			8.23	8.22	8.24			25	25	25			25	24	25		
	B	10	*	10																						
100	A	10	*	10			8.21	6.89	5.82			8.12	8.20	8.13			25	25	25			25	24	25		
	B	10	*	10																						
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: ~~OMP111908-1~~ CRP OMP120308-1 Test containers used: PP Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 2L, 500mL, 100mL pipet (s): _____

volumetric flask (s): _____ other _____

Concentration (%) mg/L Other	Diluent mL	Effluent mL	Total
0	1000	0	1000mL
6.25	937.50	62.5	↓
12.5	875	125	↓
25	750	250	↓
50	500	500	↓
100	0	1000	↓

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): < 0.1 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 450 mL
Water Depth Constant: ✓
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2X
Fed irregularly (describe) _____
Type of food: live rinsed Artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: Raw Sample OMP120308 was salinated to 25ppt with crystal sea salt
* too turbid to count
LC 50 >100%

Sample A

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions. 11414

1. Client name Omega Protein
2. Sampler's name Ted Schultz
3. Sample source Lagoon
4. Outfall/station ØØ2
5. Purchase order no. _____
6. Affiliation Employee
7. NPDES permit no./County VAØØØ3867
8. Test period for which data is being submitted: 3rd Q
9. *Sample relinquished by:* Ted Schultz / 12/2/08 *Date; Received by:* _____ / _____ *Date;*

Sample relinquished by: _____ / _____ *Date; Received by:* _____ / _____ *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab _____
    - Date collected _____
    - Time collected _____
    - Volume _____
    - Composite X
    - Composite type 24HC
    - Collection period: from 12/1/08 (date) 13:00 (time) to 12/2/08 (date) 13:00 (time)
11. Flow during sampling _____
12. Type of container _____
13. Number of containers shipped _____
14. No. of subsamples _____
15. Frequency _____
16. Volume 1 gal

Condition of Effluent at Time of Collection

17. pH 6.8
18. Chlorine _____
19. Temperature:
    - At collection point _____
    - In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
    - Chlorinated _____
    - Dechlorinated _____
    - Unknown _____
    - Dechlorination method _____

Shipping Information

21. Method of shipment UPS
22. Date shipped 12/2/08
23. Time 15:30
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by* Ted Schultz *Date* 12/2/08 *Time* 14:15

Instructions to Lab

26. Type of test(s) to be performed 48 hr Tox (Static Acute)
27. Should BMI dechlorinate the sample (Yes or No) NO
28. Should ammonia be measured? (Yes or No) No
29. Comments _____

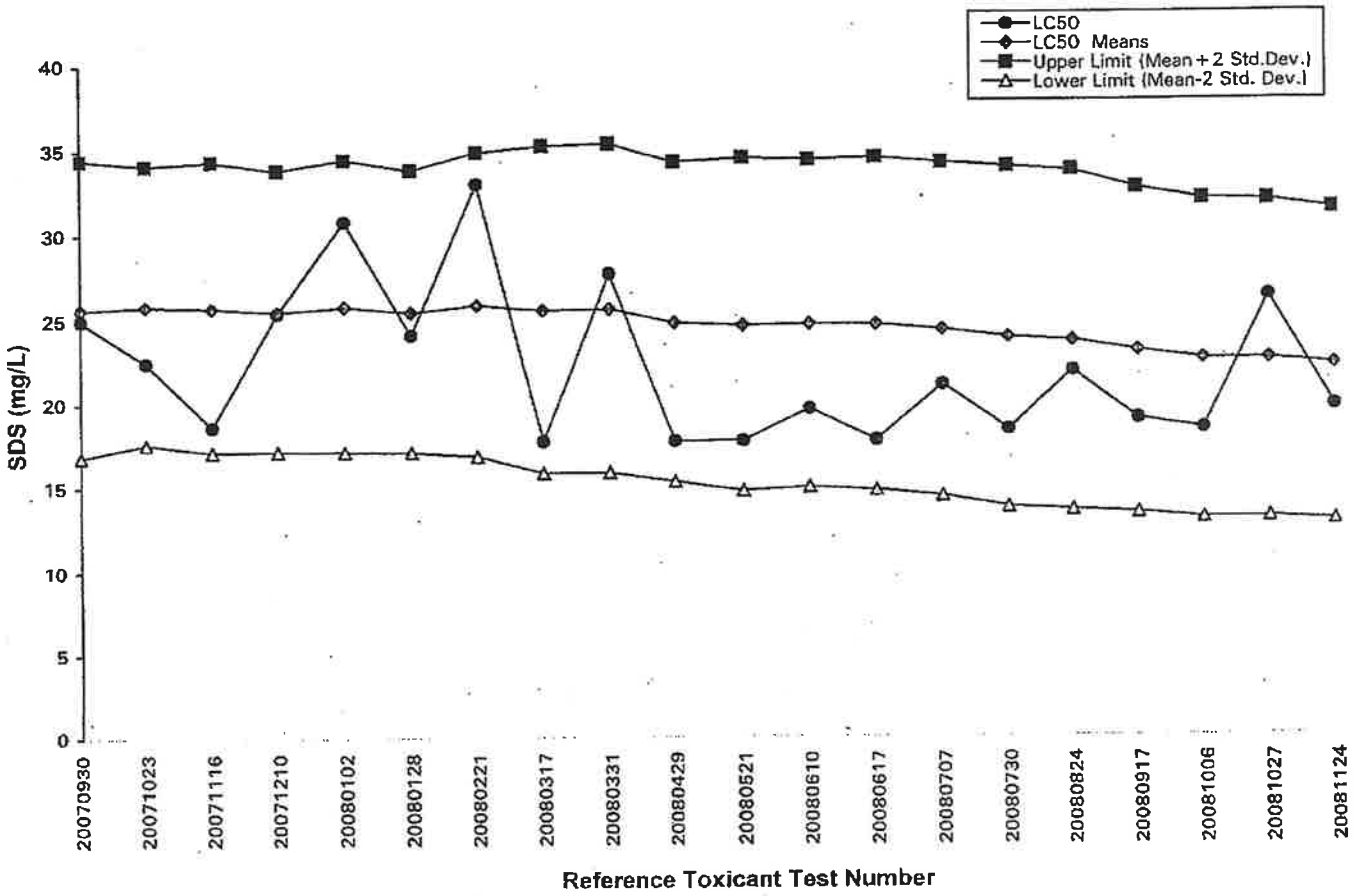
30. I certify that the above information is correct Ted Schultz (Signature) 12/2/08 (Date)

For BMI Use Only

Alk 162
Hard 1600
BMI Sample ID# OMP120308-2 *Received by* CRP *Date* 12/3/08 *Time* 1040
Upon arrival at BMI: Custody seal ✓ Temperature 10°C pH 8.04 Chlorine <0.1 DO 7.16
On ice? ✓ Salinity 5 ppt Conductivity —
Visual description green in color, slight fish odor Sample refrigerated ✓
Test ID number(s) OMP120308-1

C:\wpdocs\labforms\epicol2.frm (V.1194)

STANDARD REFERENCE TOXICANT (SODIUM DODECYL SULFATE) CONTROL CHART FOR *Mysidopsis bahia* ACUTE TOXICITY TESTS CONDUCTED AT MARINCO BIOASSAY LABORATORY, INC.



BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

December 23, 2008

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Dear Mr. Schultz:

Enclosed are the results of the toxicity tests which Biological Monitoring, Inc. (BMI) recently performed for Omega Protein. The following table summarizes your results:

SAMPLE	TEST	RESULTS	Pass/Fail*	Next Step (if any)
Outfall 001	STC Cv	NOEC Survival = 100% NOEC Growth = 100% TUc = 1.0 IC25 > 100% (Growth)	Pass	N/A
	STC Mb	NOEC Survival = 12.5% NOEC Growth = 12.5% TUc = 8.0 NOEC Fecundity = 100% TUc = 1.0 IC25 > 100% (Growth) IC25 > 100% (Fecundity)	Pass	N/A
	SA Cv	LC50 > 100% TUa = 1.0	Pass	N/A
	SA Mb	LC50 > 100% TUa = 1.0	Pass	N/A

* Pass = Test results were in compliance with biological monitoring requirements or produced Toxic Unit (TU) values that were equal to or below the appropriate WET limits.

* Fail = Test results were not in compliance with biological monitoring requirements or produced TU values that were above the appropriate WET limits.

BMI thanks you for the opportunity to provide your group with our services.

Sincerely,

Tina Paugh
Laboratory Manager

enc: as stated

TOXICITY TESTS
FOR
OMEGA PROTEIN
Outfall 001 – December 2008

Submitted to:

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

December 23, 2008

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Tina Paugh (Laboratory Manager)

BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg,VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

December 23, 2008

This letter is in regards to Omega Protein's fourth quarter WET toxicity testing required for their NPDES permit. The fourth quarter WET toxicity testing for Outfall 001 was scheduled to start on Wednesday December 3rd 2008. However, the weather prevented processing and we were not able to obtain a sample. Therefore, the test was rescheduled to start on Friday December 5th. BMI's organism supplier was not able to ship organisms due to the fact of snow. The test was then rescheduled for Saturday December 6th 2008. Under normal circumstances the test would have been rescheduled for the following week in order to ensure that samples were used in the correct time frame. However, Omega Protein was scheduled to shut down on December 12th 2008, so the fourth quarter WET toxicity testing had to be done in order to meet NPDES permit requirements.

The first sample was collected from 12/5/08 (0700) to 12/6/08 (0700) and was picked up by BMI on Saturday December 6th 2008. This sample was used on 12/6/08 (1400), 12/7/08 (1400), and 12/8/08 (1530). The sample was 80 hours old on 12/8/08 instead of the required 72 hours. The second sample was collected from 12/8/08 (0600) to 12/9/08 (0600) and was also picked up by BMI on Tuesday December 9th 2008. This sample was used on 12/9/08 (1600), 12/10/08 (1545), and 12/11/08 (1500). This sample was also was also 80 hours old on 12/11/08 instead of the required 72 hours. The final sample was collected from 12/10/08 (1400) to 12/11/08 (1400) and was shipped via UPS for delivery on Friday December 12th 2008. This sample was used on 12/12/08 (1530) and meets the required 72 hour time frame.

If you any questions regarding this letter feel free to contact me by phone at 540-953-2821 or by e-mail at cpaugh@biomon.com. Thank you.

Sincerely,

Tina Paugh
Laboratory Manager

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP100808-1

Test Organism: *Cyprinodon variegatus*

Test Type: Short Term Chronic

Organism Age at Start of Test: <24 hrs

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

From 12/05/08 @ 0700 to 12/06/08 @ 0700;
From 12/08/08 @ 0600 to 12/09/08 @ 0600;
From 12/10/08 @ 1400 to 12/11/08 @ 1400;

Sample Collector: Ted Shultz

Delivered by: UPS & Hand

Test Solution Renewal Frequency: Daily

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4

No. of Organisms per Replicate: 10

Feeding prior to test: Not fed

Feeding Regime: Live rinsed Artemia 2x daily

Chamber Size: 600 mL PP

Test Volume: 500 mL

Photo Period: 16h light/8h dark

Test Duration: 7 d

Start of Test: Date: 12/06/08

Time: 1400

End of Test: Date: 12/13/08

Time: 1300

Equipment:
- pH Meter: SA 720 (A)
- DO Meter: YSI 58 (b)
- SCT Meter:YSI 33 (A)
- °C Measurement: Calibrated Thermometer
- Salinity: SCT Meter
- Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. EPA-821-R-02-014.

BIOLOGICAL MONITORING, INC.
Chronic Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867		
Test Organism	*Cyprinodon variegatus*		Date	Time
Experiment ID	OMP120608-1	Start Test	12/06/08	1400
Sample Tested	Outfall 001	End Test	12/13/08	1300

RESULTS

Water Chemistry Analyses Survival and Reproduction
Initial (Range)

Conc. (%)	Temp. (°C)		D.O. (mg/L)		pH (SU)		Salinity (0/00)		Survival (%)		Mean Weight (mg)
	0h	Range	0h	Range	0h	Range	0h	Range	96h	7d	
0	25	25	6.59	4.85-6.77	8.11	7.54-8.17	25	25	100	100	0.988
0.02	25	25	6.61	4.85-6.71	8.16	7.57-8.17	25	25	100	100	1.049
0.2	25	25	6.62	4.94-6.74	8.18	7.58-8.18	25	25	100	100	1.094
1.6	25	25	6.58	4.96-6.74	8.20	7.63-8.23	25	25	100	100	1.058
12.5	25	25	6.13	4.71-6.81	8.19	7.65-8.24	25	25	100	100	1.080
100	25	25	5.56	1.69-8.32	7.82	7.63-8.12	25	23-25	97.5	97.5	0.896

Dilution Water and Test Sample
Initial Use Chemistry

Batch/Sample ID	Temp. (°C)	D.O. (mg/L)	pH (SU)	Salinity 0/00	TRC (mg/L)
SS 120108	25	6.59	8.11	25	<0.01
OMP 120608	25	5.56	7.82	25	<0.01
OMP 120908	25	8.32	8.12	24	<0.01
OMP 121208	25	7.04	7.97	23	<0.01

STATISTICAL ANALYSES

Test Method	End Point		
Steel's Many Rank Sum Test	Survival	NOEC = 100% TUc = 1.0	LOEC = N/A
Dunnett's Test	Growth	NOEC = 100% TUc = 1.0	LOEC = N/A
Linear Interpolation	Growth	IC25 >100%	

NOEC = No Observed Effect Concentration LOEC = Lowest Observed Effect Concentration

SURVIVAL DATA

1. Arc Sine transformation was used
2. Data FAIL normality test using Shapiro-Wilk's Test.
3. Data FAIL homogeneity test using Bartlett's Test.
4. *Cyprinodon variegatus* survival in all the effluent concentrations was not significantly different form survival in the control using Steel's Many Rank Sum Test (alpha=0.05)

GROWTH DATA

1. No transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Cyprinodon variegatus* growth in all effluent treatments was not significantly different from growth in the control using Dunnett's Test (alpha = 0.05).
5. PMSD Growth = 12.2%

Comments:

Biological Monitoring, Inc.

Sheepshead Minnow (Cyprinodon variegatus) Larval Survival and Growth Sheet

Experiment ID: ~~BMP120608-1~~ BMP120608-1 CRP

Permit #: VA 0003867

Concentration	Day No.	A	B	C	D	No. live organisms	D.O. before renewal (mg/L)	D.O. after renewal (mg/L)	pH before renewal	pH after renewal	Temp. before renewal (°C)	Temp. after renewal (°C)	Salinity (ppt)	Alkalinity (mg/L as $CaCO_3$)	Hardness (mg/L as $CaCO_3$)	Chambers cleaned/renewed	1st feeding	2nd feeding	3rd feeding	Initials
	0	10	10	10	10		6.59		8.11		25	25				1400		✓		CRP
	1	10	10	10	10	6.00	6.77	8.15	7.90	25	25	25				1400	✓	✓		MB
0%	2	10	10	10	10	5.54	6.70	7.91	8.07	25	25	25				1530	✓	✓		MB
	3	10	10	10	10	5.74	6.71	7.88	8.17	25	25	25				1600	✓	✓		MB
	4	10	10	10	10	4.85	6.56	7.57	7.95	25	25	25				1545	✓	✓		MB
0/3600	5	10	10	10	10	4.94	6.48	7.54	8.01	25	25	25				1500	✓	✓		MB
	6	10	10	10	10	5.80	6.60	7.57	7.87	25	25	25				1530	✓	✓		MB
	7	10	10	10	10	5.75		7.79		25		25				1600				MB
	0	10	10	10	10		6.61		8.16		25	25				1400		✓		CRP
	1	10	10	10	10	6.02	6.71	8.16	7.99	25	25	25				1400	✓	✓		MB
0.027%	2	10	10	10	10	5.53	6.71	7.98	8.10	25	25	25				1530	✓	✓		MB
	3	10	10	10	10	5.68	6.71	7.90	8.17	25	25	25				1600	✓	✓		MB
0.72/3600	4	10	10	10	10	4.85	6.58	7.61	7.99	25	25	25				1545	✓	✓		MB
	5	10	10	10	10	4.94	6.48	7.57	8.03	25	25	25				1500	✓	✓		MB
	6	10	10	10	10	5.84	6.60	7.59	7.89	25	25	25				1530	✓	✓		MB
	7	10	10	10	10	5.79		7.81		25		25				1600				MB
	0	10	10	10	10		6.62		8.18		25	25				1400		✓		CRP
	1	10	10	10	10	5.97	6.74	8.17	8.10	25	25	25				1400	✓	✓		MB
6.25%	2	10	10	10	10	5.58	6.72	8.03	8.12	25	25	25				1530	✓	✓		MB
	3	10	10	10	10	5.64	6.72	7.99	8.21	25	25	25				1600	✓	✓		MB
7.2/3600	4	10	10	10	10	4.94	6.58	7.64	8.02	25	25	25				1545	✓	✓		MB
	5	10	10	10	10	4.99	6.50	7.58	8.04	25	25	25				1500	✓	✓		MB
	6	10	10	10	10	5.84	6.65	7.59	7.91	25	25	25				1530	✓	✓		MB
	7	10	10	10	10	5.83		7.83		25		25				1600				MB
	0	10	10	10	10		6.58		8.20		25	25				1400		✓		CRP
	1	10	10	10	10	5.71	6.61	8.16	8.11	25	25	25				1400	✓	✓		MB
1.67%	2	10	10	10	10	5.52	6.68	8.05	8.13	25	25	25				1530	✓	✓		MB
	3	10	10	10	10	5.64	6.74	7.89	8.23	25	25	25				1600	✓	✓		MB
57.6/3600	4	10	10	10	10	4.79	6.70	7.66	8.04	25	25	25				1545	✓	✓		MB
	5	10	10	10	10	4.96	6.50	7.63	8.06	25	25	25				1500	✓	✓		MB
	6	10	10	10	10	5.85	6.65	7.63	7.94	25	25	25				1530	✓	✓		MB
	7	10	10	10	10	5.89		7.83		25		25				1500				
	0	10	10	10	10		6.13		8.19		25	25				1400		✓		CRP
	1	10	10	10	10	5.40	6.19	8.10	8.11	25	25	25				1400	✓	✓		MB
12.5%	2	10	10	10	10	5.31	6.50	8.01	8.11	25	25	25				1530	✓	✓		MB
	3	10	10	10	10	5.42	6.81	7.86	8.24	25	25	25				1600	✓	✓		MB
450/3600	4	10	10	10	10	4.71	7.13	7.71	8.02	25	25	25				1545	✓	✓		MB
	5	10	10	10	10	4.89	6.58	7.67	8.05	25	25	25				1500	✓	✓		MB
	6	10	10	10	10	5.70	6.64	7.65	7.96	25	25	25				1530	✓	✓		MB
	7	10	10	10	10	5.88		7.89		25		25				1500				
	0	10	10	10	10		5.86		7.82		25	25	140	1800		1400		✓		CRP
	1	10	10	10	10	1.69	6.08	7.85	7.65	25	25	23				1400	✓	✓		MB
100%	2	10	9	10	10	2.58	6.30	7.75	7.69	25	25	23				1530	✓	✓		MB
	3	10	9	10	10	2.39	8.32	7.72	8.12	25	25	24	96	1850		1600	✓	✓		MB
3600/3600	4	10	9	10	10	3.82	7.20	7.63	8.06	25	25	23				1545	✓	✓		MB
	5	10	9	10	10	4.38	6.50	7.65	7.90	25	25	23				1500	✓	✓		MB
	6	10	9	10	10	5.00	7.04	7.65	7.97	25	25	23	90	2000		1530	✓	✓		MB
	7	10	9	10	10	5.61		7.76		25		23				1500				MB

BIOLOGICAL MONITORING, INC.
Short-term Chronic Toxicity Test Conditions
(Fish)

Permit # VA0003867

Experiment I.D.# OMP120608-1

Organism: C. Variegatus

Client: Omega Protein

Effluent Toxicant: Outfall 001

Sample Type: 24 hr composite

Renewal Frequency: daily

Test Temperature: 25 ± 1°C

Dilution Water Used: SS120108

Start of Test: Date: 120608 Time: 1400

End of Test: Date: 121308 Time: 1300

Biologists Conducting Test: C. Baugh, J. Berenzweig

QC Officer: WMC

Test Organism Age: <24hr

Organism Batch #: ABS120608-1

Test Containers Used: 600 mL PP

Feeding Schedule: 2x daily live rinsed Artemia

Aeration: see comments

Sample Chlorine: <0.01 mg/L

Test Volume: 500mL

Template #: Random #

SAMPLE COLLECTION				SAMPLE USE		
Date(s)		Time(s)				
From:	To:	From:	To:	Date(s)	Time(s)	Test Day
12/5/08	12/6/08	0700	0700	12/6/08	1400	0
				12/7/08	1400	1
				12/8/08	1530	2
12/8/08	12/9/08	0600	0600	12/9/08	1600	3
				12/10/08	1545	4
				12/11/08	1500	5
12/10/08	12/11/08	1400	1400	12/12/08	~~1300~~ 1530	6

Diluent Batch Carboy #/Days Used

SS120108 0, 1, 2, 3, 4, 5, #6

The first use of a sample (acute or chronic) must be within 36-hours of retrieval from the sample collection device. Samples held after first use, to be used in chronic test solution renewals, must not be used if more than 72-hours have elapsed since retrieval from the sample collection device.

Condition of Organisms at End of Test: Normal

Average weight per control fish: 0.9875 Control Survival (%): 100%

Comments: Raw sample OMP120608 + OMP120408 was aerated prior to use to raise DO

PMSD Growth = 12.2%

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~CMP120608-1~~ CMP120608-1 Permit # VA0003867 Species C. variegatus

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
0A		18.41	28.12	9.71	10	0.971	CRP
0B		20.63	30.20	9.57	10	0.957	CRP
0C		18.58	28.37	9.79	10	0.979	CRP
0D		18.62	29.05	10.43	10	1.043	CRP
0.02A		17.83	28.88	11.05	10	1.105	CRP
0.02B		20.17	30.77	10.60	10	1.060	CRP
0.02C		16.01	26.32	10.31	10	1.031	CRP
0.02D		16.72	26.72	10.00	10	1.000	CRP
0.2A		23.07	34.64	11.57	10	1.157	CRP
0.2B		20.84	31.59	10.75	10	1.075	CRP
0.2C		21.73	32.72	10.97	10	1.097	CRP
0.2D		22.36	32.81	10.45	10	1.045	CRP
1.6A		15.16	25.61	10.45	10	1.045	CRP
1.6B		14.89	24.80	9.91	10	0.991	CRP
1.6C		14.52	24.44	9.92	10	0.992	CRP
1.6D		14.41	26.44	12.03	10	1.203	CRP
12.5A		15.13	24.88	9.75	10	0.975	CRP
12.5B		14.33	25.56	11.23	10	1.123	CRP
12.5C		14.41	25.48	11.07	10	1.107	CRP
12.5D		14.32	25.48	11.16	10	1.116	CRP
100A		15.75	25.96	10.21	10	1.021	CRP
100B		15.15	23.18	8.03	10	0.803	CRP
100C		15.11	23.50	8.39	10	0.839	CRP
100D		16.24	25.44	9.20	10	0.920	CRP

2/3 A, B, C, D, E

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions. 11412

1. Client name Omega Protein
2. Sampler's name Ted Schultz
3. Sample source Non-Contact. Scrubber Mix
4. Outfall/station 001
5. Purchase order no.
6. Affiliation Employee
7. NPDES permit no./County VA0003867
8. Test period for which data is being submitted: 3rd Q
9. *Sample relinquished by:* Ted Schultz / 12/6/08 *Date; Received by:* / *Date;*

Sample relinquished by: [illegible] / 12-6-08 *Date; Received by:* [illegible] / 12-6-08 *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab
    - Date collected
    - Time collected
    - Volume
    - Composite X
    - Composite type
    - Collection period: from 12/5/08 (date) 07:00 (time) to 12/6/08 (date) 07:00 (time)
11. Flow during sampling
12. Type of container LDPE CUBE
13. Number of containers shipped 4 VAB
14. No. of subsamples 4 VAB
15. Frequency
16. Volume

Condition of Effluent at Time of Collection

17. pH 7.60
18. Chlorine
19. Temperature:
    - At collection point
    - In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
    - Chlorinated
    - Dechlorinated
    - Unknown
    - Dechlorination method

Shipping Information

21. Method of shipment Hand deliver
22. Date shipped 12/6/08
23. Time
24. Was the sample packed with ice for shipment?
25. *Custody seal in place by* [illegible] *Date* 12-6-08 *Time* 0630

Instructions to Lab

26. Type of test(s) to be performed Chronic / Acute Tox
27. Should BMI dechlorinate the sample (Yes or No) NO
28. Should ammonia be measured? (Yes or No) No
29. Comments

30. I certify that the above information is correct Theodore Schultz (Signature) 12/6/08 (Date)

For BMI Use Only

Alk 140
Hard 1860
BMI Sample ID# OMP120608 *Received by* CRP *Date* 12/6/08 *Time* 1320
Upon arrival at BMI: Custody seal ✓ Temperature 2°C pH 8.05 Chlorine <0.1 DO 7.68
On ice? ✓ Salinity 25 ppt Conductivity —
Visual description yellow-ish tint, slight fish odor Sample refrigerated ✓
Test ID number(s) OMP120608-1, -2

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SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions. 11411

1. Client name Omega Protein
2. Sampler's name Ted Schultz
3. Sample source Non-Contact/ Scrubber mix
4. Outfall/station 001
5. Purchase order no.
6. Affiliation Employee
7. NPDES permit no./County VA0003867
8. Test period for which data is being submitted:

9. *Sampler relinquished by:* Ted Schultz 12/9/08 *Date; Received by:* W J Burke 12/08 6:50 *Date;*

Sampler relinquished by: W J Burke 12-9-08 *Date; Received by:* [illegible] 12/9/08 *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab
Date collected
Time collected
Volume
Composite X
Composite type
Collection period: from 12/8/08 (date) 06:00 (time) to 12/9/08 (date) 06:00 (time)

11. Flow during sampling
12. Type of container LDPE Cube
13. Number of containers shipped 5
14. No. of subsamples 96
15. Frequency 15 min
16. Volume 200 ml

Condition of Effluent at Time of Collection

17. pH 7.9
18. Chlorine
19. Temperature:
At collection point
In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
Chlorinated No
Dechlorinated No
Unknown
Dechlorination method

Shipping Information

21. Method of shipment Hand Deliver
22. Date shipped 12/9/08
23. Time
24. Was the sample packed with ice for shipment?
25. *Custody seal in place by* W J Burke *Date* 12-9-08 *Time* 6:50

Instructions to Lab

26. Type of test(s) to be performed Chronic / Acute Tox
27. Should BMI dechlorinate the sample (Yes or No) No
28. Should ammonia be measured? (Yes or No) No
29. Comments

30. I certify that the above information is correct Theodore A Schultz (Signature) 12/9/08 (Date)

****

For BMI Use Only

Alk 96
Hard 1850
BMI Sample ID# OMP120908 *Received by* CRP & RFB *Date* 120908 *Time* 1250
Upon arrival at BMI: Custody seal ✓ Temperature 1°C pH 8.35 Chlorine <0.01 DO 9.58
On ice? ✓ Salinity 25 ppt Conductivity
Visual description ~~Cle~~ slight yellow tint in color, slight fish odor Sample refrigerated ✓
Test ID number(s) OMP120608-1,-2 OMP120908-3,-4

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3/3 A, B, C, D

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

11415

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name: Omega Protein
2. Sampler's name: Ted Schultz / Non-Contact
3. Sample source: Scrubber Mix
4. Outfall/station: ØØ1
5. Purchase order no.:
6. Affiliation: Employee
7. NPDES permit no./County: VAØØØ3867
8. Test period for which data is being submitted: 3rd Q
9. *Sampler relinquished by:* Ted Schultz / 12/11/08 *Date; Received by:* / *Date;*

Sampler relinquished by: / *Date; Received by:* / *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab
    - Date collected
    - Time collected
    - Volume
    - Composite: X
    - Composite type: 24 HC
    - Collection period: from 12/10/08 (date) 14:00 (time) to 12/11/08 (date) 14:00 (time)
11. Flow during sampling
12. Type of container: LDPE CUBE
13. Number of containers shipped: 4
14. No. of subsamples: 96
15. Frequency: 15 min
16. Volume: 200 ml

Condition of Effluent at Time of Collection

17. pH: 7.30
18. Chlorine
19. Temperature:
    - At collection point
    - In collection device (comp. sample must be @ or below 4°C): 4°C
20. Is the sample:
    - Chlorinated: No
    - Dechlorinated: No
    - Unknown
    - Dechlorination method

Shipping Information

21. Method of shipment: UPS
22. Date shipped: 12/11/08
23. Time: 14:30
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by:* Ted Schultz *Date:* 12/11/08 *Time:* 14:15

Instructions to Lab

26. Type of test(s) to be performed: Chronic / Acute / Tox
27. Should BMI dechlorinate the sample (Yes or No): No
28. Should ammonia be measured? (Yes or No): No
29. Comments

30. I certify that the above information is correct: Ted Schultz (Signature) 12/11/08 (Date)

For BMI Use Only

Alk: 90
Hard: 8900
BMI Sample ID#: OMP121208 *Received by:* CRP *Date:* 12/12/08 *Time:* 1030
Upon arrival at BMI: Custody seal: ✓ Temperature: 3°C pH: 8.21 Chlorine: <0.01 DO: 8.49
On ice? ✓ Salinity: 25 ppt Conductivity: —
Visual description: clear in color, slight fish smell Sample refrigerated: ✓
Test ID number(s): OMP120608-1, -2

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OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.020

W = 0.465

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance
Bartlett's test for homogeneity of variance

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.
Additional transformations are useless.

OMP1SS

TITLE: OMP120608-1
FILE: OMP1s.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.4120
1	0	2	1.0000	1.4120
1	0	3	1.0000	1.4120
1	0	4	1.0000	1.4120
2	0.02	1	1.0000	1.4120
2	0.02	2	1.0000	1.4120
2	0.02	3	1.0000	1.4120
2	0.02	4	1.0000	1.4120
3	02	1	1.0000	1.4120
3	02	2	1.0000	1.4120
3	02	3	1.0000	1.4120
3	02	4	1.0000	1.4120
4	1.6	1	1.0000	1.4120
4	1.6	2	1.0000	1.4120
4	1.6	3	1.0000	1.4120
4	1.6	4	1.0000	1.4120
5	12.5	1	1.0000	1.4120
5	12.5	2	1.0000	1.4120
5	12.5	3	1.0000	1.4120
5	12.5	4	1.0000	1.4120
6	100	1	1.0000	1.4120
6	100	2	0.9000	1.2490
6	100	3	1.0000	1.4120
6	100	4	1.0000	1.4120

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.412	1.412	1.412
2	0.02	4	1.412	1.412	1.412
3	02	4	1.412	1.412	1.412
4	1.6	4	1.412	1.412	1.412
5	12.5	4	1.412	1.412	1.412
6	100	4	1.249	1.412	1.371

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00

			OMP1SS		
2	0.02	0.000	0.000	0.000	0.00
3	02	0.000	0.000	0.000	0.00
4	1.6	0.000	0.000	0.000	0.00
5	12.5	0.000	0.000	0.000	0.00
6	100	0.007	0.081	0.041	5.94

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.412				
2	0.02	1.412	18.00	10.00	4.00	
3	02	1.412	18.00	10.00	4.00	
4	1.6	1.412	18.00	10.00	4.00	
5	12.5	1.412	18.00	10.00	4.00	
6	100	1.371	16.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 0.090

W = 0.968

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data PASS normality test at P=0.01 level. Continue analysis.

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 4.38

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

OMP1GS

TITLE: OMP120608-1
FILE: OMP1g.txt
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.9710	0.9710
1	0	2	0.9570	0.9570
1	0	3	0.9790	0.9790
1	0	4	1.0430	1.0430
2	0.02	1	1.1050	1.1050
2	0.02	2	1.0600	1.0600
2	0.02	3	1.0310	1.0310
2	0.02	4	1.0000	1.0000
3	0.2	1	1.1570	1.1570
3	0.2	2	1.0750	1.0750
3	0.2	3	1.0970	1.0970
3	0.2	4	1.0450	1.0450
4	1.6	1	1.0450	1.0450
4	1.6	2	0.9910	0.9910
4	1.6	3	0.9920	0.9920
4	1.6	4	1.2030	1.2030
5	12.5	1	0.9750	0.9750
5	12.5	2	1.1230	1.1230
5	12.5	3	1.1070	1.1070
5	12.5	4	1.1160	1.1160
6	100	1	1.0210	1.0210
6	100	2	0.8030	0.8030
6	100	3	0.8390	0.8390
6	100	4	0.9200	0.9200

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	0.957	1.043	0.988
2	0.02	4	1.000	1.105	1.049
3	0.2	4	1.045	1.157	1.094
4	1.6	4	0.991	1.203	1.058
5	12.5	4	0.975	1.123	1.080
6	100	4	0.803	1.021	0.896

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.001	0.038	0.019	3.86

			OMP1GS		
2	0.02	0.002	0.045	0.022	4.26
3	0.2	0.002	0.047	0.024	4.33
4	1.6	0.010	0.100	0.050	9.46
5	12.5	0.005	0.070	0.035	6.52
6	100	0.009	0.097	0.048	10.80

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.110	0.022	4.390
Within (Error)	18	0.090	0.005	
Total	23	0.200		

Critical F value = 2.77 (0.05,5,18)
Since F > Critical F REJECT Ho: All equal

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	0.988	0.988		
2	0.02	1.049	1.049	-1.229	
3	0.2	1.094	1.094	-2.119	
4	1.6	1.058	1.058	-1.404	
5	12.5	1.080	1.080	-1.854	
6	100	0.896	0.896	1.834	

Dunnett table value = 2.41 (1 Tailed Value, P=0.05, df=18,5)

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	4			
2	0.02	4	0.121	12.2	-0.062
3	0.2	4	0.121	12.2	-0.106
4	1.6	4	0.121	12.2	-0.070
5	12.5	4	0.121	12.2	-0.093
6	100	4	0.121	12.2	0.092

OMP1gIC25

Conc. ID	1	2	3	4	5	6
Conc. Tested	0	0.02	0.2	1.6	12.5	100
Response 1	0.971	1.105	1.157	1.045	0.975	1.021
Response 2	0.957	1.060	1.075	0.991	1.123	0.803
Response 3	0.979	1.031	1.097	0.992	1.107	0.839
Response 4	1.043	1.000	1.045	1.203	1.116	0.920

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: C. variegatus
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

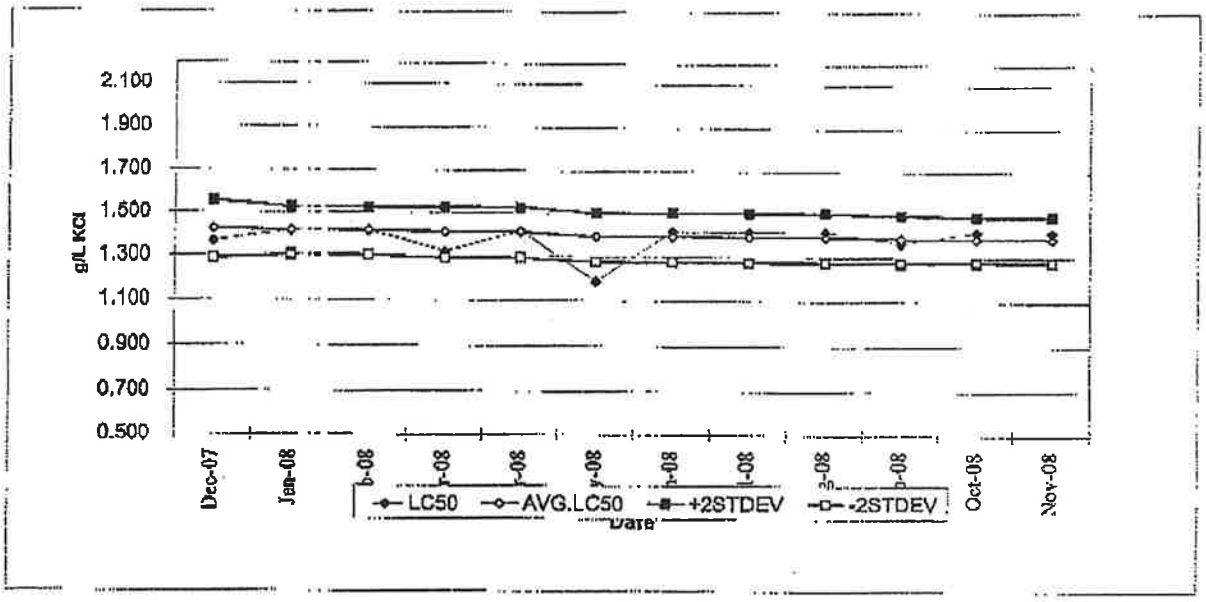
Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	4	0.000	0.988	0.038	1.054
2	4	0.020	1.049	0.045	1.054
3	4	0.200	1.094	0.047	1.054
4	4	1.600	1.058	0.100	1.054
5	4	12.500	1.080	0.070	1.054
6	4	100.000	0.896	0.097	0.896

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

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

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

REFERENCE TOXICANT LC50
Cyprinodon variegatus



48 HOUR ACUTE TOXICITY DATA FOR
Cyprinodon variegatus

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	Avg+2std	Avg-2std
Jun 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Jul 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Aug 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Sep 08	1.366	1.464	1.275	1.387	SPKR	1.496	1.277
Oct 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280
Nov 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP120608-2

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Short Term Chronic

Organism Age at Start of Test: 7d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

From 12/05/08 @ 0700 to 12/06/08 @ 0700;
From 12/08/08 @ 0600 to 12/09/08 @ 0600;
From 12/10/08 @ 1400 to 12/11/08 @ 1400;

Sample Collector: Ted Shultz

Delivered by: UPS & Hand

Test Solution Renewal Frequency: Daily

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 26 ± 1°C

No. of Replicates per conc.: 8

No. of Organisms per Replicate: 5

Feeding prior to test: Not fed

Feeding Regime: Live rinsed Artemia 2x daily

Chamber Size: 250 mL PE

Test Volume: 200 mL

Photo Period: 16h light/8h dark

Test Duration: 7 d

Start of Test: Date: 12/06/08

Time: 1400

End of Test: Date: 12/13/08

Time: 1300

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter: YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. EPA-821-R-02-014.

BIOLOGICAL MONITORING, INC.
Chronic Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)		**Date**	**Time**
Experiment ID	OMP120608-2	**Start Test**	12/06/08	1400
Sample Tested	Outfall 001	**End Test**	12/13/08	1300

RESULTS

Water Chemistry Analyses Survival and Reproduction
Initial (Range)

Conc. (%)	Temp. (°C)		D.O. (mg/L)		pH (SU)		Salinity (0/00)		Survival (%)		Mean Weight (mg)
	0h	Range	0h	Range	0h	Range	0h	Range	96h	7d	
0	25	25	6.59	4.28-6.77	8.11	7.41-8.11	25	25	80	80	
0.02	25	25	6.61	4.24-6.71	8.16	7.45-8.17	25	25	85	77.5	
0.2	25	25	6.62	4.24-6.74	8.18	7.45-8.18	25	25	82.5	75	
1.6	25	25	6.58	4.21-6.74	8.20	7.45-8.23	25	25	90	90	
12.5	25	25	6.13	4.19-7.13	8.19	7.43-8.24	25	25	87.5	87.5	
100	25	25	5.56	2.31-5.56	7.82	7.60-7.82	25	25	0	0	

Dilution Water and Test Sample
Initial Use Chemistry

Batch/Sample ID	Temp. (°C)	D.O. (mg/L)	pH (SU)	Salinity 0/00	TRC (mg/L)
SS 120108	25	6.59	8.11	25	<0.01
OMP 120608	25	5.56	7.82	25	<0.01
OMP 120908	25	8.32	8.12	24	<0.01
OMP 121208	25	7.04	7.97	23	<0.01

STATISTICAL ANALYSES

Test Method	End Point		
Steel's Many-One Rank Sum Test	**Survival**	**NOEC = 12.5% TUc = 8**	**LOEC = 100%**
Dunnett's Test	**Growth**	**NOEC = 12.5% TUc = 8**	**LOEC = 100%**
Linear Interpolation		**IC25 > 100%**	
Dunnett's Test	**Fecundity**	**NOEC = 100% TUc = 1.0**	**LOEC = N/A**
Linear Interpolation		**IC25 >100%**	

NOEC = No Observed Effect Concentration LOEC = Lowest Observed Effect Concentration

SURVIVAL DATA
1. Arcsine transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data FAIL homogeneity test using Bartlett's Test.
4. *Americamysis bahia* survival in effluent concentration 100% was significantly different from survival in the control using Steel's Many-One Rank test (alpha = 0.05).

GROWTH DATA
1. No transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Americamysis bahia* growth in effluent concentration 100% was significantly different from growth in the control using Dunnett's test (p = 0.05).
5. PMSD Growth = 32.5%

FECUNDITY DATA
1. Arcsine transformation was used.
2. Data FAIL normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Americamysis bahia* fecundity in all effluent treatments was not significantly different from fecundity in the control using Dunnett's Test (p = 0.05).
5. PMSD Fedundity = 68.9%

Comments:

Biological Monitoring, Inc.

Mysidopsis bahia Survival, Growth, and Fecundity Log Sheet

Experiment ID#: OMP120608-2 ~~OMP120608-2~~ UPS

Permit #: VA0003867

Concentra.	Day	A	B	C	D	E	F	G	H	No. of Live Organisms	D.O. before renewal (mg/L)	D.O. after renewal (mg/L)	pH before renewal	pH after renewal	Temp. before renewal (°C)	Temp. after renewal (°C)	Salinity before renewal (ppt)	Salinity after renewal (ppt)	Chambers cleaned/renewed	1st Feeding	2nd Feeding	3rd Feeding	Initial
0% 0/3600	0	5	5	5	5	5	5	5	5		6.59		8.11		25	25	25	1400		✓			RJB
	1	5	4	5	5	5	5	4	5	5.23	6.77	7.69	7.90	25	25	25	25	1500	✓	✓			MB
	2	4	4	4	5	4	4	4	5	4.84	6.70	7.67	8.07	25	25	25	25	1500	✓	✓			MB
	3	4	4	4	5	4	2	4	5	4.74	6.71	7.57	~~6.78~~ 8.07	25	25	25	25	1540	✓	✓			MB
	4	4	4	4	5	4	2	4	5	4.28	6.56	7.43	7.95	25	25	25	25	1520	✓	✓			MB
	5	4	4	4	5	4	2	4	5	4.46	6.48	7.41	8.01	25	25	25	25	1441	✓	✓			MB
	6	4	4	4	5	4	2	4	5	4.75	6.60	7.46	7.87	25	25	25	25	1500	✓	✓			MB
	7	4	4	4	5	4	2	4	5	5.02		7.43		25	~~25~~ 24	25		1430					MB
0.02% 0.72/3600	0	5	5	5	5	5	5	5	5		6.61		8.16		25	25	25	1400		✓			RJB
	1	5	5	4	5	5	5	5	5	5.32	6.71	7.76	7.99	25	25	25	25	1500	✓	✓			MB
	2	5	4	2	4	5	5	5	5	5.01	6.71	7.71	8.10	25	25	25	25	1500	✓	✓			MB
	3	5	4	2	4	5	5	5	5	4.81	6.71	7.59	8.17	25	25	25	25	1540	✓	✓			MB
	4	5	4	2	4	4	5	5	5	4.24	6.58	7.45	7.97	25	25	25	25	1520	✓	✓			MB
	5	5	4	2	4	4	5	5	5	4.48	6.48	7.46	8.03	25	25	25	25	1445	✓	✓			MB
	6	5	4	2	4	4	5	5	5	4.75	6.60	7.46	7.89	25	25	25	25	1500	✓	✓			MB
	7	5	4	2	4	3	5	5	3	4.93		7.48		25		25		1430					MB
0.2% 7.2/3600	0	5	5	5	5	5	5	5	5		6.62		8.18		25	25	25	1400		✓			RJB
	1	4	5	4	5	5	5	4	5	5.34	6.74	7.83	8.10	25	25	25	25	1500	✓	✓			MB
	2	4	5	4	5	5	5	4	3	4.81	6.72	7.73	8.12	25	25	25	25	1500	✓	✓			MB
	3	4	5	3	5	5	5	3	3	4.78	6.72	7.62	8.21	25	25	25	25	1540	✓	✓			MB
	4	4	5	3	5	5	5	3	3	4.24	6.58	7.45	8.02	25	25	25	25	1520	✓	✓			MB
	5	4	5	3	5	4	5	3	3	4.52	6.50	7.49	8.04	25	25	25	25	1445	✓	✓			MB
	6	3	5	3	4	4	5	3	3	4.78	6.65	7.47	7.91	25	25	25	25	1500	✓	✓			MB
	7	3	5	3	4	4	5	3	3	4.90		7.48		25		25		1430					MB
1.6% 57.6/3600	0	5	5	5	5	5	5	5	5		6.58		8.20		25	25	25	1400		✓			RJB
	1	5	5	4	5	4	5	5	4	5.28	6.61	7.86	8.11	25	25	25	25	1500	✓	✓			MB
	2	5	5	4	5	4	5	5	4	4.86	6.68	7.74	8.13	25	25	25	25	1500	✓	✓			MB
	3	5	4	4	5	4	5	5	4	4.72	6.74	7.63	8.23	25	25	25	25	1540	✓	✓			MB
	4	5	4	4	5	4	5	5	4	4.21	6.70	7.45	8.04	25	25	25	25	1520	✓	✓			MB
	5	5	4	4	5	4	5	5	4	4.58	6.50	7.52	8.06	25	25	25	25	1445	✓	✓			MB
	6	5	4	4	5	4	5	5	4	4.79	6.65	7.48	7.94	25	25	25	25	1500	✓	✓			MB
	7	5	4	4	5	4	5	5	4	4.84		7.50		25		25		1430					MB
12.5% 450/3600	0	5	5	5	5	5	5	5	5		6.13		8.19		25	~~25~~	25	1400		✓			RJB
	1	5	5	4	5	5	4	5	5	4.61	6.19	7.84	8.11	25	25	25	25	1500	✓	✓			MB
	2	5	5	4	5	5	4	5	5	4.77	6.50	7.74	8.11	25	25	25	25	1500	✓	✓			MB
	3	4	5	4	5	5	4	4	5	4.39	6.81	7.62	8.24	25	25	25	25	1540	✓	✓			MB
	4	4	5	3	5	5	4	4	5	4.19	7.13	7.43	8.02	25	25	25	25	1520	✓	✓			MB
	5	4	5	3	5	5	4	4	5	4.58	6.58	7.52	8.05	25	25	25	25	1445	✓	✓			MB
	6	4	5	3	5	5	4	4	5	4.85	6.64	7.48	7.96	25	25	25	25	1500	✓	✓			MB
	7	4	5	3	5	5	4	4	5	4.80		7.51		25		25		1430					MB
100% 3600/3600	0	5	5	5	5	5	5	5	5		5.56		7.82		25	25	25	1400		✓			RJB
	1	0	0	0	0	0	0	0	0	2.31		7.60			25	25	~~25~~ 24	1500	✓	✓			MB
	2																~~25~~ 24		✓				
	3																						
	4																						
	5																						
	6																						
	7																						

BIOLOGICAL MONITORING, INC.
Short-term Chronic Toxicity Test Conditions.
Mysidopsis bahia

Permit # VA0003867

Experiment I.D.# OMP120608-2

Biologists Conducting Test: C. Paugh, J. Berenzweig

Organism: M. bahia

Client: Omega Protein

QC Officer: WM

Effluent Toxicant: Outfall 001

Test Organism Age: <24hr

Sample Type: 24 hr composite

Organism Batch #: ABS120608-2

Renewal Frequency: daily

Test Containers Used: 250 mL PS

Test Temperature: 26±1°C

Feeding Schedule: 2x daily live rinsed Artemia

Dilution Water Used: SS120108

Aeration: See comments

Start of Test: Date: 120608 Time: 1400

Sample Chlorine: <0.01mg/L

End of Test: Date: 12/3/08 Time: 1300

Test Volume: 200mL

Template #: Random B

SAMPLE COLLECTION				SAMPLE USE		
Date(s)		Time(s)				
From:	To:	From:	To:	Date(s)	Time(s)	Test Day
12/5/08	12/6/08	0700	0700	12/6/08	1400	0
				12/7/08	1500	1
				12/8/08	1500	2
12/8/08	12/9/08	0600	0600	12/9/08	1540	3
				12/10/08	1520	4
				12/11/08	1441	5
12/10/08	12/11/08	1400	1400	12/12/08	1500	6

Diluent Batch Carboy #/Days Used

SS120108 (0, 1, 2, 3, 4, 5, & 6)

The first use of a sample (acute or chronic) must be within 36-hours of retrieval from the sample collection device. Samples held after first use, to be used in chronic test solution renewals, must not be used if more than 72-hours have elapsed since retrieval from the sample collection device.

Condition of Organisms at End of Test: Normal

Average weight per control fish: 0.3055 Control Survival (%): 80%

Comments: Raw sample OMP120608 & OMP120908 was aerated prior to use to raise DO

PMSD growth = 32.5%

PMSD fecundity = 68.4%

BMI/SOP 4.12

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~OMP120508-2~~ OMP120608-2 CRP Permit # VA0003867 Species M. bahia

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
0A		15.25	16.60	1.35	5	0.270	CRP
0B		17.78	19.57	1.79	5	0.358	CRP
0C		16.20	17.40	1.20	5	0.240	CRP
0D		14.93	~~16.~~ 17.04	2.11	5	0.422	CRP
0E		15.28	16.90	1.62	5	0.324	CRP
0F		17.01	17.76	0.75	5	0.150	CRP
0G		15.49	17.20	1.71	5	0.342	CRP
0H		14.78	16.47	1.69	5	0.338	CRP
0.02A		18.19	20.18	1.99	5	0.398	CRP
0.02B		12.94	14.60	1.66	5	0.332	CRP
0.02C		15.71	16.43	0.72	5	0.144	CRP
0.02D		16.83	18.42	1.59	5	0.318	CRP
0.02E		15.33	16.43	1.10	5	0.220	CRP
0.02F		14.57	16.43	1.86	5	0.372	CRP
0.02G		13.66	15.79	2.13	5	0.426	CRP
0.02H		15.32	16.08	0.760	5	0.152	CRP
0.2A		15.50	16.47	0.970	5	0.194	CRP
0.2B		14.58	16.46	1.88	5	0.376	CRP
0.2C		17.55	19.09	1.54	5	0.308	CRP
0.2D		16.19	17.44	1.25	5	0.250	CRP
0.2E		15.03	16.45	1.42	5	0.284	CRP
0.2F		13.25	15.76	2.51	5	0.502	CRP
0.2G		15.20	16.44	1.24	5	0.248	CRP
0.2H		15.04	16.27	1.23	5	0.246	CRP

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~OMP120505-2~~ OMP120608-2 CRP Permit # VA0003867 Species mibahia

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
1.6A		12.28	13.88	1.60	5	0.320	CRP
1.6B		12.41	13.72	1.31	5	0.262	CRP
1.6C		11.62	13.48	1.86	5	0.372	CRP
1.6D		12.41	14.56	2.15	5	0.430	CRP
1.6E		13.80	15.13	1.32	5	0.264	CRP
1.6F		13.21	15.34	2.13	5	0.426	CRP
1.6G		11.65	13.55	1.90	5	0.380	CRP
1.6H		12.51	14.13	1.62	5	0.324	CRP
12.5A		15.61	17.04	1.43	5	0.286	CRP
12.5B		14.37	16.28	1.91	5	0.382	CRP
12.5C		12.71	13.76	1.05	5	0.210	CRP
12.5D		12.88	15.21	2.33	5	0.466	CRP
12.5E		14.37	16.32	1.95	5	0.390	CRP
12.5F		14.49	15.99	1.50	5	0.300	CRP
12.5G		12.64	14.57	1.93	5	0.386	CRP
12.5H		12.45	14.21	1.76	5	0.352	CRP
100A		—					
100B		—					
100C		—					
100D		—					
100E		—					
100F		—					
100G		—					
100H		—					

7-day Short-Term Chronic *Americamysis bahia* Fecundity Data

Test ID ~~GMPI20608-2~~ GMPI20608-2 Permit No VA0003867 Page 5 of 5

Concentration	Rep	7d survival	Female w/eggs	Female no eggs	Male	Immature
0%	A	4	II		I	I
	B	4	II		II	
	C	4			III	I
	D	5	IIII		I	
	E	4			IIII	
	F	2	I		I	
	G	4	III		I	
	H	5	IIII			I
0.02%	A	5 ~~3~~ ~~3~~	I		III	I
	B	4 ~~5~~			IIII	
	C	2 ~~3~~			II	
	D	4	II	I	I	
	E	3 ~~4~~		I	II	
	F	5	I	I	III	
	G	5 ~~3~~	II		III	
	H	3	I		I	I
0.2%	A	3			II	I
	B	5	III		II	
	C	3	III			
	D	4	I	II		I
	E	4	I		II	I
	F	5	II		III	
	G	3		I	II	
	H	3	I		II	
1.6%	A	5	I	I	II	I
	B	4	I	I	II	
	C	4	III		I	
	D	5	II	I	II	
	E	4	I		II	I
	F	5	III		II	
	G	5	II		III	
	H	4				
12.5%	A	4	I	I	II	
	B	5	II		III	
	C	3	I		II	
	D	5	IIII		I	
	E	5	I		IIII	
	F	4			IIII	
	G	4	II		II	
	H	5	I	I	III	
100%	A	0				
	B	0				
	C	0				
	D	0				
	E	0				
	F	0				
	G	0				
	H	0				

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 1.345

W = 0.953

Critical W (P = 0.05) (n = 48) = 0.947
Critical W (P = 0.01) (n = 48) = 0.929

Data PASS normality test at P=0.01 level. Continue analysis.

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance
Bartlett's test for homogeneity of variance

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.
Additional transformations are useless.

TITLE: OMP120608-2
FILE: OMP2s.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.8000	1.1071
1	0	2	0.8000	1.1071
1	0	3	0.8000	1.1071
1	0	4	1.0000	1.3453
1	0	5	0.8000	1.1071
1	0	6	0.4000	0.6847
1	0	7	0.8000	1.1071
1	0	8	1.0000	1.3453
2	0.02	1	1.0000	1.3453
2	0.02	2	0.8000	1.1071
2	0.02	3	0.4000	0.6847
2	0.02	4	0.8000	1.1071
2	0.02	5	0.6000	0.8861
2	0.02	6	1.0000	1.3453
2	0.02	7	1.0000	1.3453
2	0.02	8	0.6000	0.8861
3	0.2	1	0.6000	0.8861
3	0.2	2	1.0000	1.3453
3	0.2	3	0.6000	0.8861
3	0.2	4	0.8000	1.1071
3	0.2	5	0.8000	1.1071
3	0.2	6	1.0000	1.3453
3	0.2	7	0.6000	0.8861
3	0.2	8	0.6000	0.8861
4	1.6	1	1.0000	1.3453
4	1.6	2	0.8000	1.1071
4	1.6	3	0.8000	1.1071
4	1.6	4	1.0000	1.3453
4	1.6	5	0.8000	1.1071
4	1.6	6	1.0000	1.3453
4	1.6	7	1.0000	1.3453
4	1.6	8	0.8000	1.1071
5	12.5	1	0.8000	1.1071
5	12.5	2	1.0000	1.3453
5	12.5	3	0.6000	0.8861
5	12.5	4	1.0000	1.3453
5	12.5	5	1.0000	1.3453
5	12.5	6	0.8000	1.1071
5	12.5	7	0.8000	1.1071
5	12.5	8	1.0000	1.3453
6	100	1	0.0000	0.2255
6	100	2	0.0000	0.2255
6	100	3	0.0000	0.2255
6	100	4	0.0000	0.2255
6	100	5	0.0000	0.2255
6	100	6	0.0000	0.2255
6	100	7	0.0000	0.2255
6	100	8	0.0000	0.2255

OMP2SS

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.685	1.345	1.114
2	0.02	8	0.685	1.345	1.088
3	0.2	8	0.886	1.345	1.056
4	1.6	8	1.107	1.345	1.226
5	12.5	8	0.886	1.345	1.199
6	100	8	0.226	0.226	0.226

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.042	0.204	0.072	18.32
2	0.02	0.063	0.252	0.089	23.13
3	0.2	0.041	0.203	0.072	19.21
4	1.6	0.016	0.127	0.045	10.38
5	12.5	0.030	0.173	0.061	14.41
6	100	0.000	0.000	0.000	0.00

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.114				
2	0.02	1.088	66.50	46.00	8.00	
3	0.2	1.056	61.00	46.00	8.00	
4	1.6	1.226	78.00	46.00	8.00	
5	12.5	1.199	75.50	46.00	8.00	
6	100	0.226	36.00	46.00	8.00	*

Critical values use k = 5, are 1 tailed, and alpha = 0.05

```
OMP120608-2
File: OMP2g.txt        Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality
-----------------------------------------------------------------------------

D =    0.273

W =    0.977

Critical W (P = 0.05) (n = 40) = 0.940
Critical W (P = 0.01) (n = 40) = 0.919
-----------------------------------------------------------------------------

Data PASS normality test at P=0.01 level. Continue analysis.


OMP120608-2
File: OMP2g.txt        Transform: NO TRANSFORMATION

-----------------------------------------------------------------------------
Bartlett's test for homogeneity of variance
Calculated B1 statistic =    2.03

-----------------------------------------------------------------------------
Table Chi-square value =   13.28  (alpha = 0.01, df =   4)
Table Chi-square value =    9.49  (alpha = 0.05, df =   4)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.
```

TITLE: OMP120608-2
FILE: OMP2g.txt
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 5

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.2700	0.2700
1	0	2	0.3580	0.3580
1	0	3	0.2400	0.2400
1	0	4	0.4220	0.4220
1	0	5	0.3240	0.3240
1	0	6	0.1500	0.1500
1	0	7	0.3420	0.3420
1	0	8	0.3380	0.3380
2	0.02	1	0.3980	0.3980
2	0.02	2	0.3320	0.3320
2	0.02	3	0.1440	0.1440
2	0.02	4	0.3180	0.3180
2	0.02	5	0.2200	0.2200
2	0.02	6	0.3720	0.3720
2	0.02	7	0.4260	0.4260
2	0.02	8	0.1520	0.1520
3	0.2	1	0.1940	0.1940
3	0.2	2	0.3760	0.3760
3	0.2	3	0.3080	0.3080
3	0.2	4	0.2500	0.2500
3	0.2	5	0.2840	0.2840
3	0.2	6	0.5020	0.5020
3	0.2	7	0.2480	0.2480
3	0.2	8	0.2460	0.2460
4	1.6	1	0.3200	0.3200
4	1.6	2	0.2620	0.2620
4	1.6	3	0.3720	0.3720
4	1.6	4	0.4300	0.4300
4	1.6	5	0.2640	0.2640
4	1.6	6	0.4260	0.4260
4	1.6	7	0.3800	0.3800
4	1.6	8	0.3240	0.3240
5	12.5	1	0.2860	0.2860
5	12.5	2	0.3820	0.3820
5	12.5	3	0.2100	0.2100
5	12.5	4	0.4660	0.4660
5	12.5	5	0.3900	0.3900
5	12.5	6	0.3000	0.3000
5	12.5	7	0.3860	0.3860
5	12.5	8	0.3520	0.3520

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.150	0.422	0.305
2	0.02	8	0.144	0.426	0.295
3	0.2	8	0.194	0.502	0.301

OMP2GS

4	1.6	8	0.262	0.430	0.347
5	12.5	8	0.210	0.466	0.346

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.007	0.083	0.030	27.33
2	0.02	0.012	0.110	0.039	37.21
3	0.2	0.009	0.097	0.034	32.32
4	1.6	0.004	0.066	0.023	18.92
5	12.5	0.006	0.079	0.028	22.74

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	4	0.021	0.005	0.672
Within (Error)	35	0.273	0.008	
Total	39	0.294		

Critical F value = 2.69 (0.05,4,30)
Since F < Critical F FAIL TO REJECT Ho: All equal

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	0.305	0.305		
2	0.02	0.295	0.295	0.232	
3	0.2	0.301	0.301	0.102	
4	1.6	0.347	0.347	-0.945	
5	12.5	0.346	0.346	-0.928	

Dunnett table value = 2.25 (1 Tailed Value, P=0.05, df=30,4)

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	8			
2	0.02	8	0.099	32.5	0.010
3	0.2	8	0.099	32.5	0.005
4	1.6	8	0.099	32.5	-0.042
5	12.5	8	0.099	32.5	-0.041

Conc. ID	1	2	3	4	5
Conc. Tested	0	0.02	0.2	1.6	12.5
Response 1	.270	.398	.194	.320	.286
Response 2	.357	.332	.376	.262	.382
Response 3	.240	.144	.308	.372	.210
Response 4	.422	.318	.250	.430	.466
Response 5	.324	.220	.284	.264	.390
Response 6	.150	.372	.502	.426	.300
Response 7	.342	.426	.248	.380	.386
Response 8	.338	.152	.246	.324	.352

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: M. bahia
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	8	0.000	0.305	0.083	0.319
2	8	0.020	0.295	0.110	0.319
3	8	0.200	0.301	0.097	0.319
4	8	1.600	0.347	0.066	0.319
5	8	12.500	0.346	0.079	0.319

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

```
OMP120608-2
File: OMP2f.txt        Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality
-----------------------------------------------------------------------------

D =     8.171

W =     0.825

Critical W (P = 0.05) (n = 40) = 0.940
Critical W (P = 0.01) (n = 40) = 0.919
-----------------------------------------------------------------------------

Data FAIL normality test. Try another transformation.

Warning -  The first three homogeneity tests are sensitive to non-normal
           data and should not be performed.


OMP120608-2
File: OMP2f.txt        Transform: ARC SINE(SQUARE ROOT(Y))

-----------------------------------------------------------------------------
Bartlett's test for homogeneity of variance
Calculated B1 statistic =     0.79

-----------------------------------------------------------------------------
Table Chi-square value =   13.28  (alpha = 0.01, df =   4)
Table Chi-square value =    9.49  (alpha = 0.05, df =   4)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.
```

TITLE: OMP120608-2
FILE: OMP2f.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 5

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.3453
1	0	2	1.0000	1.3453
1	0	3	0.0000	0.2255
1	0	4	1.0000	1.3453
1	0	5	0.0000	0.2255
1	0	6	1.0000	1.3453
1	0	7	1.0000	1.3453
1	0	8	1.0000	1.3453
2	0.02	1	1.0000	1.3453
2	0.02	2	0.0000	0.2255
2	0.02	3	0.0000	0.2255
2	0.02	4	0.6000	0.8861
2	0.02	5	0.0000	0.2255
2	0.02	6	0.5000	0.7854
2	0.02	7	1.0000	1.3453
2	0.02	8	1.0000	1.3453
3	0.2	1	0.0000	0.2255
3	0.2	2	1.0000	1.3453
3	0.2	3	1.0000	1.3453
3	0.2	4	0.3000	0.5796
3	0.2	5	1.0000	1.3453
3	0.2	6	1.0000	1.3453
3	0.2	7	0.0000	0.2255
3	0.2	8	1.0000	1.3453
4	1.6	1	0.5000	0.7854
4	1.6	2	0.5000	0.7854
4	1.6	3	1.0000	1.3453
4	1.6	4	0.6000	0.8861
4	1.6	5	1.0000	1.3453
4	1.6	6	1.0000	1.3453
4	1.6	7	1.0000	1.3453
4	1.6	8	0.0000	0.2255
5	12.5	1	0.5000	0.7854
5	12.5	2	1.0000	1.3453
5	12.5	3	1.0000	1.3453
5	12.5	4	1.0000	1.3453
5	12.5	5	1.0000	1.3453
5	12.5	6	0.0000	0.2255
5	12.5	7	1.0000	1.3453
5	12.5	8	0.5000	0.7854

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.226	1.345	1.065
2	0.02	8	0.226	1.345	0.798
3	0.2	8	0.226	1.345	0.970

				OMP2FS	
4	1.6	8	0.226	1.345	1.008
5	12.5	8	0.226	1.345	1.065

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.269	0.518	0.183	48.66
2	0.02	0.270	0.520	0.184	65.11
3	0.2	0.281	0.530	0.187	54.64
4	1.6	0.169	0.411	0.145	40.76
5	12.5	0.179	0.423	0.150	39.73

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	4	0.389	0.097	0.416
Within (Error)	35	8.171	0.233	
Total	39	8.559		

Critical F value = 2.69 (0.05,4,30)
Since F < Critical F FAIL TO REJECT Ho: All equal

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	1.065	0.750		
2	0.02	0.798	0.513	1.107	
3	0.2	0.970	0.663	0.396	
4	1.6	1.008	0.700	0.238	
5	12.5	1.065	0.750	0.000	

Dunnett table value = 2.25 (1 Tailed Value, P=0.05, df=30,4)

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

OMP2FS

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	8			
2	0.02	8	0.517	68.9	0.237
3	0.2	8	0.517	68.9	0.087
4	1.6	8	0.517	68.9	0.050
5	12.5	8	0.517	68.9	0.000

OMP2fIC25

Conc. ID	1	2	3	4	5
Conc. Tested	0	0.02	0.2	1.6	12.5
Response 1	1	1	0	0.5	0.5
Response 2	1	0	1	0.5	1
Response 3	0	0	1	1	1
Response 4	1	0.6	0.3	0.6	1
Response 5	0	0	1	1	1
Response 6	1	0.5	1	1	0
Response 7	1	1	0	1	1
Response 8	1	1	1	0	0.5

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: M. bahia
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	8	0.000	0.750	0.463	0.750
2	8	0.020	0.513	0.464	0.656
3	8	0.200	0.663	0.475	0.656
4	8	1.600	0.700	0.366	0.656
5	8	12.500	0.750	0.378	0.656

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

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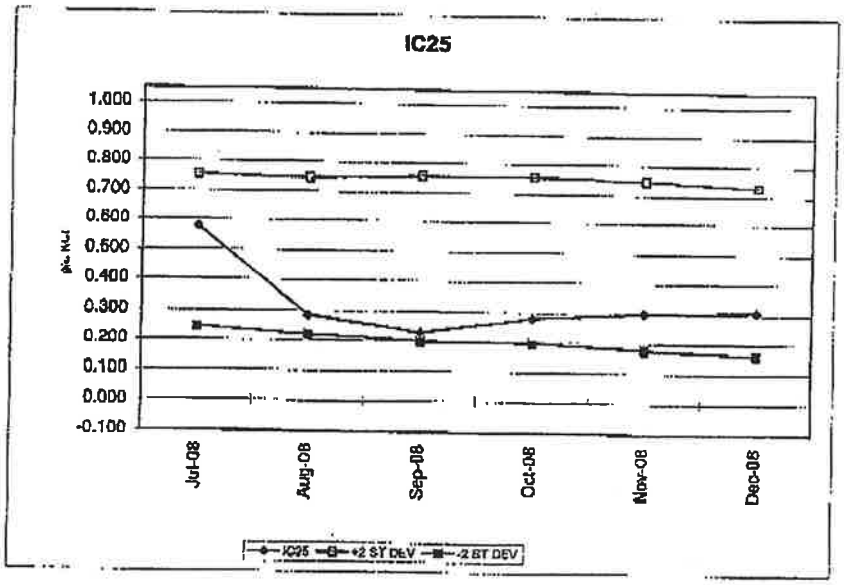
Americamysis bahia



Chronic 7 Day Survival Test Data

Date	NOEC (g/L KCl)	LOEC (g/L KCl)
Jul 08	0.25	0.50
Aug 08	0.25	0.50
Sep 08	0.25	0.50
Oct 08	0.25	0.50
Nov 08	0.25	0.50
Dec 08	0.25	0.50

IC 25 for Growth Test

Date	IC25 (g/L KCl)	95% Confidence (upper)	(lower)	Avg. IC25 (g/L KCl)	+2 ST DEV	-2 ST DEV
Jul 08	0.576	0.649	0.327	0.500	0.754	0.247
Aug 08	0.287	0.321	0.038	0.483	0.747	0.220
Sep 08	0.231	0.252	0.071	0.478	0.757	0.199
Oct 08	0.283	0.443	0.137	0.477	0.758	0.197
Nov 08	0.303	0.318	0.226	0.463	0.748	0.178
Dec 08	0.309	0.314	0.259	0.447	0.730	0.165

Post-it® Fax Note 7671	Date 12/19	# of pages ▶ 4
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Co./Dept. BIOL. MONIT	Co ABS	
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Fax # 540-951-1481	Fax #	

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP120908-3

Test Organism: *Cyprinodon variegatus*

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Date and Time: From 12/08/08@ 0600 to 12/09/08 @ 0600

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: not fed

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/09/08

Time: 1430

End of Test: Date: 12/11/08

Time: 1330

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	*Cyprinodon variegatus*		**Date**	**Time**
Experiment ID	OMP120908-3	**Start Test**	12/09/08	1430
Sample Tested	Outfall 001	**End Test**	12/11/08	1330

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	25	25	6.72	5.85	5.66	8.09	7.93	7.85	25	25	100
6.25	25	25	25	6.68	5.57	5.77	8.11	7.92	7.91	25	25	100
12.5	25	25	25	6.46	5.62	5.73	8.13	7.96	7.94	25	25	100
25	25	25	25	6.96	5.81	5.84	8.14	7.98	7.97	25	25	100
50	25	25	25	7.18	5.78	5.78	8.15	7.99	7.94	24	24	100
100	25	25	25	7.61	5.62	5.82	8.14	7.98	7.95	24	23	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100	1.0	N/A

COMMENTS:

BIOLOGICAL MONITORING , INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMP120508-3~~ OMP120908-3 CRP
Effluent/Sample: OMP120908
NPDES#: VA0003867
Sample Container: PE
Client: Omega Protein
Project Scientist: C. Pough, J. Benzuzing
Outfall/Station No. 001
QC Officer: WK

Sample Type:
Grab: _____
Collection Date: _____ Time: _____
Composite: X
Collected From: Date: 12/8/08 Time: 0600
Collected To: Date: 12/9/08 Time: 0600

Test Organism:
Species: C. variegatus
Source: ~~MBI CRP~~ ABS
Batch#: ~~MBI 060608-1 CRP~~ ABS120608-1
Age: 3d
No. of organisms/ con. 20

Test Mode: Static Acute / 120908
Test Start Date: 12/5/08 ~~CRP~~ Time: 1430
Test End Date: 12/11/08 Time: 1330
Test Temperature: 25±1°C
Dilution Water Used: SS120108
Test Duration: 48hr
Waterbath/Shelf#: 3/3
Temp. of Org. Stock Solution: 25°C

Con. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.72	~~6.95~~ CRP 6.95	5.66			8.09	7.93	7.85			25	25	25			25	25	25		
	B	10	10	10				5.85																		
6.25	A	10	10	10			6.68	~~6.95~~ CRP 6.95	5.77			8.11	7.92	7.91			25	25	25			25	25	25		
	B	10	10	10				5.57																		
12.5	A	10	10	10			6.46	~~6.97~~ CRP 6.97	5.73			8.13	7.96	7.94			25	25	25			25	25	25		
	B	10	10	10				5.62																		
25	A	10	10	10			6.96	~~6.73~~ CRP 6.73	5.84			8.14	7.98	7.97			25	25	25			25	25	25		
	B	10	10	10				5.81																		
50	A	10	10	10			7.18	~~6.78~~ CRP 6.78	5.78			8.15	7.99	7.94			25	24	24			25	25	25		
	B	10	10	10				5.78																		
100	A	10	10	10			7.61	~~6.79~~ CRP 6.79	5.82			8.14	7.98	7.95			25	23	23			25	25	25		
	B	10	10	10				5.62																		
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: ~~OMP1~~ ~~OMP180908-3~~ ~~OMP180908-3~~ ~~CRP~~ OMP180908-3 CRP

Test containers used: PP

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s) 8L, 1L, 500mL, 250mL pipet (s):

volumetric flask (s): other

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

Concentration mg/L Other	Diluent mL	Effluent mL	Total
0	2000	0	2000 mL
6.25	1875	125	✓
12.5	1750	250	✓
25	1500	500	✓
50	1000	1000	✓
100	0	2000	✓

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 450 mL
Water Depth Constant: ✓
Cyclic:

Feeding schedule
Pretest feeding:
Not fed: ✓
Fed daily:
Fed irregularly (describe)
Type of food:

Aeration
Pretest:
None: ✓
Slow: (bubbles/min)
Moderate:
Vigorous:
Beginning: (hour)

Screened Animal Enclosures
Not used: ✓
Used:
Photoperiod:
8h/16h: ✓
Other:

Conditions of surviving organisms at end of test: Normal

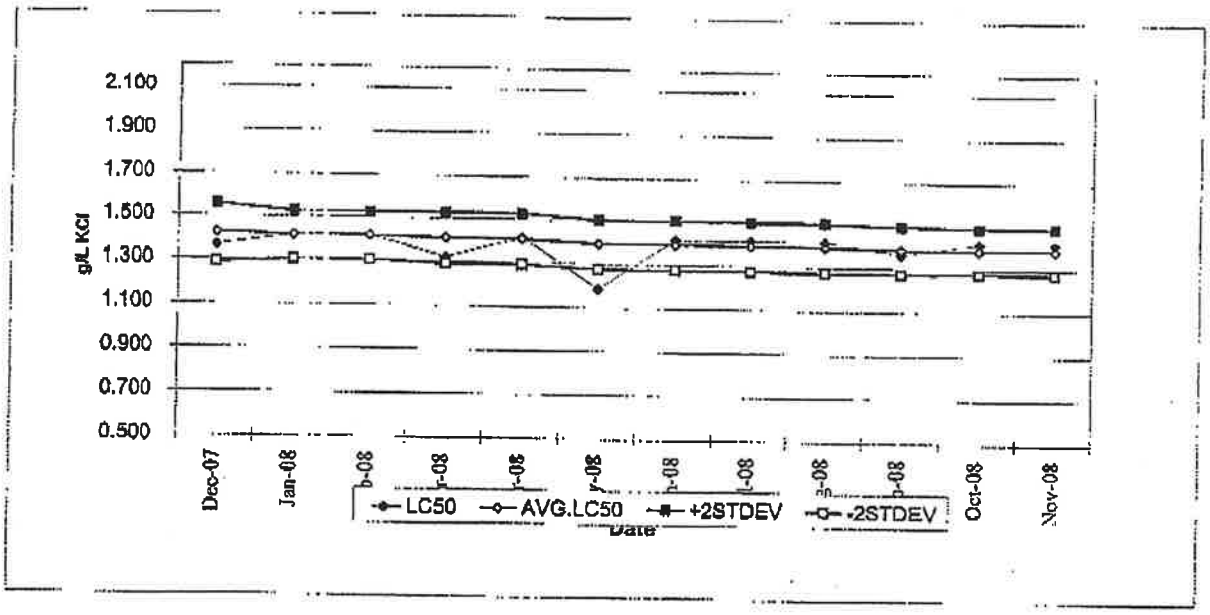
Methods of randomization employed: Random #

Comments:

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

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

REFERENCE TOXICANT LC50
Cyprinodon variegatus



48 HOUR ACUTE TOXICITY DATA FOR
Cyprinodon variegatus

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	Avg+2std	Avg-2std
Jun 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Jul 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Aug 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Sep 08	1.366	1.464	1.275	1.387	SPKR	1.496	1.277
Oct 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280
Nov 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP120908-4

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Static Acute

Organism Age at Start of Test: 5 d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Date and Time: From 12/08/08 @ 0600 to 12/09/08 @ 0600

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily live rinsed Artemia

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/09/08

Time: 1500

End of Test: Date: 12/11/08

Time: 1400

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)		**Date**	**Time**
Experiment ID	OMP120908-4	**Start Test**	12/09/08	1500
Sample Tested	Outfall 001	**End Test**	12/11/08	1400

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	25	25	6.72	5.85	5.48	8.09	7.84	7.98	25	25	100
6.25	25	25	25	6.68	5.72	5.58	8.11	7.89	8.00	25	25	100
12.5	25	25	25	6.46	5.77	5.54	8.13	7.93	8.02	25	25	100
25	25	25	25	6.96	5.80	5.59	8.14	7.98	8.04	25	24	100
50	25	25	25	7.18	5.68	5.53	8.15	7.99	8.06	24	24	100
100	25	25	25	7.61	5.67	5.48	8.14	8.01	8.02	24	23	95

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100	1.0	N/A

COMMENTS:

BIOLOGICAL MONITORING, INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMPi120908-4~~ ~~OMPi121008-4~~ CRP OMPi120508-4 CRP
Effluent/Sample: OMPi120908

NPDES#: VA0003567
Sample Container: PE

Client: Omega Protein
Project Scientist: C. Pough, J. Beauregard

Outfall/Station No. 001
QC Officer: WTR

Sample Type:
Grab: _____
Collection Date: _____ Time: _____
Composite: X
Collected From: Date: 12/8/08 Time: 0600
Collected To: Date: 12/9/08 Time: 0600

Test Organism:
Species: M. bahia
Source: MBL
Batch#: MBL120908
Age: 5 day
No. of organisms/ con. 20

Test Mode: Static Acute ✓ 120908
Test Start Date: ~~12/15/08~~ ~~12/10/08~~ CRP Time: 1500
Test End Date: 12/11/08 Time: 1400
Test Temperature: 25 ± 1°C
Dilution Water Used: SS 120108
Test Duration: 48 hr
Waterbath/Shelf#: 3/3
Temp. of Org. Stock Solution: 25°C

Conc. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.72	5.85	5.48			8.09	7.84	7.98			25	25	25			25	25	25		
	B	10	10	10																						
6.25	A	10	10	10			6.68	5.72	5.58			8.11	7.89	8.00			25	25	25			25	25	25		
	B	10	10	10																						
12.5	A	10	10	10			6.46	5.77	5.54			8.13	7.93	8.02			25	25	25			25	25	25		
	B	10	10	10																						
25	A	10	10	10			6.96	5.80	5.59			8.14	7.98	8.04			25	24	24			25	25	25		
	B	10	10	10																						
50	A	10	10	10			7.18	5.68	5.53			8.15	7.99	8.00			25	24	24			25	25	25		
	B	10	10	10																						
100	A	10	10	10			7.61	5.67	5.48			8.14	8.01	8.02			25	23	23			25	25	25		
	B	10	9	9																						
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: CRP ~~BMP120508-4~~ BMP120908-4 ~~BMP121008-4~~ CRP Test containers used: PP

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s) 2L, 1L, 500mL, 250mL pipet (s):

volumetric flask (s): other

Concentration % mg/L Other	Diluent mL	Effluent mL	Total
0	2000	0	2000 mL
6.25	1875	125	↓
12.5	1750	250	↓
25	1500	500	↓
50	1000	1000	↓
100	0	2000	✓

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 450mL
Water Depth Constant:
Cyclic:

Feeding schedule
Pretest feeding:
Not fed:
Fed daily: 2x
Fed irregularly (describe)
Type of food: live rinsed Artemia

Aeration
Pretest:
None: ✓
Slow: (bubbles/min)
Moderate:
Vigorous:
Beginning: (hour)

Screened Animal Enclosures
Not used: ✓
Used:
Photoperiod:
8h/16h: ✓
Other:

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

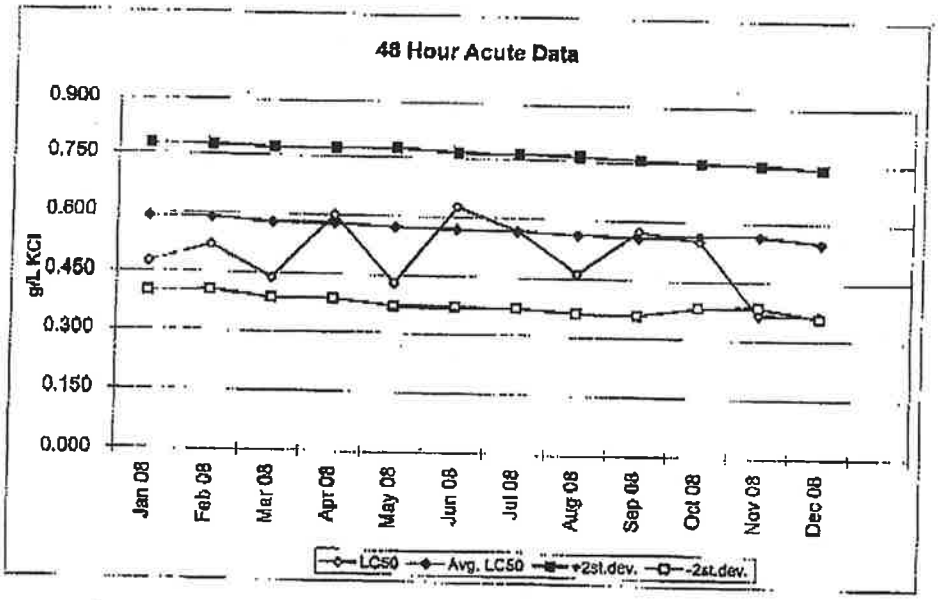
Comments:

1300 Blue Spruce Drive Suite C
Fort Collins, Colorado 80524

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

REFERENCE TOXICANT LC50

Americamysis bahia



48 HOUR ACUTE TOXICITY DATA FOR

Americamysis bahia

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	+2std	-2std
Jul 08	0.569	1.596	0.257	0.568	PRBT	0.765	0.371
Aug 08	0.463	0.523	0.409	0.562	SPKR	0.763	0.361
Sep 08	0.574	0.642	0.514	0.559	SPKR	0.757	0.360
Oct 08	0.553	0.615	0.497	0.566	SPKR	0.750	0.382
Nov 08	0.366	0.397	0.337	0.567	SPKR	0.748	0.385
Dec 08	0.366	0.392	0.342	0.551	SPKR	0.741	0.360

TOXICITY TEST
FOR
OMEGA PROTEIN
Outfall 002
~~Q4~~ 2008
Q3

Submitted to:

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

December 19, 2008

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Tina Paugh (Laboratory Manager)

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE
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L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Gerard Seeley, Jr.
Regional Director

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Prepared by: Tina Paugh

Client: Omega Protein

NPDES Permit #: VA0003867

Experiment ID#: OMP120308-1

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Static Acute

Organism Age at Start of Test: 4 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Date and Time: From 12/01/08 @ 1300 to 12/02/08 @ 1300

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily live rinsed Artemia

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/03/08

Time: 1600

End of Test: Date: 12/05/08

Time: 1620

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

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BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #: VA0003867**		
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)		**Date**	**Time**
Experiment ID	OMP120308-1	**Start Test**	12/03/08	1600
Sample Tested	Outfall 002	**End Test**	12/05/08	1620

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	24	25	6.82	5.19	4.45	8.43	7.85	7.67	25	25	100
6.25	25	24	25	6.85	4.73	4.64	8.28	7.92	7.78	25	25	100
12.5	25	24	25	6.89	4.75	4.85	8.30	7.98	7.87	25	25	100
25	25	24	25	6.96	5.51	5.44	8.31	8.13	8.08	25	25	95
50	25	24	25	7.17	6.23	5.78	8.23	8.22	8.24	25	25	100
100	25	24	25	8.21	6.89	5.82	8.12	8.30	8.43	25	25	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100%	1.0	N/A

COMMENTS: Raw sample OMP120308 was salinated to 25ppt with Crystal Sea Bioassay Mix.

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BIOLOGICAL MONITORING , INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMP111908-1 CRP~~ OMP120308-1
Effluent/Sample: OMP120308
NPDES#: VA0003867
Sample Container: PE
Client: Omega Protein
Project Scientist: C. Pough, J. Berezwicz
Outfall/Station No. 002
QC Officer: [illegible]

Sample Type:
Grab: _____
Collection Date: _____ Time: _____
Composite: X
Collected From: Date: 12/1/08 Time: 1300
Collected To: Date: 12/2/08 Time: 1300

Test Organism:
Species: M. bahia
Source: MBL
Batch#: MBL-120208-3
Age: 4 days
No. of organisms/con. 20

Test Mode: Static Acute
Test Start Date: ~~11/19/08~~ 12/3/08
Test End Date: 12/5/08
Test Temperature: 25 ±1°C
Dilution Water Used: SS
Test Duration: 48 hr
Time: 1600
Time: 1620
Waterbath/Shelf#: 2/3
Temp. of Org. Stock Solution: 25°C

Con. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.82	5.19	4.45			8.43	7.85	7.67			25	25	25			25	24	25		
	B	10	10	10																						
6.25	A	10	10	10			6.85	4.73	4.64			8.28	7.92	7.78			25	25	25			25	24	25		
	B	10	10	10																						
12.5	A	10	10	10			6.89	4.75	4.85			8.30	7.98	7.87			25	25	25			25	24	25		
	B	10	10	10								~~8.57~~ CRP														
25	A	10	*	9			6.96	5.51	5.44			8.31	8.13	8.08			25	25	25			25	24	25		
	B	10	*	10																						
50	A	10	*	10			7.17	6.23	5.78			8.23	8.22	8.24			25	25	25			25	24	25		
	B	10	*	10																						
100	A	10	*	10			8.21	6.89	5.82			8.12	8.20	8.43			25	25	25			25	24	25		
	B	10	*	10																						
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

COMMONWEALTH of VIRGINIA

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David K. Paylor
Director

Gerard Seeley, Jr.
Regional Director

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: ~~OMP111908-1~~ OMP120308-1 Test containers used: PP

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s): 2L, 500mL, 100mL pipet (s):

volumetric flask (s): other

Concentration (%) mg/L Other	Diluent mL	Effluent mL	Total
0	1000	0	1000mL
6.25	937.50	62.5	
12.5	875	125	
25	750	250	
50	500	500	
100	0	1000	

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): < 0.1 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 450 mL
Water Depth Constant: ✓
Cyclic:

Feeding schedule
Pretest feeding:
Not fed:
Fed daily: 2X
Fed irregularly (describe)
Type of food: live rinsed Artemia

Aeration
Pretest:
None: ✓
Slow: (bubbles/min)
Moderate:
Vigorous:
Beginning: (hour)

Screened Animal Enclosures
Not used: ✓
Used:
Photoperiod:
8h/16h: ✓
Other:

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

Comments: Raw Sample OMP120308 was salinated to 25ppt with crystal sea salt
* too turbid to count
LC50 >100%

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Gerard Seeley, Jr.
Regional Director

Sample A

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

11414

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omega Protein
2. Sampler's name Ted Schultz
3. Sample source Lagoon
4. Outfall/station ØØ2
5. Purchase order no.
6. Affiliation Employee
7. NPDES permit no./County VAØØØ3867
8. Test period for which data is being submitted: 3rd Q
9. *Sample relinquished by:* Ted Schultz / 12/2/08 *Date; Received by:* / *Date;*

Sample relinquished by: / *Date; Received by:* / *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab
    - Date collected
    - Time collected /
    - Volume
    - Composite X
    - Composite type 24HC
    - Collection period: from 12/1/08 (date) 13:00 (time) to 12/2/08 (date) 13:00 (time)
11. Flow during sampling
12. Type of container
13. Number of containers shipped
14. No. of subsamples
15. Frequency
16. Volume 1 gal

Condition of Effluent at Time of Collection

17. pH 6.8
18. Chlorine
19. Temperature:
    - At collection point
    - In collection device (comp. sample must be @ or below 4°C) 4°C
20. Is the sample:
    - Chlorinated
    - Dechlorinated
    - Unknown
    - Dechlorination method

Shipping Information

21. Method of shipment UPS
22. Date shipped 12/2/08
23. Time 15:30
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by* Ted Schultz *Date* 12/2/08 *Time* 14:15

Instructions to Lab

26. Type of test(s) to be performed 48hr Tox (Static Acute)
27. Should BMI dechlorinate the sample (Yes or No) NO
28. Should ammonia be measured? (Yes or No) No
29. Comments

30. I certify that the above information is correct Ted Schultz (Signature) 12/2/08 (Date)

For BMI Use Only

Alk 162
Hard 1600
BMI Sample ID# OMP120308-1 *Received by* CRP *Date* 12/3/08 *Time* 1040
Upon arrival at BMI: Custody seal ✓ Temperature 1°C pH 8.04 Chlorine <0.1 DO ~~8.48~~ 7.16
On ice? ✓ Salinity 5 ppt Conductivity —
Visual description green in color, slight fish odor Sample refrigerated ✓
Test ID number(s) OMP120308-1

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

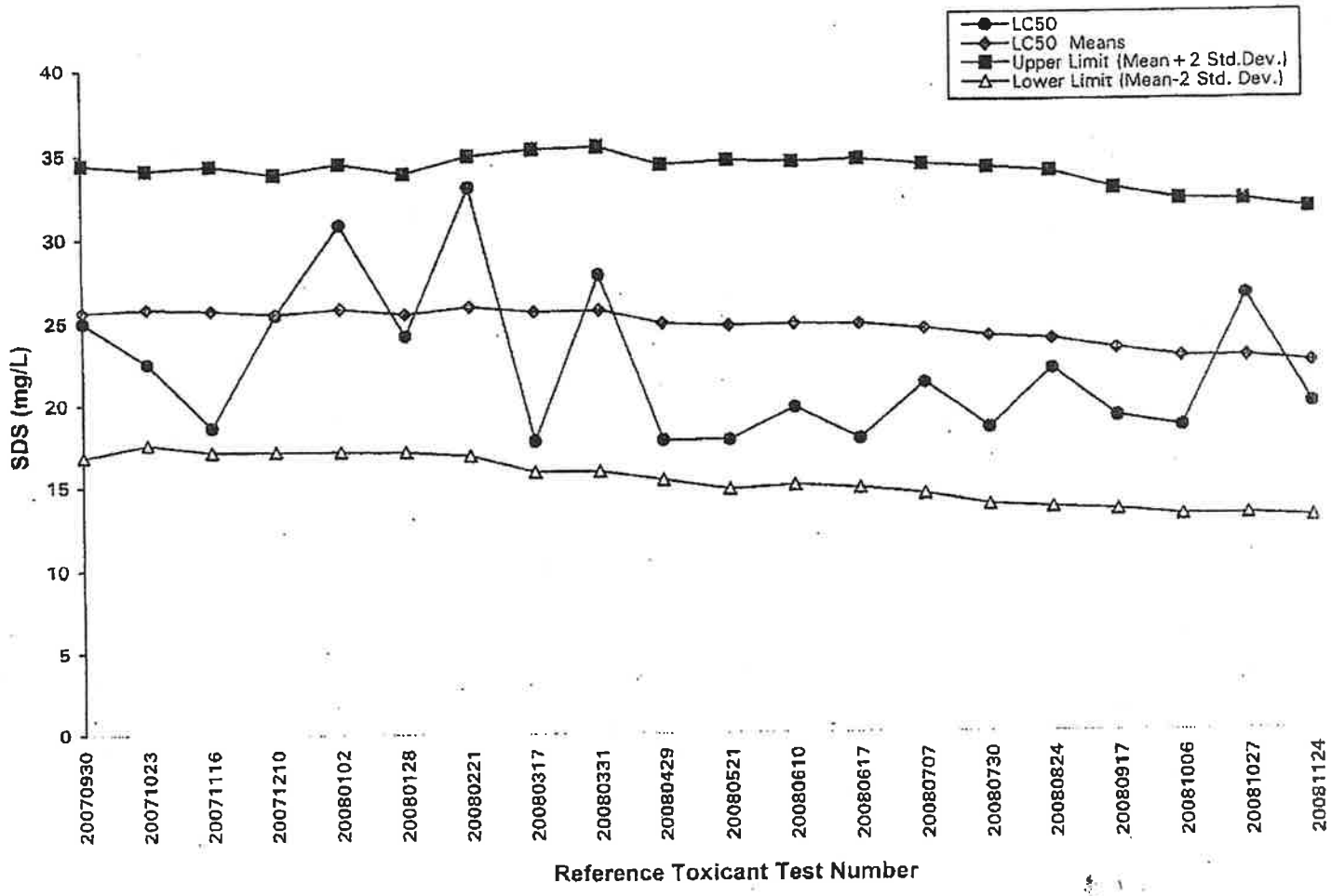
PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Gerard Seeley, Jr.
Regional Director

STANDARD REFERENCE TOXICANT (SODIUM DODECYL SULFATE) CONTROL CHART FOR *Mysidopsis bahia* ACUTE TOXICITY TESTS CONDUCTED AT MARINCO BIOASSAY LABORATORY, INC.



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Regional Director

001 STD 2007

TOXICITY TESTS
FOR
OMEGA PROTEIN
Outfall 001 – December 2008

Submitted to:

Mr. Ted Schultz
Omega Protein
P.O. Box 175
Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc.
1800 Kraft Drive, Suite 101
Blacksburg, VA 24060

Phone: 540-953-2821
Fax: 540-951-1481
www.biomon.com

December 23, 2008

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Tina Paugh (Laboratory Manager)

BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg,VA 24060
Tel 540-953-2821 • Fax 540-951-1481 • Toll Free 877-CLENWTR
www.biomon.com

December 23, 2008

This letter is in regards to Omega Protein's fourth quarter WET toxicity testing required for their NPDES permit. The fourth quarter WET toxicity testing for Outfall 001 was scheduled to start on Wednesday December 3rd 2008. However, the weather prevented processing and we were not able to obtain a sample. Therefore, the test was rescheduled to start on Friday December 5th. BMI's organism supplier was not able to ship organisms due to the fact of snow. The test was then rescheduled for Saturday December 6th 2008. Under normal circumstances the test would have been rescheduled for the following week in order to ensure that samples were used in the correct time frame. However, Omega Protein was scheduled to shut down on December 12th 2008, so the fourth quarter WET toxicity testing had to be done in order to meet NPDES permit requirements.

The first sample was collected from 12/5/08 (0700) to 12/6/08 (0700) and was picked up by BMI on Saturday December 6th 2008. This sample was used on 12/6/08 (1400), 12/7/08 (1400), and 12/8/08 (1530). The sample was 80 hours old on 12/8/08 instead of the required 72 hours. The second sample was collected from 12/8/08 (0600) to 12/9/08 (0600) and was also picked up by BMI on Tuesday December 9th 2008. This sample was used on 12/9/08 (1600), 12/10/08 (1545), and 12/11/08 (1500). This sample was also was also 80 hours old on 12/11/08 instead of the required 72 hours. The final sample was collected from 12/10/08 (1400) to 12/11/08 (1400) and was shipped via UPS for delivery on Friday December 12th 2008. This sample was used on 12/12/08 (1530) and meets the required 72 hour time frame.

If you any questions regarding this letter feel free to contact me by phone at 540-953-2821 or by e-mail at cpaugh@biomon.com. Thank you.

Sincerely,

Tina Paugh
Laboratory Manager

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP100808-1

Test Organism: *Cyprinodon variegatus*

Test Type: Short Term Chronic

Organism Age at Start of Test: <24 hrs

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

From 12/05/08 @ 0700 to 12/06/08 @ 0700;
From 12/08/08 @ 0600 to 12/09/08 @ 0600;
From 12/10/08 @ 1400 to 12/11/08 @ 1400;

Sample Collector: Ted Shultz

Delivered by: UPS & Hand

Test Solution Renewal Frequency: Daily

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4

No. of Organisms per Replicate: 10

Feeding prior to test: Not fed

Feeding Regime: Live rinsed Artemia 2x daily

Chamber Size: 600 mL PP

Test Volume: 500 mL

Photo Period: 16h light/8h dark

Test Duration: 7 d

Start of Test: Date: 12/06/08

Time: 1400

End of Test: Date: 12/13/08

Time: 1300

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. EPA-821-R-02-014.

BIOLOGICAL MONITORING, INC.
Chronic Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867		
Test Organism	*Cyprinodon variegatus*		Date	Time
Experiment ID	OMP120608-1	Start Test	12/06/08	1400
Sample Tested	Outfall 001	End Test	12/13/08	1300

RESULTS

Water Chemistry Analyses Survival and Reproduction
Initial (Range)

Conc. (%)	Temp. (°C) 0h	Temp. (°C) Range	D.O. (mg/L) 0h	D.O. (mg/L) Range	pH (SU) 0h	pH (SU) Range	Salinity (0/00) 0h	Salinity (0/00) Range	Survival (%) 96h	Survival (%) 7d	Mean Weight (mg)
0	25	25	6.59	4.85-6.77	8.11	7.54-8.17	25	25	100	100	0.988
0.02	25	25	6.61	4.85-6.71	8.16	7.57-8.17	25	25	100	100	1.049
0.2	25	25	6.62	4.94-6.74	8.18	7.58-8.18	25	25	100	100	1.094
1.6	25	25	6.58	4.96-6.74	8.20	7.63-8.23	25	25	100	100	1.058
12.5	25	25	6.13	4.71-6.81	8.19	7.65-8.24	25	25	100	100	1.080
100	25	25	5.56	1.69-8.32	7.82	7.63-8.12	25	23-25	97.5	97.5	0.896

Dilution Water and Test Sample
Initial Use Chemistry

Batch/Sample ID	Temp. (°C)	D.O. (mg/L)	pH (SU)	Salinity 0/00	TRC (mg/L)
SS 120108	25	6.59	8.11	25	<0.01
OMP 120608	25	5.56	7.82	25	<0.01
OMP 120908	25	8.32	8.12	24	<0.01
OMP 121208	25	7.04	7.97	23	<0.01

STATISTICAL ANALYSES

Test Method	End Point		
Steel's Many Rank Sum Test	Survival	NOEC = 100% TUc = 1.0	LOEC = N/A
Dunnett's Test	Growth	NOEC = 100% TUc = 1.0	LOEC = N/A
Linear Interpolation	Growth	IC25 >100%	

NOEC = No Observed Effect Concentration LOEC = Lowest Observed Effect Concentration

SURVIVAL DATA

1. Arc Sine transformation was used
2. Data FAIL normality test using Shapiro-Wilk's Test.
3. Data FAIL homogeneity test using Bartlett's Test.
4. *Cyprinodon variegatus* survival in all the effluent concentrations was not significantly different form survival in the control using Steel's Many Rank Sum Test (alpha=0.05)

GROWTH DATA

1. No transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Cyprinodon variegatus* growth in all effluent treatments was not significantly different from growth in the control using Dunnett's Test (alpha = 0.05).
5. PMSD Growth = 12.2%

Comments:

Biological Monitoring, Inc.

Sheepshead Minnow (Cyprinodon variegatus) Larval Survival and Growth Sheet

Experiment ID: ~~OMP120508-1~~ OMP120608-1 CRP

Permit #: VA0003867

Concentration	Day No.	A	B	C	D	No. live organisms	D.O. before renewal (mg/L)	D.O. after renewal (mg/L)	pH before renewal	pH after renewal	Temp. before renewal (°C)	Temp. after renewal (°C)	Salinity (ppt)	Alkalinity (mg/L as $CaCO_3$)	Hardness (mg/L as $CaCO_3$)	Chambers cleaned/renewed	1st feeding	2nd feeding	3rd feeding	Initials
0%	0	10	10	10	10		6.59		8.11		25	25			1400		✓		CRP
	1	10	10	10	10	6.00	6.77	8.15	7.90	25	25	25			1400	✓	✓		MB
	2	10	10	10	10	5.54	6.70	7.91	8.07	25	25	25			1530	✓	✓		MB
	3	10	10	10	10	5.74	6.71	7.88	8.17	25	25	25			1600	✓	✓		MB
	4	10	10	10	10	4.85	6.56	7.57	7.95	25	25	25			1545	✓	✓		MB
0/3600	5	10	10	10	10	4.94	6.48	7.54	8.01	25	25	25			1500	✓	✓		MB
	6	10	10	10	10	5.80	6.60	7.57	7.87	25	25	25			1530	✓	✓		MB
	7	10	10	10	10	5.75		7.79		25		25			1600				MB
0.02%	0	10	10	10	10		6.61		8.16		25	25			1400		✓		CRP
	1	10	10	10	10	6.02	6.71	8.16	7.99	25	25	25			1400	✓	✓		MB
	2	10	10	10	10	5.53	6.71	7.98	8.10	25	25	25			1530	✓	✓		MB
	3	10	10	10	10	5.68	6.71	7.90	8.17	25	25	25			1600	✓	✓		MB
0.72/3600	4	10	10	10	10	4.85	6.58	7.61	7.99	25	25	25			1545	✓	✓		MB
	5	10	10	10	10	4.94	6.48	7.57	8.03	25	25	25			1500	✓	✓		MB
	6	10	10	10	10	5.84	6.60	7.59	7.89	25	25	25			1530	✓	✓		MB
	7	10	10	10	10	5.79		7.81		25		25			1600				MB
6.2%	0	10	10	10	10		6.62		8.18		25	25			1400		✓		CRP
	1	10	10	10	10	5.97	6.74	8.17	8.10	25	25	25			1400	✓	✓		MB
	2	10	10	10	10	5.58	6.72	8.03	8.12	25	25	25			1530	✓	✓		MB
	3	10	10	10	10	5.64	6.72	7.89	8.21	25	25	25			1600	✓	✓		MB
7.2/3600	4	10	10	10	10	4.94	6.58	7.64	8.02	25	25	25			1545	✓	✓		MB
	5	10	10	10	10	4.99	6.50	7.58	8.04	25	25	25			1500	✓	✓		MB
	6	10	10	10	10	5.84	6.65	7.59	7.91	25	25	25			1530	✓	✓		MB
	7	10	10	10	10	5.83		7.83		25		25			1600				MB
1.6%	0	10	10	10	10		6.58		8.20		25	25			1400		✓		CRP
	1	10	10	10	10	5.71	6.61	8.16	8.11	25	25	25			1400	✓	✓		MB
	2	10	10	10	10	5.52	6.68	8.05	8.13	25	25	25			1530	✓	✓		MB
	3	10	10	10	10	5.64	6.74	7.89	8.23	25	25	25			1600	✓	✓		MB
57.6/3600	4	10	10	10	10	4.77	6.70	7.66	8.04	25	25	25			1545	✓	✓		MB
	5	10	10	10	10	4.96	6.50	7.63	8.06	25	25	25			1500	✓	✓		MB
	6	10	10	10	10	5.85	6.65	7.63	7.94	25	25	25			1530	✓	✓		MB
	7	10	10	10	10	5.89		7.83		25		25			1500				
12.5%	0	10	10	10	10		6.13		8.19		25	25			1400		✓		CRP
	1	10	10	10	10	5.40	6.19	8.10	8.11	25	25	25			1400	✓	✓		MB
	2	10	10	10	10	5.31	6.50	8.01	8.11	25	25	25			1530	✓	✓		MB
	3	10	10	10	10	5.42	6.81	7.86	8.24	25	25	25			1600	✓	✓		MB
450/3600	4	10	10	10	10	4.71	7.13	7.71	8.02	25	25	25			1545	✓	✓		MB
	5	10	10	10	10	4.89	6.58	7.67	8.05	25	25	25			1500	✓	✓		MB
	6	10	10	10	10	5.70	6.64	7.65	7.96	25	25	25			1530	✓	✓		MB
	7	10	10	10	10	5.88		7.89		25		25			1500				
100%	0	10	10	10	10		5.86		7.82		25	25	140	1800	1400		✓		CRP
	1	10	10	10	10	1.69	6.08	7.85	7.65	25	25	23			1400	✓	✓		MB
	2	10	9	10	10	2.58	6.30	7.75	7.69	25	25	23			1530	✓	✓		MB
	3	10	9	10	10	2.39	6.32	7.72	8.12	25	25	24	96	1850	1600	✓	✓		MB
3600/3600	4	10	9	10	10	3.82	7.20	7.63	8.06	25	25	23			1545	✓	✓		MB
	5	10	9	10	10	4.38	6.50	7.65	7.90	25	25	23			1500	✓	✓		MB
	6	10	9	10	10	5.00	7.04	7.65	7.97	25	25	23	90	2000	1530	✓	✓		MB
	7	10	9	10	10	5.01		7.76		25		23			1500				MB

BIOLOGICAL MONITORING, INC.
Short-term Chronic Toxicity Test Conditions
(Fish)

Permit # VA0003867

Experiment I.D.# OMP120608-1

Organism: C. Variegatus

Client: Omega Protein

Effluent Toxicant: Outfall 001

Sample Type: 24 hr composite

Renewal Frequency: daily

Test Temperature: 25 ± 1°C

Dilution Water Used: SS120108

Start of Test: Date: 120608 Time: 1400

End of Test: Date: 121308 Time: 1300

Biologists Conducting Test: C. Baugh, J. Berenzweig

QC Officer: WMC

Test Organism Age: <24hr

Organism Batch #: ABS120608-1

Test Containers Used: 600 mL PP

Feeding Schedule: 2x daily live rinsed Artemia

Aeration: see comments

Sample Chlorine: <0.01 mg/L

Test Volume: 500mL

Template #: Random #

SAMPLE COLLECTION				SAMPLE USE		
Date(s)		Time(s)				
From:	To:	From:	To:	Date(s)	Time(s)	Test Day
12/6/08	12/6/08	0700	0700	12/6/08	1400	0
				12/7/08	1400	1
				12/8/08	1530	2
12/8/08	12/9/08	0600	0600	12/9/08	1600	3
				12/10/08	1545	4
				12/11/08	1500	5
12/9/08	12/11/08	1400	1400	12/12/08	~~1300~~ CBW 1530	6

Diluent Batch Carboy #/Days Used

SS120108 0,1,2,3,4,5,6

The first use of a sample (acute or chronic) must be within 36-hours of retrieval from the sample collection device. Samples held after first use, to be used in chronic test solution renewals, must not be used if more than 72-hours have elapsed since retrieval from the sample collection device.

Condition of Organisms at End of Test: Normal

Average weight per control fish: 0.9875 Control Survival (%): 100%

Comments: Raw Sample OMP120608 + OMP120408 was aerated prior to use to raise DO

PMSD Growth = 12.2%.

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~CMP120508-1~~ CMP120608-1 Permit # VA0003867 Species C. variegatus

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
0A		18.41	28.12	9.71	10	0.971	CRP
0B		20.63	30.20	9.57	10	0.957	CRP
0C		18.58	28.37	9.79	10	0.979	CRP
0D		18.62	29.05	10.43	10	1.043	CRP
0.02A		17.83	28.88	11.05	10	1.105	CRP
0.02B		20.17	30.77	10.60	10	1.060	CRP
0.02C		16.01	26.32	10.31	10	1.031	CRP
0.02D		16.72	26.72	10.00	10	1.000	CRP
0.2A		23.07	34.64	11.57	10	1.157	CRP
0.2B		20.84	31.57	10.73	10	1.073	CRP
0.2C		21.73	32.72	10.97	10	1.097	CRP
0.2D		22.36	32.81	10.45	10	1.045	CRP
1.6A		15.16	25.61	10.45	10	1.045	CRP
1.6B		14.89	24.80	9.91	10	0.991	CRP
1.6C		14.52	24.44	9.92	10	0.992	CRP
1.6D		14.41	26.44	12.03	10	1.203	CRP
12.5A		15.13	24.88	9.75	10	0.975	CRP
12.5B		14.33	25.56	11.23	10	1.123	CRP
12.5C		14.41	25.48	11.07	10	1.107	CRP
12.5D		14.32	25.48	11.16	10	1.116	CRP
100A		15.75	25.96	10.21	10	1.021	CRP
100B		15.15	23.18	8.03	10	0.803	CRP
100C		15.11	23.50	8.39	10	0.839	CRP
100D		16.24	25.44	9.20	10	0.920	CRP

2/3 A, B, C, D, E

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

11412

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name: Omega Protein
2. Sampler's name: Ted Schultz
3. Sample source: Non-Contact. Scrubber Mix
4. Outfall/station: 001
5. Purchase order no.:
6. Affiliation: Employee
7. NPDES permit no./County: VA0003867
8. Test period for which data is being submitted: 3rd Q

9. *Sample relinquished by:* Ted Schultz / 12/6/08 *Date;* *Received by:* / *Date;*

Sample relinquished by: [illegible] / 12-6-08 *Date;* *Received by:* [illegible] / 12-6-08 *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab
Date collected
Time collected
Volume

Composite X
Composite type
Collection period: from 12/5/08 (date) 07:00 (time) to 12/6/08 (date) 07:00 (time)

11. Flow during sampling
12. Type of container: LDPE CUBE
13. Number of containers shipped: 4 VAB

14. No. of subsamples: 4 VAB
15. Frequency
16. Volume

Condition of Effluent at Time of Collection

17. pH 7.60
18. Chlorine
19. Temperature:
At collection point
In collection device (comp. sample must be @ or below 4°C) 4°C

20. Is the sample:
Chlorinated
Dechlorinated
Unknown
Dechlorination method

Shipping Information

21. Method of shipment: Hand deliver
22. Date shipped: 12/6/08
23. Time
24. Was the sample packed with ice for shipment?
25. *Custody seal in place by* [illegible] *Date* 12-6-08 *Time* 06:30

Instructions to Lab

26. Type of test(s) to be performed: Chronic / Acute Tox
27. Should BMI dechlorinate the sample (Yes or No) No
28. Should ammonia be measured? (Yes or No) No
29. Comments

30. I certify that the above information is correct: Theodore Schultz (Signature) 12/6/08 (Date)

For BMI Use Only

Alk 140
Hard 1600
BMI Sample ID# CMP120608 *Received by* CRP *Date* 12/6/08 *Time* 1320
Upon arrival at BMI: Custody seal ✓ Temperature 20°C pH 8.05 Chlorine <0.1 DO 7.68
On ice? ✓ Salinity 25 ppt Conductivity
Visual description yellow fint, slight fish odor Sample refrigerated ✓
Test ID number(s) CMP120608-1, -2

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SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions. 11411

1. Client name Omega Protein
2. Sampler's name Ted Schultz
3. Sample source Non-Contact / Scrubber mix
4. Outfall/station ØØ1
5. Purchase order no.
6. Affiliation Employee
7. NPDES permit no./County VAØØØ3867
8. Test period for which data is being submitted:

9. *Sample relinquished by:* Ted Schultz 12/9/08 *Date;* *Received by:* W J Burke 12/08 6:50 *Date;*

Sample relinquished by: W J Burke 12-9-08 *Date;* *Received by:* [illegible] 12/9/08 *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
Grab
Date collected
Time collected
Volume

Composite X
Composite type
Collection period: from 12/8/08 (date) 06:00 (time) to 12/9/08 (date) 06:00 (time)

11. Flow during sampling
12. Type of container LDPE Cube
13. Number of containers shipped 5

14. No. of subsamples 96
15. Frequency 15 min
16. Volume 200 ml

Condition of Effluent at Time of Collection

17. pH 7.9
18. Chlorine
19. Temperature:
At collection point
In collection device (comp. sample must be @ or below 4°C) 4°C

20. Is the sample:
Chlorinated No
Dechlorinated No
Unknown
Dechlorination method

Shipping Information

21. Method of shipment Hand Deliver
22. Date shipped 12/9/08
23. Time
24. Was the sample packed with ice for shipment?
25. *Custody seal in place by* W J Burke *Date* 12-9-08 *Time* 6:50

Instructions to Lab

26. Type of test(s) to be performed Chronic / Acute Tox
27. Should BMI dechlorinate the sample (Yes or No) No
28. Should ammonia be measured? (Yes or No) No
29. Comments

30. I certify that the above information is correct Theodore A Schultz (Signature) 12/9/08 (Date)

For BMI Use Only

Alk 96
Hard 1950
BMI Sample ID# OMP120908 *Received by* CRP & RJB *Date* 120908 *Time* 1250
Upon arrival at BMI: Custody seal ✓ Temperature 1°C pH 8.35 Chlorine <0.01 DO 9.58
On ice? ✓ Salinity 25 ppt Conductivity
Visual description slight yellow tint in color, slight fish odor Sample refrigerated ✓
Test ID number(s) OMP120608-1,-2 OMP120908-3,-4

C:\wpdocs\labforms\spicol2.frm (V.1194)

3/3 A, B, C, D

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

11415

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name: Omega Protein
2. Sampler's name: Ted Schultz / Non-Contact
3. Sample source: Scrubber Mix
4. Outfall/station: 001
5. Purchase order no.:
6. Affiliation: Employee
7. NPDES permit no./County: VA0003867
8. Test period for which data is being submitted: 3rd Q
9. *Sample relinquished by:* Ted Schultz / 12/11/08 *Date; Received by:* / *Date;*

Sample relinquished by: / *Date; Received by:* / *Date.*

Description of Sampling Methods and Equipment

10. Type of sample collected:
    - Grab
    - Date collected
    - Time collected
    - Volume
    - Composite: X
    - Composite type: 24HC
    - Collection period: from 12/10/08 (date) 14:00 (time) to 12/11/08 (date) 14:00 (time)
11. Flow during sampling
12. Type of container: LDPE CUBE
13. Number of containers shipped: 4
14. No. of subsamples: 96
15. Frequency: 15 min
16. Volume: 200ml

Condition of Effluent at Time of Collection

17. pH: 7.30
18. Chlorine
19. Temperature:
    - At collection point
    - In collection device (comp. sample must be @ or below 4°C): 4°C
20. Is the sample:
    - Chlorinated: No
    - Dechlorinated: No
    - Unknown
    - Dechlorination method

Shipping Information

21. Method of shipment: UPS
22. Date shipped: 12/11/08
23. Time: 14:30
24. Was the sample packed with ice for shipment? Yes
25. *Custody seal in place by* Ted Schultz *Date* 12/11/08 *Time* 14:15

Instructions to Lab

26. Type of test(s) to be performed: Chronic/Acute Tox
27. Should BMI dechlorinate the sample (Yes or No): No
28. Should ammonia be measured? (Yes or No): No
29. Comments:
30. I certify that the above information is correct: Ted Schultz (Signature) 12/11/08 (Date)

For BMI Use Only

Alk 90
Hard 2900
BMI Sample ID# OMP121208 *Received by* CRP *Date* 12/12/08 *Time* 1030
Upon arrival at BMI: Custody seal ✓ Temperature 3°C pH 8.21 Chlorine <0.01 DO 8.49
On ice? ✓ Salinity 25 ppt Conductivity —
Visual description clear in color, slight fish smell Sample refrigerated ✓
Test ID number(s) OMP120608-1, -2

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.020

W = 0.465

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance
Bartlett's test for homogeneity of variance

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.
Additional transformations are useless.

OMP1SS

TITLE: OMP120608-1
FILE: OMP1s.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.4120
1	0	2	1.0000	1.4120
1	0	3	1.0000	1.4120
1	0	4	1.0000	1.4120
2	0.02	1	1.0000	1.4120
2	0.02	2	1.0000	1.4120
2	0.02	3	1.0000	1.4120
2	0.02	4	1.0000	1.4120
3	02	1	1.0000	1.4120
3	02	2	1.0000	1.4120
3	02	3	1.0000	1.4120
3	02	4	1.0000	1.4120
4	1.6	1	1.0000	1.4120
4	1.6	2	1.0000	1.4120
4	1.6	3	1.0000	1.4120
4	1.6	4	1.0000	1.4120
5	12.5	1	1.0000	1.4120
5	12.5	2	1.0000	1.4120
5	12.5	3	1.0000	1.4120
5	12.5	4	1.0000	1.4120
6	100	1	1.0000	1.4120
6	100	2	0.9000	1.2490
6	100	3	1.0000	1.4120
6	100	4	1.0000	1.4120

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.412	1.412	1.412
2	0.02	4	1.412	1.412	1.412
3	02	4	1.412	1.412	1.412
4	1.6	4	1.412	1.412	1.412
5	12.5	4	1.412	1.412	1.412
6	100	4	1.249	1.412	1.371

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00

			OMP1SS		
2	0.02	0.000	0.000	0.000	0.00
3	02	0.000	0.000	0.000	0.00
4	1.6	0.000	0.000	0.000	0.00
5	12.5	0.000	0.000	0.000	0.00
6	100	0.007	0.081	0.041	5.94

OMP120608-1
File: OMP1s.txt Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.412				
2	0.02	1.412	18.00	10.00	4.00	
3	02	1.412	18.00	10.00	4.00	
4	1.6	1.412	18.00	10.00	4.00	
5	12.5	1.412	18.00	10.00	4.00	
6	100	1.371	16.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality

D = 0.090

W = 0.968

Critical W (P = 0.05) (n = 24) = 0.916
Critical W (P = 0.01) (n = 24) = 0.884

Data PASS normality test at P=0.01 level. Continue analysis.

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 4.38

Table Chi-square value = 15.09 (alpha = 0.01, df = 5)
Table Chi-square value = 11.07 (alpha = 0.05, df = 5)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

OMP1GS

TITLE: OMP120608-1
FILE: OMP1g.txt
TRANSFORM: NO TRANSFORMATION
NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.9710	0.9710
1	0	2	0.9570	0.9570
1	0	3	0.9790	0.9790
1	0	4	1.0430	1.0430
2	0.02	1	1.1050	1.1050
2	0.02	2	1.0600	1.0600
2	0.02	3	1.0310	1.0310
2	0.02	4	1.0000	1.0000
3	0.2	1	1.1570	1.1570
3	0.2	2	1.0750	1.0750
3	0.2	3	1.0970	1.0970
3	0.2	4	1.0450	1.0450
4	1.6	1	1.0450	1.0450
4	1.6	2	0.9910	0.9910
4	1.6	3	0.9920	0.9920
4	1.6	4	1.2030	1.2030
5	12.5	1	0.9750	0.9750
5	12.5	2	1.1230	1.1230
5	12.5	3	1.1070	1.1070
5	12.5	4	1.1160	1.1160
6	100	1	1.0210	1.0210
6	100	2	0.8030	0.8030
6	100	3	0.8390	0.8390
6	100	4	0.9200	0.9200

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	0.957	1.043	0.988
2	0.02	4	1.000	1.105	1.049
3	0.2	4	1.045	1.157	1.094
4	1.6	4	0.991	1.203	1.058
5	12.5	4	0.975	1.123	1.080
6	100	4	0.803	1.021	0.896

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.001	0.038	0.019	3.86

			OMP1GS		
2	0.02	0.002	0.045	0.022	4.26
3	0.2	0.002	0.047	0.024	4.33
4	1.6	0.010	0.100	0.050	9.46
5	12.5	0.005	0.070	0.035	6.52
6	100	0.009	0.097	0.048	10.80

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.110	0.022	4.390
Within (Error)	18	0.090	0.005	
Total	23	0.200		

Critical F value = 2.77 (0.05,5,18)
Since F > Critical F REJECT Ho: All equal

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	0.988	0.988		
2	0.02	1.049	1.049	-1.229	
3	0.2	1.094	1.094	-2.119	
4	1.6	1.058	1.058	-1.404	
5	12.5	1.080	1.080	-1.854	
6	100	0.896	0.896	1.834	

Dunnett table value = 2.41 (1 Tailed Value, P=0.05, df=18,5)

OMP120608-1
File: OMP1g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	4			
2	0.02	4	0.121	12.2	-0.062
3	0.2	4	0.121	12.2	-0.106
4	1.6	4	0.121	12.2	-0.070
5	12.5	4	0.121	12.2	-0.093
6	100	4	0.121	12.2	0.092

OMP1gIC25

Conc. ID	1	2	3	4	5	6
Conc. Tested	0	0.02	0.2	1.6	12.5	100
Response 1	0.971	1.105	1.157	1.045	0.975	1.021
Response 2	0.957	1.060	1.075	0.991	1.123	0.803
Response 3	0.979	1.031	1.097	0.992	1.107	0.839
Response 4	1.043	1.000	1.045	1.203	1.116	0.920

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: C. variegatus
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

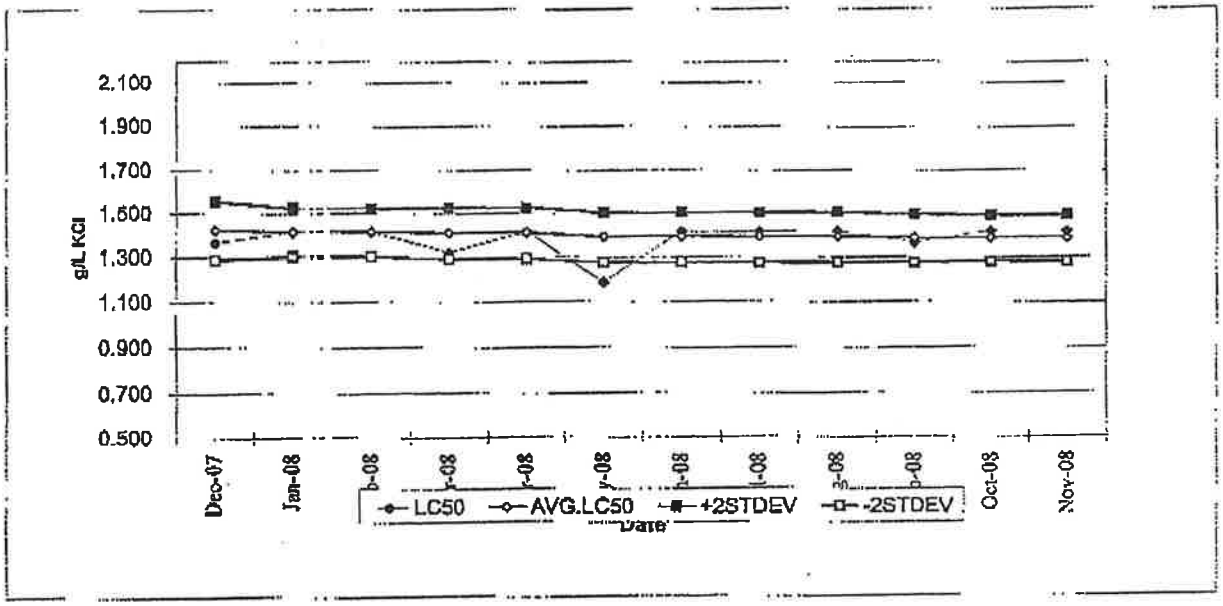
Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	4	0.000	0.988	0.038	1.054
2	4	0.020	1.049	0.045	1.054
3	4	0.200	1.094	0.047	1.054
4	4	1.600	1.058	0.100	1.054
5	4	12.500	1.080	0.070	1.054
6	4	100.000	0.896	0.097	0.896

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

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

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

REFERENCE TOXICANT LC50
Cyprinodon variegatus



48 HOUR ACUTE TOXICITY DATA FOR
Cyprinodon variegatus

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	Avg+2std	Avg-2std
Jun 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Jul 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Aug 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Sep 08	1.366	1.464	1.275	1.387	SPKR	1.496	1.277
Oct 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280
Nov 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Tina Paugh

NPDES Permit #: VA0003867

Experiment ID#: OMP120608-2

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Short Term Chronic

Organism Age at Start of Test: 7d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Dates and Times:

From 12/05/08 @ 0700 to 12/06/08 @ 0700;
From 12/08/08 @ 0600 to 12/09/08 @ 0600;
From 12/10/08 @ 1400 to 12/11/08 @ 1400;

Sample Collector: Ted Shultz

Delivered by: UPS & Hand

Test Solution Renewal Frequency: Daily

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 26 ± 1°C

No. of Replicates per conc.: 8

No. of Organisms per Replicate: 5

Feeding prior to test: Not fed

Feeding Regime: Live rinsed Artemia 2x daily

Chamber Size: 250 mL PE

Test Volume: 200 mL

Photo Period: 16h light/8h dark

Test Duration: 7 d

Start of Test: Date: 12/06/08

Time: 1400

End of Test: Date: 12/13/08

Time: 1300

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. EPA-821-R-02-014.

BIOLOGICAL MONITORING, INC.
Chronic Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867		
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)		Date	Time
Experiment ID	OMP120608-2	Start Test	12/06/08	1400
Sample Tested	Outfall 001	End Test	12/13/08	1300

RESULTS

Water Chemistry Analyses Survival and Reproduction
Initial (Range)

Conc. (%)	Temp. (°C) 0h	Temp. (°C) Range	D.O. (mg/L) 0h	D.O. (mg/L) Range	pH (SU) 0h	pH (SU) Range	Salinity (0/00) 0h	Salinity (0/00) Range	Survival (%) 96h	Survival (%) 7d	Mean Weight (mg)
0	25	25	6.59	4.28-6.77	8.11	7.41-8.11	25	25	80	80	
0.02	25	25	6.61	4.24-6.71	8.16	7.45-8.17	25	25	85	77.5	
0.2	25	25	6.62	4.24-6.74	8.18	7.45-8.18	25	25	82.5	75	
1.6	25	25	6.58	4.21-6.74	8.20	7.45-8.23	25	25	90	90	
12.5	25	25	6.13	4.19-7.13	8.19	7.43-8.24	25	25	87.5	87.5	
100	25	25	5.56	2.31-5.56	7.82	7.60-7.82	25	25	0	0	

Dilution Water and Test Sample
Initial Use Chemistry

Batch/Sample ID	Temp. (°C)	D.O. (mg/L)	pH (SU)	Salinity 0/00	TRC (mg/L)
SS 120108	25	6.59	8.11	25	<0.01
OMP 120608	25	5.56	7.82	25	<0.01
OMP 120908	25	8.32	8.12	24	<0.01
OMP 121208	25	7.04	7.97	23	<0.01

STATISTICAL ANALYSES

Test Method	End Point		
Steel's Many-One Rank Sum Test	Survival	NOEC = 12.5% TUc = 8	LOEC = 100%
Dunnett's Test	Growth	NOEC = 12.5% TUc = 8	LOEC = 100%
Linear Interpolation		IC25 > 100%	
Dunnett's Test	Fecundity	NOEC = 100% TUc = 1.0	LOEC = N/A
Linear Interpolation		IC25 >100%	

NOEC = No Observed Effect Concentration LOEC = Lowest Observed Effect Concentration

SURVIVAL DATA
1. Arcsine transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data FAIL homogeneity test using Bartlett's Test.
4. *Americamysis bahia* survival in effluent concentration 100% was significantly different from survival in the control using Steel's Many-One Rank test (alpha = 0.05).

GROWTH DATA
1. No transformation was used.
2. Data PASS normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Americamysis bahia* growth in effluent concentration 100% was significantly different from growth in the control using Dunnett's test (p = 0.05).
5. PMSD Growth = 32.5%

FECUNDITY DATA
1. Arcsine transformation was used.
2. Data FAIL normality test using Shapiro-Wilk's Test.
3. Data PASS homogeneity test using Bartlett's Test.
4. *Americamysis bahia* fecundity in all effluent treatments was not significantly different from fecundity in the control using Dunnett's Test (p = 0.05).
5. PMSD Fedundity = 68.9%

Comments:

Biological Monitoring, Inc.

Mysidopsis bahia Survival, Growth, and Fecundity Log Sheet

xperiment ID#: OMP120608-2 ~~OMP120608-2~~ UPP

ermit #: VA0003867

Concentra.	Day	A	B	C	D	E	F	G	H	D.O. before renewal (mg/L)	D.O. after renewal (mg/L)	pH before renewal	pH after renewal	Temp. before renewal (°C)	Temp. after renewal (°C)	Salinity before renewal (ppt)	Salinity after renewal (ppt)	Chambers cleaned/renewed	1st Feeding	2nd Feeding	3rd Feeding	Initial
		No. of Live Organisms																				
0/. 0/3600	0	5	5	5	5	5	5	5	5		6.59		8.11		25	25	25	1400		✓		RJB
	1	5	4	5	5	5	5	4	5	5.23	6.77	7.68	7.90	25	25	25	25	1500		✓		MB
	2	4	4	4	5	4	4	4	5	4.89	6.70	7.67	8.07	25	25	25	25	1500	✓	✓		MB
	3	4	4	4	5	4	2	4	5	4.74	6.71	7.57	6.78	25	25	25	25	1540	✓	✓		MB
	4	4	4	4	5	4	2	4	5	4.28	6.56	7.43	7.95	25	25	25	25	1520	✓	✓		MB
	5	4	4	4	5	4	2	4	5	4.46	6.48	7.41	8.01	25	25	25	25	1441	✓	✓		MB
	6	4	4	4	5	4	2	4	5	4.75	6.60	7.46	7.87	25	25	25	25	1500	✓	✓		MB
	7	4	4	4	5	4	2	4	5	5.02		7.43		25	25	25		1430				MB
0.02/. 0.72/3600	0	5	5	5	5	5	5	5	5		6.61		8.16		25	25	25	1400		✓		RJB
	1	5	5	4	5	5	5	5	5	5.32	6.71	7.76	7.99	25	25	25	25	1500	✓	✓		MB
	2	5	4	2	4	5	5	5	5	5.01	6.71	7.71	8.10	25	25	25	25	1500	✓	✓		MB
	3	5	4	2	4	5	5	5	5	4.81	6.71	7.59	8.17	25	25	25	25	1540	✓	✓		MB
	4	5	4	2	4	4	5	5	5	4.24	6.58	7.45	7.97	25	25	25	25	1520	✓	✓		MB
	5	5	4	2	4	4	5	5	5	4.48	6.48	7.46	8.03	25	25	25	25	1445	✓	✓		MB
	6	5	4	2	4	4	5	5	5	4.75	6.60	7.46	7.89	25	25	25	25	1500	✓	✓		MB
	7	5	4	2	4	3	5	5	3	4.93		7.48		25		25		1430				MB
0.2/. 7.2/3600	0	5	5	5	5	5	5	5	5		6.62		8.18		25	25	25	1400		✓		RJB
	1	4	5	4	5	5	5	4	5	5.34	6.74	7.83	8.10	25	25	25	25	1500	✓	✓		MB
	2	4	5	4	5	5	5	4	3	4.81	6.72	7.73	8.12	25	25	25	25	1500	✓	✓		MB
	3	4	5	3	5	5	5	3	3	4.78	6.72	7.62	8.21	25	25	25	25	1540	✓	✓		MB
	4	4	5	3	5	5	5	3	3	4.24	6.58	7.45	8.02	25	25	25	25	1520	✓	✓		MB
	5	4	5	3	5	4	5	3	3	4.52	6.50	7.49	8.04	25	25	25	25	1445	✓	✓		MB
	6	3	5	3	4	4	5	3	3	4.78	6.65	7.47	7.91	25	25	25	25	1500	✓	✓		MB
	7	3	5	3	4	4	5	3	3	4.90		7.48		25		25		1430				MB
1.6/. 57.6/3600	0	5	5	5	5	5	5	5	5		6.58		8.20		25	25	25	1400		✓		RJB
	1	5	5	4	5	4	5	5	4	5.28	6.61	7.86	8.11	25	25	25	25	1500	✓	✓		MB
	2	5	5	4	5	4	5	5	4	4.86	6.68	7.74	8.13	25	25	25	25	1500	✓	✓		MB
	3	5	4	4	5	4	5	5	4	4.72	6.74	7.63	8.23	25	25	25	25	1540	✓	✓		MB
	4	5	4	4	5	4	5	5	4	4.21	6.70	7.45	8.04	25	25	25	25	1520	✓	✓		MB
	5	5	4	4	5	4	5	5	4	4.58	6.50	7.52	8.06	25	25	25	25	1445	✓	✓		MB
	6	5	4	4	5	4	5	5	4	4.79	6.65	7.48	7.94	25	25	25	25	1500	✓	✓		MB
	7	5	4	4	5	4	5	5	4	4.84		7.50		25		25		1430				MB
12.5/. 450/3600	0	5	5	5	5	5	5	5	5		6.63		8.19		25	25	25	1400		✓		RJB
	1	5	5	4	5	5	4	5	5	4.61	6.19	7.84	8.11	25	25	25	25	1500	✓	✓		MB
	2	5	5	4	5	5	4	5	5	4.77	6.50	7.79	8.11	25	25	25	25	1500	✓	✓		MB
	3	4	5	4	5	5	4	4	5	4.39	6.81	7.62	8.24	25	25	25	25	1540	✓	✓		MB
	4	4	5	3	5	5	4	4	5	4.19	7.13	7.43	8.02	25	25	25	25	1520	✓	✓		MB
	5	4	5	3	5	5	4	4	5	4.58	6.58	7.52	8.05	25	25	25	25	1445	✓	✓		MB
	6	4	5	3	5	5	4	4	5	4.85	6.64	7.48	7.96	25	25	25	25	1500	✓	✓		MB
	7	4	5	3	5	5	4	4	5	4.80		7.51		25		25		1430				MB
100/. 3600/3600	0	5	5	5	5	5	5	5	5		5.56		7.82		25	25	25	1400		✓		RJB
	1	0	0	0	0	0	0	0	0	2.31		7.60			25	25	25	1500	✓	✓		MB
	2																					
	3																					
	4																					
	5																					
	6																					
	7																					

BIOLOGICAL MONITORING, INC.
Short-term Chronic Toxicity Test Conditions.
Mysidopsis bahia

Permit # VA0003867

Experiment I.D.# OMP120608-2

Biologists Conducting Test: C. Paugh, J. Berenzweig

Organism: M. bahia

Client: Omega Protein

QC Officer: WM

Effluent Toxicant: Outfall 001

Test Organism Age: <24hr

Sample Type: 24 hr Composite

Organism Batch #: ABS120608-2

Renewal Frequency: daily

Test Containers Used: 250 mL PS

Test Temperature: 26±1°C

Feeding Schedule: 2x daily live rinsed Artemia

Dilution Water Used: SS120108

Aeration: See comments

Start of Test: Date: 120608 Time: 1400

Sample Chlorine: <0.01 mg/L

End of Test: Date: 12/13/08 Time: 1300

Test Volume: 200mL

Template #: Random B

SAMPLE COLLECTION				SAMPLE USE		
Date(s)		Time(s)				
From:	To:	From:	To:	Date(s)	Time(s)	Test Day
12/5/08	12/6/08	0700	0700	12/6/08	1400	0
				12/7/08	1500	1
				12/8/08	1500	2
12/8/08	12/9/08	0600	0600	12/9/08	1540	3
				12/10/08	1520	4
				12/11/08	1441	5
12/10/08	12/11/08	1400	1400	12/12/08	1500	6

Diluent Batch Carboy #/Days Used

SS120108 (0, 1, 2, 3, 4, 5, 6)

The first use of a sample (acute or chronic) must be within 36-hours of retrieval from the sample collection device. Samples held after first use, to be used in chronic test solution renewals, must not be used if more than 72-hours have elapsed since retrieval from the sample collection device.

Condition of Organisms at End of Test: Normal

Average weight per control fish: 0.3055 Control Survival (%): 80%

Comments: Raw sample OMP120608 + OMP120908 was aerated prior to use to raise DO

PMSD growth 32.5%

PMSD fecundity = 68.4%

BMI/SOP 4.R

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~OMP120508-2~~ OMP120608-2 CRP Permit # VA0003867 Species M. bahia

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
0A		15.25	16.60	1.35	5	0.270	CRP
0B		17.78	19.57	1.79	5	0.358	CRP
0C		16.20	17.40	1.20	5	0.240	CRP
0D		14.93	~~16.~~ 17.04	2.11	5	0.422	CRP
0E		15.28	16.90	1.62	5	0.324	CRP
0F		17.01	17.76	0.75	5	0.150	CRP
0G		15.49	17.20	1.71	5	0.342	CRP
0H		14.78	16.47	1.69	5	0.338	CRP
0.02A		18.19	20.18	1.99	5	0.398	CRP
0.02B		12.94	14.60	1.66	5	0.332	CRP
0.02C		15.71	16.43	0.72	5	0.144	CRP
0.02D		16.83	18.42	1.59	5	0.318	CRP
0.02E		15.33	16.43	1.10	5	0.220	CRP
0.02F		14.57	16.43	1.86	5	0.372	CRP
0.02G		13.66	15.79	2.13	5	0.426	CRP
0.02H		15.32	16.08	0.760	5	0.152	CRP
0.2A		15.50	16.47	0.970	5	0.194	CRP
0.2B		14.58	16.46	1.88	5	0.376	CRP
0.2C		17.55	19.09	1.54	5	0.308	CRP
0.2D		16.19	17.44	1.25	5	0.250	CRP
0.2E		15.03	16.45	1.42	5	0.284	CRP
0.2F		13.25	15.76	2.51	5	0.502	CRP
0.2G		15.20	16.44	1.24	5	0.248	CRP
0.2H		15.04	16.27	1.23	5	0.246	CRP

Biological Monitoring, Inc.
Weight Data Sheet

Test ID # ~~OMPI20508-2~~ OMPI80608-2 CRP Permit # VA0003867 Species mibbia

Organism or Concentration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. Wt. Larvae (mg)	Initials
1.6A		12.28	13.88	1.60	5	0.320	CRP
1.6B		12.41	13.72	1.31	5	0.262	CRP
1.6C		11.62	13.48	1.86	5	0.372	CRP
1.6D		12.41	14.56	2.15	5	0.430	CRP
1.6E		13.80	15.13	1.32	5	0.264	CRP
1.6F		13.21	15.34	2.13	5	0.426	CRP
1.6G		11.65	13.55	1.90	5	0.380	CRP
1.6H		12.51	14.13	1.62	5	0.324	CRP
12.5A		15.61	17.04	1.43	5	0.286	CRP
12.5B		14.37	16.28	1.91	5	0.382	CRP
12.5C		12.71	13.76	1.05	5	0.210	CRP
12.5D		12.88	15.21	2.33	5	0.466	CRP
12.5E		14.37	16.32	1.95	5	0.390	CRP
12.5F		14.49	15.99	1.50	5	0.300	CRP
12.5G		12.64	14.57	1.93	5	0.386	CRP
12.5H		12.45	14.21	1.76	5	0.352	CRP
100A		—					
100B		—					
100C		—					
100D		—					
100E		—					
100F		—					
100G		—					
100H		—					

7-day Short-Term Chronic *Americamysis bahia* Fecundity Data

Test ID CMP120608-2 Permit No VA0003867 Page 5 of 5

Concentration	Rep	7d survival	Female w/eggs	Female no eggs	Male	Immature
0%	A	4	II		I	I
	B	4	II		II	
	C	4			III	I
	D	5	IIII		I	
	E	4			IIII	
	F	2	I		I	
	G	4	III		I	
	H	5	IIII			I
0.02%	A	5 ~~3~~ NO	I		III	I
	B	4 ~~3~~ NO			IIII	
	C	2 ~~3~~ NO			II	
	D	4	II	I	I	
	E	3 ~~4~~ NO		I	II	
	F	5	I	I	III	
	G	5 ~~3~~ NO	II		III	
	H	3	I		I	I
0.2%	A	3			II	I
	B	5	III		II	
	C	3	III			
	D	4	I	II		I
	E	4	I		II	I
	F	5	II		III	
	G	3		I	II	
	H	3	I		II	
1.6%	A	5	I	I	II	I
	B	4	I	I	II	
	C	4	III		I	
	D	5	II	I	II	
	E	4	I		II	I
	F	5	III		II	
	G	5	II		III	
	H	4				
12.5%	A	4	I	I	II	
	B	5	II		III	
	C	3	I		II	
	D	5	IIII		I	
	E	5	I		IIII	
	F	4			IIII	
	G	4	II		II	
	H	5	I	I	III	
100%	A	0				
	B	0				
	C	0				
	D	0				
	E	0				
	F	0				
	G	0				
	H	0				

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 1.345

W = 0.953

Critical W (P = 0.05) (n = 48) = 0.947
Critical W (P = 0.01) (n = 48) = 0.929

Data PASS normality test at P=0.01 level. Continue analysis.

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's test for homogeneity of variance
Bartlett's test for homogeneity of variance

These two tests can not be performed because at least one group has zero variance.

Data FAIL to meet homogeneity of variance assumption.
Additional transformations are useless.

TITLE: OMP120608-2
FILE: OMP2s.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y))

NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.8000	1.1071
1	0	2	0.8000	1.1071
1	0	3	0.8000	1.1071
1	0	4	1.0000	1.3453
1	0	5	0.8000	1.1071
1	0	6	0.4000	0.6847
1	0	7	0.8000	1.1071
1	0	8	1.0000	1.3453
2	0.02	1	1.0000	1.3453
2	0.02	2	0.8000	1.1071
2	0.02	3	0.4000	0.6847
2	0.02	4	0.8000	1.1071
2	0.02	5	0.6000	0.8861
2	0.02	6	1.0000	1.3453
2	0.02	7	1.0000	1.3453
2	0.02	8	0.6000	0.8861
3	0.2	1	0.6000	0.8861
3	0.2	2	1.0000	1.3453
3	0.2	3	0.6000	0.8861
3	0.2	4	0.8000	1.1071
3	0.2	5	0.8000	1.1071
3	0.2	6	1.0000	1.3453
3	0.2	7	0.6000	0.8861
3	0.2	8	0.6000	0.8861
4	1.6	1	1.0000	1.3453
4	1.6	2	0.8000	1.1071
4	1.6	3	0.8000	1.1071
4	1.6	4	1.0000	1.3453
4	1.6	5	0.8000	1.1071
4	1.6	6	1.0000	1.3453
4	1.6	7	1.0000	1.3453
4	1.6	8	0.8000	1.1071
5	12.5	1	0.8000	1.1071
5	12.5	2	1.0000	1.3453
5	12.5	3	0.6000	0.8861
5	12.5	4	1.0000	1.3453
5	12.5	5	1.0000	1.3453
5	12.5	6	0.8000	1.1071
5	12.5	7	0.8000	1.1071
5	12.5	8	1.0000	1.3453
6	100	1	0.0000	0.2255
6	100	2	0.0000	0.2255
6	100	3	0.0000	0.2255
6	100	4	0.0000	0.2255
6	100	5	0.0000	0.2255
6	100	6	0.0000	0.2255
6	100	7	0.0000	0.2255
6	100	8	0.0000	0.2255

OMP2SS

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.685	1.345	1.114
2	0.02	8	0.685	1.345	1.088
3	0.2	8	0.886	1.345	1.056
4	1.6	8	1.107	1.345	1.226
5	12.5	8	0.886	1.345	1.199
6	100	8	0.226	0.226	0.226

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.042	0.204	0.072	18.32
2	0.02	0.063	0.252	0.089	23.13
3	0.2	0.041	0.203	0.072	19.21
4	1.6	0.016	0.127	0.045	10.38
5	12.5	0.030	0.173	0.061	14.41
6	100	0.000	0.000	0.000	0.00

OMP120608-2
File: OMP2s.txt Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	0	1.114				
2	0.02	1.088	66.50	46.00	8.00	
3	0.2	1.056	61.00	46.00	8.00	
4	1.6	1.226	78.00	46.00	8.00	
5	12.5	1.199	75.50	46.00	8.00	
6	100	0.226	36.00	46.00	8.00	*

Critical values use k = 5, are 1 tailed, and alpha = 0.05

```
OMP120608-2
File: OMP2g.txt        Transform: NO TRANSFORMATION

Shapiro - Wilk's test for normality
-----------------------------------------------------------------------------

D =     0.273

W =     0.977

Critical W (P = 0.05) (n = 40) = 0.940
Critical W (P = 0.01) (n = 40) = 0.919
-----------------------------------------------------------------------------

Data PASS normality test at P=0.01 level. Continue analysis.


OMP120608-2
File: OMP2g.txt        Transform: NO TRANSFORMATION

-----------------------------------------------------------------------------
Bartlett's test for homogeneity of variance
Calculated B1 statistic =     2.03

-----------------------------------------------------------------------------
Table Chi-square value =   13.28  (alpha = 0.01, df =   4)
Table Chi-square value =    9.49  (alpha = 0.05, df =   4)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.
```

OMP2GS

TITLE: OMP120608-2
FILE: OMP2g.txt
TRANSFORM: NO TRANSFORMATION NUMBER OF GROUPS: 5

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	0.2700	0.2700
1	0	2	0.3580	0.3580
1	0	3	0.2400	0.2400
1	0	4	0.4220	0.4220
1	0	5	0.3240	0.3240
1	0	6	0.1500	0.1500
1	0	7	0.3420	0.3420
1	0	8	0.3380	0.3380
2	0.02	1	0.3980	0.3980
2	0.02	2	0.3320	0.3320
2	0.02	3	0.1440	0.1440
2	0.02	4	0.3180	0.3180
2	0.02	5	0.2200	0.2200
2	0.02	6	0.3720	0.3720
2	0.02	7	0.4260	0.4260
2	0.02	8	0.1520	0.1520
3	0.2	1	0.1940	0.1940
3	0.2	2	0.3760	0.3760
3	0.2	3	0.3080	0.3080
3	0.2	4	0.2500	0.2500
3	0.2	5	0.2840	0.2840
3	0.2	6	0.5020	0.5020
3	0.2	7	0.2480	0.2480
3	0.2	8	0.2460	0.2460
4	1.6	1	0.3200	0.3200
4	1.6	2	0.2620	0.2620
4	1.6	3	0.3720	0.3720
4	1.6	4	0.4300	0.4300
4	1.6	5	0.2640	0.2640
4	1.6	6	0.4260	0.4260
4	1.6	7	0.3800	0.3800
4	1.6	8	0.3240	0.3240
5	12.5	1	0.2860	0.2860
5	12.5	2	0.3820	0.3820
5	12.5	3	0.2100	0.2100
5	12.5	4	0.4660	0.4660
5	12.5	5	0.3900	0.3900
5	12.5	6	0.3000	0.3000
5	12.5	7	0.3860	0.3860
5	12.5	8	0.3520	0.3520

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.150	0.422	0.305
2	0.02	8	0.144	0.426	0.295
3	0.2	8	0.194	0.502	0.301

				OMP2GS	
4	1.6	8	0.262	0.430	0.347
5	12.5	8	0.210	0.466	0.346

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.007	0.083	0.030	27.33
2	0.02	0.012	0.110	0.039	37.21
3	0.2	0.009	0.097	0.034	32.32
4	1.6	0.004	0.066	0.023	18.92
5	12.5	0.006	0.079	0.028	22.74

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	4	0.021	0.005	0.672
Within (Error)	35	0.273	0.008	
Total	39	0.294		

Critical F value = 2.69 (0.05,4,30)
Since F < Critical F FAIL TO REJECT Ho: All equal

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	0.305	0.305		
2	0.02	0.295	0.295	0.232	
3	0.2	0.301	0.301	0.102	
4	1.6	0.347	0.347	-0.945	
5	12.5	0.346	0.346	-0.928	

Dunnett table value = 2.25 (1 Tailed Value, P=0.05, df=30,4)

OMP120608-2
File: OMP2g.txt Transform: NO TRANSFORMATION

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	8			
2	0.02	8	0.099	32.5	0.010
3	0.2	8	0.099	32.5	0.005
4	1.6	8	0.099	32.5	-0.042
5	12.5	8	0.099	32.5	-0.041

Conc. ID	1	2	3	4	5
Conc. Tested	0	0.02	0.2	1.6	12.5
Response 1	.270	.398	.194	.320	.286
Response 2	.357	.332	.376	.262	.382
Response 3	.240	.144	.308	.372	.210
Response 4	.422	.318	.250	.430	.466
Response 5	.324	.220	.284	.264	.390
Response 6	.150	.372	.502	.426	.300
Response 7	.342	.426	.248	.380	.386
Response 8	.338	.152	.246	.324	.352

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: M. bahia
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	8	0.000	0.305	0.083	0.319
2	8	0.020	0.295	0.110	0.319
3	8	0.200	0.301	0.097	0.319
4	8	1.600	0.347	0.066	0.319
5	8	12.500	0.346	0.079	0.319

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 8.171

W = 0.825

Critical W (P = 0.05) (n = 40) = 0.940
Critical W (P = 0.01) (n = 40) = 0.919

Data FAIL normality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

Bartlett's test for homogeneity of variance
Calculated B1 statistic = 0.79

Table Chi-square value = 13.28 (alpha = 0.01, df = 4)
Table Chi-square value = 9.49 (alpha = 0.05, df = 4)

Data PASS B1 homogeneity test at 0.01 level. Continue analysis.

TITLE: OMP120608-2
FILE: OMP2f.txt
TRANSFORM: ARC SINE(SQUARE ROOT(Y)) NUMBER OF GROUPS: 5

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.3453
1	0	2	1.0000	1.3453
1	0	3	0.0000	0.2255
1	0	4	1.0000	1.3453
1	0	5	0.0000	0.2255
1	0	6	1.0000	1.3453
1	0	7	1.0000	1.3453
1	0	8	1.0000	1.3453
2	0.02	1	1.0000	1.3453
2	0.02	2	0.0000	0.2255
2	0.02	3	0.0000	0.2255
2	0.02	4	0.6000	0.8861
2	0.02	5	0.0000	0.2255
2	0.02	6	0.5000	0.7854
2	0.02	7	1.0000	1.3453
2	0.02	8	1.0000	1.3453
3	0.2	1	0.0000	0.2255
3	0.2	2	1.0000	1.3453
3	0.2	3	1.0000	1.3453
3	0.2	4	0.3000	0.5796
3	0.2	5	1.0000	1.3453
3	0.2	6	1.0000	1.3453
3	0.2	7	0.0000	0.2255
3	0.2	8	1.0000	1.3453
4	1.6	1	0.5000	0.7854
4	1.6	2	0.5000	0.7854
4	1.6	3	1.0000	1.3453
4	1.6	4	0.6000	0.8861
4	1.6	5	1.0000	1.3453
4	1.6	6	1.0000	1.3453
4	1.6	7	1.0000	1.3453
4	1.6	8	0.0000	0.2255
5	12.5	1	0.5000	0.7854
5	12.5	2	1.0000	1.3453
5	12.5	3	1.0000	1.3453
5	12.5	4	1.0000	1.3453
5	12.5	5	1.0000	1.3453
5	12.5	6	0.0000	0.2255
5	12.5	7	1.0000	1.3453
5	12.5	8	0.5000	0.7854

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	8	0.226	1.345	1.065
2	0.02	8	0.226	1.345	0.798
3	0.2	8	0.226	1.345	0.970

OMP2FS

4	1.6	8	0.226	1.345	1.008
5	12.5	8	0.226	1.345	1.065

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.269	0.518	0.183	48.66
2	0.02	0.270	0.520	0.184	65.11
3	0.2	0.281	0.530	0.187	54.64
4	1.6	0.169	0.411	0.145	40.76
5	12.5	0.179	0.423	0.150	39.73

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	4	0.389	0.097	0.416
Within (Error)	35	8.171	0.233	
Total	39	8.559		

Critical F value = 2.69 (0.05,4,30)
Since F < Critical F FAIL TO REJECT Ho: All equal

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	0	1.065	0.750		
2	0.02	0.798	0.513	1.107	
3	0.2	0.970	0.663	0.396	
4	1.6	1.008	0.700	0.238	
5	12.5	1.065	0.750	0.000	

Dunnett table value = 2.25 (1 Tailed Value, P=0.05, df=30,4)

OMP120608-2
File: OMP2f.txt Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETT'S TEST - TABLE 2 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	NUM OF REPS	Minimum Sig Diff (IN ORIG. UNITS)	% of CONTROL	DIFFERENCE FROM CONTROL
1	0	8			
2	0.02	8	0.517	68.9	0.237
3	0.2	8	0.517	68.9	0.087
4	1.6	8	0.517	68.9	0.050
5	12.5	8	0.517	68.9	0.000

OMP2fIC25

Conc. ID	1	2	3	4	5
Conc. Tested	0	0.02	0.2	1.6	12.5
Response 1	1	1	0	0.5	0.5
Response 2	1	0	1	0.5	1
Response 3	0	0	1	1	1
Response 4	1	0.6	0.3	0.6	1
Response 5	0	0	1	1	1
Response 6	1	0.5	1	1	0
Response 7	1	1	0	1	1
Response 8	1	1	1	0	0.5

*** Inhibition Concentration Percentage Estimate ***
Toxicant/Effluent: Outfall 001
Test Start Date: 120608 Test Ending Date: 121308
Test Species: M. bahia
Test Duration: 7 days
DATA FILE:
OUTPUT FILE: ICPout.i25

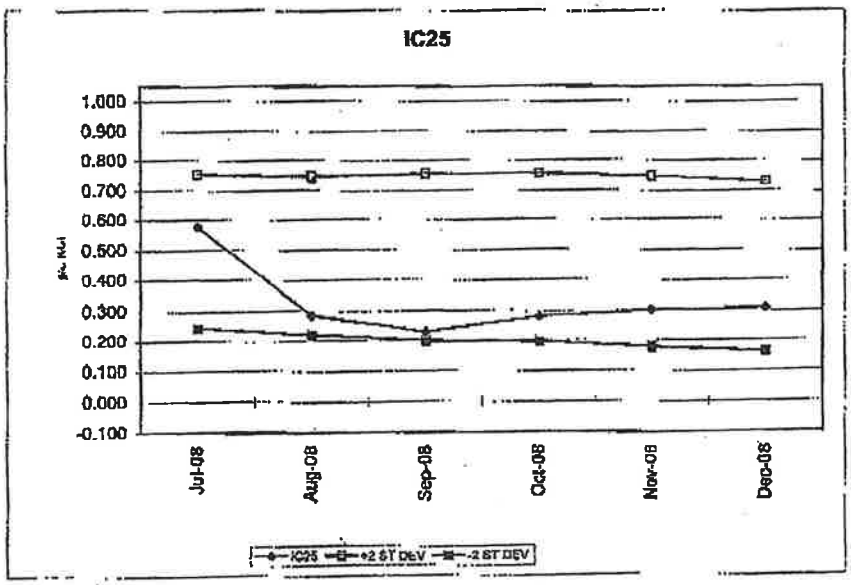
Conc. ID	Number Replicates	Concentration percent	Response Means	Std. Dev.	Pooled Response Means
1	8	0.000	0.750	0.463	0.750
2	8	0.020	0.513	0.464	0.656
3	8	0.200	0.663	0.475	0.656
4	8	1.600	0.700	0.366	0.656
5	8	12.500	0.750	0.378	0.656

*** No Linear Interpolation Estimate can be calculated from the input data since none of the (possibly pooled) group response means were less than 75% of the control response mean.

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

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

Americamysis bahia



Chronic 7 Day Survival Test Data

Date	NOEC (g/L KCl)	LOEC (g/L KCl)
Jul 08	0.25	0.50
Aug 08	0.25	0.50
Sep 08	0.25	0.50
Oct 08	0.25	0.50
Nov 08	0.25	0.50
Dec 08	0.25	0.50

IC 25 for Growth Test

Date	IC25 (g/L KCl)	95% Confidence (upper)	(lower)	Avg. IC25 (g/L KCl)	+2 ST DEV	-2 ST DEV
Jul 08	0.576	0.649	0.327	0.500	0.754	0.247
Aug 08	0.287	0.321	0.038	0.483	0.747	0.220
Sep 08	0.231	0.252	0.071	0.478	0.757	0.199
Oct 08	0.283	0.443	0.137	0.477	0.758	0.197
Nov 08	0.303	0.318	0.226	0.463	0.748	0.178
Dec 08	0.309	0.314	0.259	0.447	0.730	0.165

Post-it® Fax Note 7671

To TWA	Date 12/19 # of pages ▶ 4
Co./Dept. BIOL. MONIT	From Scott.
Phone # TOX	Co ABS
Fax # 540-951-1481	Phone #
	Fax #

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Prepared by: Tina Paugh

Client: Omega Protein

NPDES Permit #: VA0003867

Experiment ID#: OMP120908-3

Test Organism: *Cyprinodon variegatus*

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Date and Time: From 12/08/08@ 0600 to 12/09/08 @ 0600

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: not fed

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/09/08

Time: 1430

End of Test: Date: 12/11/08

Time: 1330

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

Client	Omega Protein	**NPDES PERMIT #:** VA0003867		
Test Organism	*Cyprinodon variegatus*		**Date**	**Time**
Experiment ID	OMP120908-3	**Start Test**	12/09/08	1430
Sample Tested	Outfall 001	**End Test**	12/11/08	1330

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	25	25	6.72	5.85	5.66	8.09	7.93	7.85	25	25	100
6.25	25	25	25	6.68	5.57	5.77	8.11	7.92	7.91	25	25	100
12.5	25	25	25	6.46	5.62	5.73	8.13	7.96	7.94	25	25	100
25	25	25	25	6.96	5.81	5.84	8.14	7.98	7.97	25	25	100
50	25	25	25	7.18	5.78	5.78	8.15	7.99	7.94	24	24	100
100	25	25	25	7.61	5.62	5.82	8.14	7.98	7.95	24	23	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100	1.0	N/A

COMMENTS:

BIOLOGICAL MONITORING, INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMP120508-3~~ OMP120908-3 CRP
Effluent/Sample: OMP120908
NPDES#: VA0003867
Sample Container: PE
Client: Omega Protein
Project Scientist: C. Pough, J. Benzuzing
Outfall/Station No. 001
QC Officer: WK

Sample Type:
Grab: ____
Collection Date: ____ Time: ____
Composite: X
Collected From: Date: 12/8/08 Time: 0600
Collected To: Date: 12/9/08 Time: 0600

Test Organism:
Species: C. variegatus
Source: MBI CRP ABS
Batch#: ~~ABS120608-1~~ ABS120608-1
Age: 3d
No. of organisms/ con. 20

Test Mode: Static Acute
Test Start Date: ~~12/5/08~~ 12/9/08 CRP Time: 1430
Test End Date: 12/11/08 Time: 1330
Test Temperature: 25±1°C Waterbath/Shelf#: 3/3
Dilution Water Used: S120108 Temp. of Org. Stock Solution: 25°C
Test Duration: 48hr

Con. % or mg/L	Test Cont. #	Number of Live Organisms 0	24	48	72	96	Dissolved Oxygen (mg/L) 0	24	48	72	96	pH 0	24	48	72	96	Salinity 0/00 0	24	48	72	96	Temperature (°C) 0	24	48	72	96
0	A	10	10	10			6.72	~~6.85~~ CRP 5.85	5.66			8.09	7.93	7.85			25	25	25			25	25	25		
	B	10	10	10																						
6.25	A	10	10	10			6.68	~~6.85~~ CRP 5.57	5.77			8.11	7.92	7.91			25	25	25			25	25	25		
	B	10	10	10																						
12.5	A	10	10	10			6.46	~~6.57~~ CRP 5.62	5.73			8.13	7.96	7.94			25	25	25			25	25	25		
	B	10	10	10																						
25	A	10	10	10			6.96	~~6.73~~ CRP 5.81	5.84			8.14	7.98	7.97			25	25	25			25	25	25		
	B	10	10	10																						
50	A	10	10	10			7.18	~~6.78~~ CRP 5.78	5.78			8.15	7.99	7.94			25	24	24			25	25	25		
	B	10	10	10																						
100	A	10	10	10			7.61	~~6.57~~ CRP 5.62	5.82			8.14	7.98	7.95			25	23	23			25	25	25		
	B	10	10	10																						
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: ~~GMPI~~ ~~GMPI20908~~ ~~-3~~ CRP OMPI20908-3 ~~CRP~~ Test containers used: PP

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s) 2L, 1L, 500mL, 250mL pipet (s):

volumetric flask (s): other

Concentration mg/L Other	Diluent mL	Effluent mL	Total
0	2000	0	2000 mL
6.25	1875	125	
12.5	1750	250	
25	1500	500	
50	1000	1000	
100	0	2000	✓

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 500 mL
Test solution volume: 450 mL
Water Depth Constant: ✓
Cyclic:

Feeding schedule
Pretest feeding:
Not fed: ✓
Fed daily:
Fed irregularly (describe)
Type of food:

Aeration
Pretest:
None: ✓
Slow: (bubbles/min)
Moderate:
Vigorous:
Beginning: (hour)

Screened Animal Enclosures
Not used: ✓
Used:
Photoperiod:
8h/16h: ✓
Other:

Conditions of surviving organisms at end of test: Normal

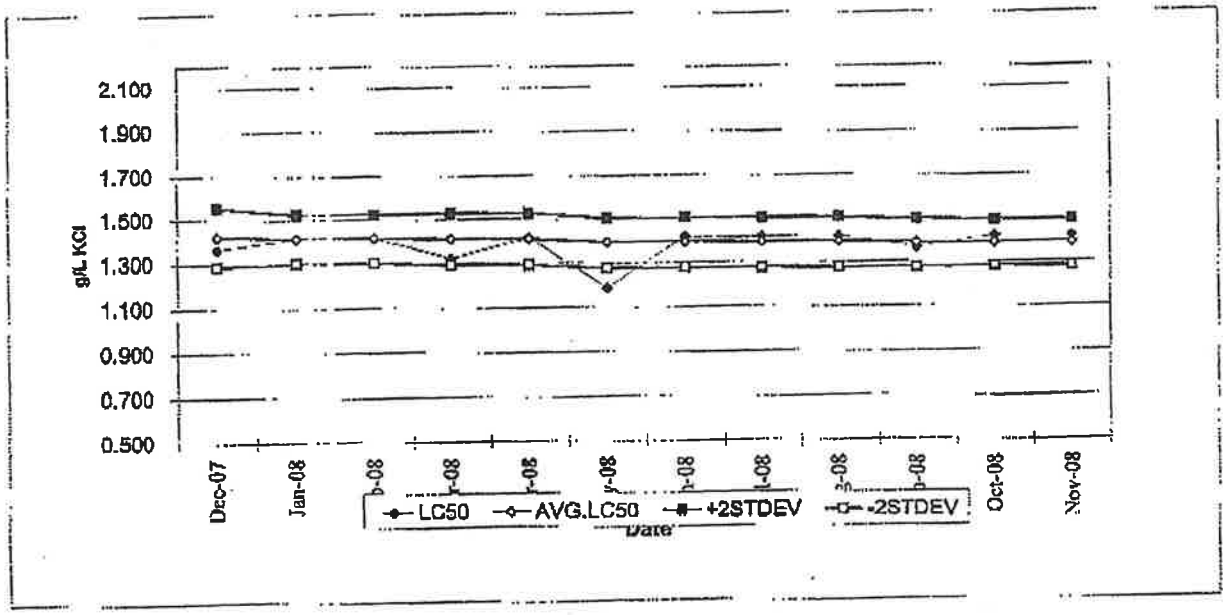
Methods of randomization employed: Random #

Comments:

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

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

REFERENCE TOXICANT LC50
Cyprinodon variegatus



48 HOUR ACUTE TOXICITY DATA FOR
Cyprinodon variegatus

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	Avg+2std	Avg-2std
Jun 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Jul 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Aug 08	1.414	1.414	1.414	1.391	Graphical	1.505	1.278
Sep 08	1.366	1.464	1.275	1.387	SPKR	1.496	1.277
Oct 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280
Nov 08	1.414	1.414	1.414	1.384	Graphical	1.489	1.280

BIOLOGICAL MONITORING, INC.
Toxicity Test Condition Summary

Prepared by: Tina Paugh

Client: Omega Protein

NPDES Permit #: VA0003867

Experiment ID#: OMP120908-4

Test Organism: *Americamysis bahia* (formerly *Mysidopsis*)

Test Type: Static Acute

Organism Age at Start of Test: 5 d

Sample Tested: Outfall 001

Sample Type: Composite

Sample Collection Date and Time: From 12/08/08 @ 0600 to 12/09/08 @ 0600

Sample Collector: Ted Schultz

Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 120108

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily live rinsed Artemia

Chamber Size: 800 mL PP

Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 12/09/08

Time: 1500

End of Test: Date: 12/11/08

Time: 1400

Equipment:

pH Meter: SA 720 (A)
DO Meter: YSI 58 (b)
SCT Meter:YSI 33 (A)
°C Measurement: Calibrated Thermometer
Salinity: SCT Meter
Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 2002. Methods for measuring the Acute toxicity of effluents and receiving waters to freshwater and marine organisms. EPA-821-R-02-012.

BIOLOGICAL MONITORING, INC.
Acute Toxicity Test Data Summary

		NPDES PERMIT #: VA0003867		
Client	Omega Protein		**Date**	**Time**
Test Organism	*Americamysis bahia* (formerly *Mysidopsis*)	**Start Test**	12/09/08	1500
Experiment ID	OMP120908-4	**End Test**	12/11/08	1400
Sample Tested	Outfall 001			

RESULTS

Water Chemistry Analyses

Conc. %	Temp. (°C)			D.O. (mg/L)			pH (SU)			Salinity (0/00)		Survival (%) 48 h
	0h	24h	48h	0h	24h	48h	0h	24h	48h	0h	48h	
0	25	25	25	6.72	5.85	5.48	8.09	7.84	7.98	25	25	100
6.25	25	25	25	6.68	5.72	5.58	8.11	7.89	8.00	25	25	100
12.5	25	25	25	6.46	5.77	5.54	8.13	7.93	8.02	25	25	100
25	25	25	25	6.96	5.80	5.59	8.14	7.98	8.04	25	24	100
50	25	25	25	7.18	5.68	5.53	8.15	7.99	8.06	24	24	100
100	25	25	25	7.61	5.67	5.48	8.14	8.01	8.02	24	23	95

STATISTICAL ANALYSES

Test Method	LC50 (%)	TUa	95% Fiducial (Confidence) Limits
N/A	> 100	1.0	N/A

COMMENTS:

BIOLOGICAL MONITORING, INC.
TOXICITY TEST DATA SHEET

Experiment I.D. #: ~~OMP120908-4~~ ~~OMP121008-4~~ ~~CRP~~ OMP120508-4 CRP
Effluent/Sample: OMP120908
NPDES#: VA0003567
Sample Container: PE
Client: Omega Protein
Project Scientist: C. Paugh, J. Bernarcicig
Outfall/Station No. 001
QC Officer: WR

Sample Type:
Grab: ____
Collection Date: ____ Time: ____
Composite: X
Collected From: Date: 12/8/08 Time: 0600
Collected To: Date: 12/9/08 Time: 0600

Test Organism:
Species: M. bahia
Source: MBL
Batch#: MBL120908
Age: 5 day
No. of organisms/ con. 20

Test Mode: Static Acute 120908
Test Start Date: ~~12/5/08~~ ~~12/10/08~~ 12/10/08 CRP
Test End Date: 12/11/08
Test Temperature: 25 ± 1°C
Dilution Water Used: SS 120108
Test Duration: 48 hr
Time: 1500
Time: 1400
Waterbath/Shelf#: 3/3
Temp. of Org. Stock Solution: 25°C

Conc. % or mg/L	Test Cont. #	Number of Live Organisms					Dissolved Oxygen (mg/L)					pH					Salinity 0/00					Temperature (°C)				
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			6.72	5.85	5.48			8.09	7.84	7.98			25	25	25			25	25	25		
	B	10	10	10																						
6.25	A	10	10	10			6.68	5.72	5.58			8.11	7.89	8.00			25	25	25			25	25	25		
	B	10	10	10																						
12.5	A	10	10	10			6.46	5.77	5.54			8.13	7.93	8.02			25	25	25			25	25	25		
	B	10	10	10																						
25	A	10	10	10			6.96	5.80	5.59			8.14	7.98	8.04			25	24	24			25	25	25		
	B	10	10	10																						
50	A	10	10	10			7.18	5.68	5.53			8.15	7.99	8.00			25	24	24			25	25	25		
	B	10	10	10																						
100	A	10	10	10			7.61	5.67	5.48			8.14	8.01	8.02			25	23	23			25	25	25		
	B	10	9	9																						
Recorded By:		CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP			CRP	CRP	CRP		

BIOLOGICAL MONITORING , INC.
Toxicity Test Procedure Check Sheet

Test I.D. #: ~~BMP120508-4~~ BMP120908-4 ~~BMP121008-4~~ BMP120908-4 Test containers used: PP

Specify below no. milliliters (mLs) of diluent and effluent measured out per concentration in this test:

No. of replicates per concentration: 2

Are all test chambers properly labeled? ✓

Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:

graduated cylinder (s) 8L, 1L, 500mL, 250mL pipet (s): _____

volumetric flask (s): _____ other _____

Concentration % mg/L Other	Diluent mL	Effluent mL	Total
0	2000	0	2000 mL
6.25	1875	125	↓
12.5	1750	250	↓
25	1500	500	↓
50	1000	1000	↓
100	0	2000	✓

Specify material (s) used to place test organisms into test chambers: wide bore pipet

Total Chlorine of sample upon arrival (mg/L): <0.01 mg/L

Total Chlorine of sample after dechlorination (mg/L): N/A

Pretest treatment for organisms: Normal

Exposure Chamber
Total vessel capacity: 800 mL
Test solution volume: 450 mL
Water Depth Constant: _____
Cyclic: _____

Feeding schedule
Pretest feeding: _____
Not fed: _____
Fed daily: 2x
Fed irregularly (describe) _____
Type of food: live brine shrimp Artemia

Aeration
Pretest: _____
None: ✓
Slow: _____ (bubbles/min)
Moderate: _____
Vigorous: _____
Beginning: _____ (hour)

Screened Animal Enclosures
Not used: ✓
Used: _____
Photoperiod:
8h/16h: ✓
Other: _____

Conditions of surviving organisms at end of test: Normal

Methods of randomization employed: Random #

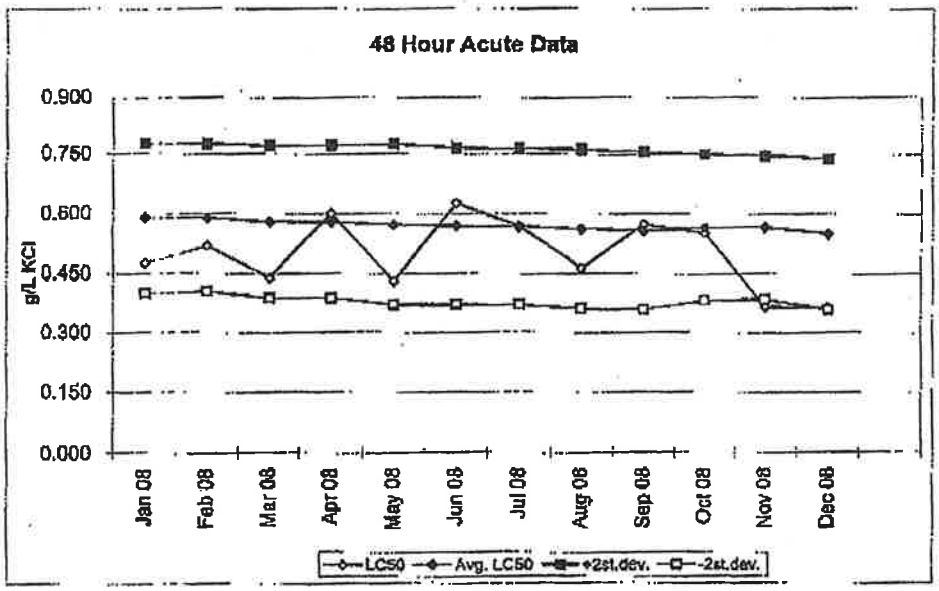
Comments: _____

1300 Blue Spruce Drive Suite C
Fort Collins, Colorado 80524

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

REFERENCE TOXICANT LC50

Americamysis bahia



48 HOUR ACUTE TOXICITY DATA FOR *Americamysis bahia*

DATE	LC50 (g/L KCl)	95% CONFIDENCE (upper)	(lower)	AVG.LC50 (g/L KCl)	METHOD	+2std	-2std
Jul 08	0.569	1.598	0.257	0.568	PRBT	0.765	0.371
Aug 08	0.463	0.523	0.409	0.562	SPKR	0.763	0.361
Sep 08	0.574	0.642	0.514	0.559	SPKR	0.757	0.360
Oct 08	0.553	0.615	0.497	0.566	SPKR	0.750	0.382
Nov 08	0.366	0.397	0.337	0.567	SPKR	0.748	0.385
Dec 08	0.366	0.392	0.342	0.551	SPKR	0.741	0.360

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 1/15/09 To 1/11/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert V. La Bruzzo 2/2/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 1/12/09 To 1/18/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert A. La Bruzzo 2/2/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 1/12/09 To 1/18/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert W. LaBruzzo 2/2/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 1/1/09 To 1/25/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert L. LaBoyne 2/2/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 1/26/09 To 1/31/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor.
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert LaBrecque 2/2/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 2/1/09 To 2/28/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor.
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert V. LaBruzzo 3/04/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 2/9/09 To 2/15/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V LaBruzzo 3/04/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 2/16/09 To 2/22/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert V. de Bruyzo 3/4/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 2/23/09 To 2/28/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert La Bruzzo 3/4/09
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 03/01/09 To 03/08/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert W. Bruzza April 03 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 03/09/09 To 03/15/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schvitz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V. La Bruzzo April 03/2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 03/16/09 To 03/22/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE * (check as appropriate)
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V La Bruzzo April 03 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 03/2/09 To 03/31/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V La Bruzzo April 03 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 4/1/09 To 4/15/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE*
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V. La Bruyere May 1 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 4/6/09 To 4/12/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V. LaBruzzo May 01, 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 4/13/09 To 4/19/09

Paint Area	COMPLIANCE	NONCOMPLIANCE *
	(check as appropriate)	
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V. LaBruzzo May 01, 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 4/20/09 To 4/26/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE *
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years).

Robert V La Bruzzo May 01, 2009
Signature of Principal Officer or Authorized Agent / Date

ATTACHMENT C
DEPARTMENT OF ENVIRONMENTAL QUALITY
BMP Compliance Report

Facility Name: Omega Protein
Address: Reedville, VA.

VPDES Permit No.: VA0003867

Report Period: From 4/27/09 To 4/30/09

Paint Area	COMPLIANCE (check as appropriate)	NONCOMPLIANCE * (check as appropriate)
	✓	

*Comments on Noncompliance

Theodore Schultz / Technical Supervisor
Name of Principal Exec. Officer or Authorized Agent / Title

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Robert V. Di Bruzzo May 01, 2009
Signature of Principal Officer or Authorized Agent / Date

VA0003867 R-6-R4

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020 Fax (804) 527-5106
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

April 16, 2009

Mr. William Purcell
Environmental Director
Omega Protein
P.O. Box 175
Reedville, Va. 22539

RE: VPDES Permit No. VA0003867
Omega Protein Outfall 002 and 003

Dear Mr. Purcell:

Enclosed please find a new Discharge Monitoring Report form (DMR). It has come to our attention that the 3-year schedule of compliance period for the phosphorus parameter at 002 and 003 was completed on December 2, 2008. These DMRs reflect the limitations that became effective at that time. Please discard the DMRs previously sent to you and insert these updated pages in your permit. Begin monitoring for these parameters next month when you begin processing for the 2009 season and submit the new DMR forms that include this parameter and others by June 10, 2009.

In accordance with the permit, you are required to submit monitoring reports to the Piedmont Regional Office. The reporting form which is enclosed supersedes any that you have received from this office and should be used from now on. You will be responsible for obtaining copies of the reporting form.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Curtis J. Linderman, P.E.
Water Permit Manager

cc: DEQ-OWPS
EPA-Region III (3PW12)

Enclosures: DMR - Permit No. VA0003867

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 04/14/2009

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein - Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

VA0003867	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	MEAS
002 PH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		2D/W	GRAB
003 BOD5	REPORTD				*********	*********	*********				
	REQRMNT	470	840	KG/D	*********	*********	*********			2/M	24HC
004 TSS	REPORTD				*********	*********	*********				
	REQRMNT	160	410	KG/D	*********	*********	*********			2/M	24HC
006 COLIFORM, FECAL	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	NL	*********	N/CML		1/W	GRAB
012 PHOSPHORUS, TOTAL (AS P)	REPORTD				*********		*********				
	REQRMNT	1.9	********	KG/D	*********	2.0	*********	MG/L		1/W	24HC
039 AMMONIA, AS N	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	38	45	MG/L		2/M	24HC
080 TEMPERATURE, WATER (DEG. C)	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	C		2D/W	IS

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 04/14/2009

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein - Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

VA0003867	002
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
140 ENTEROCOCCI	REPORTD	*********	*********		*********		*********				
	REQRMNT	*********	*********		*********	NL	*********	N/CML		1/W	GRAB
379 TOXICITY, FINAL, ACUTE	REPORTD	*********	*********		*********	*********					
	REQRMNT	*********	*********		*********	*********	14	TU-A		1/3M	24HC
500 OIL & GREASE	REPORTD				*********	*********	*********				
	REQRMNT	25	46	KG/D	*********	*********	*********			2/M	GRAB
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 04/16/2009

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein - Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

VA0003867	003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
YEAR	MO	DAY		YEAR	MO	DAY
			FROM			
			TO			

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
001 FLOW	REPORTD				*********	*********	*********				
	REQRMNT	NL	NL	MGD	*********	*********	*********			CONT	EST
002 PH	REPORTD	*********	*********			*********					
	REQRMNT	*********	*********		6.0	*********	9.0	SU		2/M	GRAB
003 BOD5	REPORTD				*********	*********	*********				
	REQRMNT	4300	7700	KG/D	*********	*********	*********			2/M	24HC
004 TSS	REPORTD				*********	*********	*********				
	REQRMNT	110	280	KG/D	*********	*********	*********			2/M	24HC
007 DO	REPORTD	*********	*********				*********				
	REQRMNT	*********	*********		NL	NL	*********	MG/L		1/DAY	GRAB
012 PHOSPHORUS, TOTAL (AS P)	REPORTD		*********		*********		*********				
	REQRMNT	3.0	*********	KG/D	*********	2.0	*********	MG/L		1/W	24HC
039 AMMONIA, AS N	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	37	45	MG/L		2/M	24HC
080 TEMPERATURE, WATER (DEG. C)	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	C		1/DAY	IS

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

Industrial Major 04/16/2009

PERMITTEE NAME/ADDRESS(INCLUDE FACILITY NAME/LOCATION IF DIFFERENT)

NAME Omega Protein - Reedville
ADDRESS PO Box 175
Reedville VA 22539
FACILITY LOCATION 610 Menhaden Rd

VA0003867	003
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD						
	YEAR	MO	DAY		YEAR	MO	DAY
FROM				TO			

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)
Piedmont Regional Office
4949-A Cox Road
Glen Allen VA 23060

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
442 COPPER, DISSOLVED (UG/L AS CU)	REPORTD	*********	*********		*********						
	REQRMNT	*********	*********		*********	NL	NL	UG/L		1/M	GRAB
500 OIL & GREASE	REPORTD				*********	*********	*********				
	REQRMNT	430	780	KG/D	*********	*********	*********			2/M	GRAB
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	
	REPORTD										
	REQRMNT									*******	

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND OVERFLOWS	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. & 1001 AND 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

OPERATOR IN RESPONSIBLE CHARGE			DATE		
TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		TELEPHONE			
TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

THIS REPORT IS REQUIRED BY LAW (33 U. S. C. § 1318 40 CFR 122.41(l)(4)(i)). FAILURE TO REPORT OR FAILURE TO REPORT TRUTHFULLY CAN RESULT IN CIVIL PENALTIES NOT TO EXCEED $10,000 PER DAY OF VIOLATION: OR IN CRIMINAL PENALTIES NOT TO EXCEED $25,000 PER DAY OF VIOLATION OR BY IMPRISONMENT FOR NOT MORE THAN FIVE YEARS, OR BOTH.

GENERAL INSTRUCTIONS

1. Complete this form in permanent ink or indelible pencil.
2. Be sure to enter the dates for the first and last day of the period covered by the report on the form in the space marked "Monitoring Period".
3. For those parameters where the "permit requirement" spaces are blank or a limitation appears, provide data in the "reported" spaces in accordance with your permit.
4. Enter the average and, if appropriate, maximum quantities and units in the "reported" spaces in the columns marked "Quantity or Loading". KG/DAY = Concentration(mg/l) x Flow(MGD) x 3.785.
5. Enter maximum, minimum, and/or average concentrations and units in the "reported" spaces in the columns marked "Quality or Concentration".
6. Enter the number of samples which do not comply with the maximum and /or minimum permit requirements in the "reported" space in the column marked "No. Ex.".
7. Enter the actual frequency of analysis for each parameter (number of times per day, week, month) in the "reported" space in the column marked "Frequency of Analysis".
8. Enter the actual type of sample collected for each parameter in the "reported" space in the column marked "Sample Type".
9. Enter additional required data or comments in the space marked "additional permit requirements or comments".
10. Record the number of bypasses during the month, the total flow in million gallons and BOD5 in kilograms in the proper columns in the section marked "Bypasses and Overflows".
11. The operator in responsible charge of the facility should review the form and sign in the space provided. If the plant is required to have a licensed operator, the operator's certificate number should be reported in the space provided.
12. The principal executive officer should then review the form and sign in the space provided and provide a telephone number where he/she can be reached.
13. You are required to sample at the frequency and type indicated in your permit.
14. Send the completed form to your Dept. of Environmental Quality Regional Office by the 10th of each month.
15. You are required to retain a copy of the report for your records.
16. Where violations of permit requirements are reported, attach a brief explanation in accordance with the permit requirements describing causes and corrective actions taken. Reference each violation by date.
17. If you have any questions, contact the Dept. of Environmental Quality Regional Office.

HAJOCA
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AIR CONDITIONING · WATER SYSTEMS · TOOLS

4/22/2009

Denise,

Here are the COAs from the metals sampling last year. We used ICP for analysis to minimize the salt water interference that you see in other methods such as graphite furnace.

Bill P.

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APR 22 2009
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APR 22 2009
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Certificate of Analysis

Final Report

Laboratory Order ID 08030333

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: March 20, 2008
Date Issued: March 27, 2008

Submitted To: Bill Purcell
Client Site I.D.: Cockrell Creek Study

Project Number: NA
Purchase Order NA

Sample I.D.: Total Metal #1 — Laboratory Sample I.D.: 08030333-001
Date/Time Sampled: 03/20/08 09:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:33	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:33	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:33	CGT

Sample I.D.: Total Metal #2 — Laboratory Sample I.D.: 08030333-002
Date/Time Sampled: 03/20/08 09:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:36	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:36	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:36	CGT

Sample I.D.: Total Metal #3 — Laboratory Sample I.D.: 08030333-003
Date/Time Sampled: 03/20/08 11:05

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:38	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:38	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:38	CGT

Sample I.D.: Total Metal #4 — Laboratory Sample I.D.: 08030333-004
Date/Time Sampled: 03/20/08 10:20

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:40	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:40	CGT
Zinc	EPA200.7/R4.4	0.014 mg/L	0.010	03/25/08 15:40	CGT

Sample I.D.: Total Metal #5 — Laboratory Sample I.D.: 08030333-005
Date/Time Sampled: 03/20/08 11:10

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	0.012 mg/L	0.010	03/25/08 15:43	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:43	CGT
Zinc	EPA200.7/R4.4	0.011 mg/L	0.010	03/25/08 15:43	CGT

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Certificate of Analysis

Final Report

Laboratory Order ID 08030333

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: March 20, 2008
Date Issued: March 27, 2008

Submitted To: Bill Purcell
Client Site I.D.: Cockrell Creek Study

Project Number: NA
Purchase Order NA

Sample I.D.: Total Metal #6 — Laboratory Sample I.D.: 08030333-006
Date/Time Sampled: 03/20/08 10:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:45	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:45	CGT
Zinc	EPA200.7/R4.4	0.013 mg/L	0.010	03/25/08 15:45	CGT

Sample I.D.: Total Metal #7 — Laboratory Sample I.D.: 08030333-007
Date/Time Sampled: 03/20/08 10:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:58	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 15:58	CGT
Zinc	EPA200.7/R4.4	0.013 mg/L	0.010	03/25/08 15:58	CGT

Sample I.D.: Dissolved Metals #1 — Laboratory Sample I.D.: 08030333-008
Date/Time Sampled: 03/20/08 09:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:01	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:01	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:01	CGT

Sample I.D.: Dissolved Metals #2 — Laboratory Sample I.D.: 08030333-009
Date/Time Sampled: 03/20/08 09:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:03	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:03	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:03	CGT

Sample I.D.: Dissolved Metals #3 — Laboratory Sample I.D.: 08030333-010
Date/Time Sampled: 03/20/08 11:05

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:06	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:06	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:06	CGT

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Certificate of Analysis

Final Report

Laboratory Order ID 08030333

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: March 20, 2008
Date Issued: March 27, 2008

Submitted To: Bill Purcell
Client Site I.D.: Cockrell Creek Study

Project Number: NA
Purchase Order NA

Sample I.D.: Dissolved Metals #4 — Laboratory Sample I.D.: 08030333-011
Date/Time Sampled: 03/20/08 10:20

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:09	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:09	CGT
Zinc	EPA200.7/R4.4	0.016 mg/L	0.010	03/25/08 16:09	CGT

Sample I.D.: Dissolved Metals #5 — Laboratory Sample I.D.: 08030333-012
Date/Time Sampled: 03/20/08 11:10

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:12	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:12	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:12	CGT

Sample I.D.: Dissolved Metals #6 — Laboratory Sample I.D.: 08030333-013
Date/Time Sampled: 03/20/08 10:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:14	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:14	CGT
Zinc	EPA200.7/R4.4	0.013 mg/L	0.010	03/25/08 16:14	CGT

Sample I.D.: Dissolved Metals #7 — Laboratory Sample I.D.: 08030333-014
Date/Time Sampled: 03/20/08 10:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:17	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	03/25/08 16:17	CGT
Zinc	EPA200.7/R4.4	0.011 mg/L	0.010	03/25/08 16:17	CGT

Sample I.D.: Fecal 1 — Laboratory Sample I.D.: 08030333-015
Date/Time Sampled: 03/20/08 09:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	13 mpn/100mL	2	03/20/08 17:20	VLG

Sample I.D.: Fecal 2 — Laboratory Sample I.D.: 08030333-016
Date/Time Sampled: 03/20/08 09:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	8 mpn/100mL	2	03/20/08 17:20	VLG

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Certificate of Analysis

Final Report

Laboratory Order ID 08030333

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: March 20, 2008
Date Issued: March 27, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek Study

Purchase Order NA

Sample I.D.: Fecal 3 — Laboratory Sample I.D.: 08030333-017
Date/Time Sampled: 03/20/08 11:05

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	22 mpn/100mL	2	03/20/08 17:20	VLG

Sample I.D.: Fecal 4 — Laboratory Sample I.D.: 08030333-018
Date/Time Sampled: 03/20/08 10:20

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	11 mpn/100mL	2	03/20/08 17:20	VLG

Sample I.D.: Fecal 5 — Laboratory Sample I.D.: 08030333-019
Date/Time Sampled: 03/20/08 11:10

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	13 mpn/100mL	2	03/20/08 17:20	VLG

Sample I.D.: Fecal 6 — Laboratory Sample I.D.: 08030333-020
Date/Time Sampled: 03/20/08 10:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	03/20/08 17:20	VLG

Sample I.D.: Fecal 7 — Laboratory Sample I.D.: 08030333-021
Date/Time Sampled: 03/20/08 10:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	23 mpn/100mL	2	03/20/08 17:20	VLG

Carmela Fombes
for: Ted Soyars
Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 08040364

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: April 24, 2008
Date Issued: May 01, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek Study

Purchase Order: NA

Sample I.D.: Station 1 — Laboratory Sample I.D.: 08040364-001
Date/Time Sampled: 04/24/08 10:24

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	4 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Silver, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT

Sample I.D.: Station 2 — Laboratory Sample I.D.: 08040364-002
Date/Time Sampled: 04/24/08 10:34

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT

Sample I.D.: Station 3 — Laboratory Sample I.D.: 08040364-003
Date/Time Sampled: 04/24/08 11:12

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Silver, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT

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Certificate of Analysis

Final Report

Laboratory Order ID 08040364

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: April 24, 2008
Date Issued: May 01, 2008

Submitted To: Bill Purcell
Project Number: NA
Client Site I.D.: Cockrell Creek Study
Purchase Order: NA

Sample I.D.: Station 4
Laboratory Sample I.D.: 08040364-004
Date/Time Sampled: 04/24/08 10:40

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT

Sample I.D.: Station 5
Laboratory Sample I.D.: 08040364-005
Date/Time Sampled: 04/24/08 11:21

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	8 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:44	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:44	CGT
Zinc	EPA200.7/R4.4	0.012 mg/L	0.010	05/01/08 15:44	CGT

Sample I.D.: Station 6
Laboratory Sample I.D.: 08040364-006
Date/Time Sampled: 04/24/08 10:48

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	11 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:00	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:00	CGT

Sample I.D.: Station 7
Laboratory Sample I.D.: 08040364-007
Date/Time Sampled: 04/24/08 10:56

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT

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Final Report

Laboratory Order ID 08040364

Client Name:	Omega Protein P.O. Box 175 Reedville, Virginia 22539	Date Received: Date Issued:	April 24, 2008 May 01, 2008
Submitted To:	Bill Purcell	Project Number:	NA
Client Site I.D.:	Cockrell Creek Study	Purchase Order:	NA

Ted Soyars

Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 08050315

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: May 22, 2008
Date Issued: June 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 1 — Laboratory Sample I.D.: 08050315-001
Date/Time Sampled: 05/22/08 10:20

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	05/22/08 14:40	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:16	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:16	CGT
Zinc	EPA200.7/R4.4	0.015 mg/L	0.010	06/02/08 13:16	CGT

Sample I.D.: Station 2 — Laboratory Sample I.D.: 08050315-002
Date/Time Sampled: 05/22/08 10:28

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	05/22/08 15:00	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:20	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:20	CGT
Zinc	EPA200.7/R4.4	0.017 mg/L	0.010	06/02/08 13:20	CGT

Sample I.D.: Station 3 — Laboratory Sample I.D.: 08050315-003
Date/Time Sampled: 05/22/08 11:10

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	7 mpn/100mL	2	05/22/08 15:15	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:24	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 13:24	CGT
Zinc	EPA200.7/R4.4	0.020 mg/L	0.010	06/02/08 13:24	CGT

Sample I.D.: Station 4 — Laboratory Sample I.D.: 08050315-004
Date/Time Sampled: 05/22/08 10:34

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	05/22/08 15:24	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:11	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:11	CGT
Zinc	EPA200.7/R4.4	0.016 mg/L	0.010	06/02/08 14:11	CGT

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Final Report

Laboratory Order ID 08050315

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville, Virginia 22539

Date Received: May 22, 2008
Date Issued: June 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 5 — Laboratory Sample I.D.: 08050315-005
Date/Time Sampled: 05/22/08 11:16

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	300 mpn/100mL	2	05/22/08 15:35	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:15	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:15	CGT
Zinc	EPA200.7/R4.4	0.026 mg/L	0.010	06/02/08 14:15	CGT

Sample I.D.: Station 6 — Laboratory Sample I.D.: 08050315-006
Date/Time Sampled: 05/22/08 10:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	4 mpn/100mL	2	05/22/08 15:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:19	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:19	CGT
Zinc	EPA200.7/R4.4	0.020 mg/L	0.010	06/02/08 14:19	CGT

Sample I.D.: Station 7 — Laboratory Sample I.D.: 08050315-007
Date/Time Sampled: 05/22/08 10:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	8 mpn/100mL	2	05/22/08 15:55	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:23	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:23	CGT
Zinc	EPA200.7/R4.4	0.017 mg/L	0.010	06/02/08 14:23	CGT

Sample I.D.: Pond 1 — Laboratory Sample I.D.: 08050315-008
Date/Time Sampled: 05/22/08 11:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	170 mpn/100mL	2	05/22/08 16:00	CGT

Sample I.D.: Pond 2 — Laboratory Sample I.D.: 08050315-009
Date/Time Sampled: 05/22/08 11:32

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	130 mpn/100mL	2	05/22/08 16:00	CGT

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Final Report

Laboratory Order ID 08050315

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: May 22, 2008
Date Issued: June 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 5 — Laboratory Sample I.D.: 08050315-005
Date/Time Sampled: 05/22/08 11:16

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	300 mpn/100mL	2	05/22/08 15:35	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:15	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:15	CGT
Zinc	EPA200.7/R4.4	0.026 mg/L	0.010	06/02/08 14:15	CGT

Sample I.D.: Station 6 — Laboratory Sample I.D.: 08050315-006
Date/Time Sampled: 05/22/08 10:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	4 mpn/100mL	2	05/22/08 15:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:19	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:19	CGT
Zinc	EPA200.7/R4.4	0.020 mg/L	0.010	06/02/08 14:19	CGT

Sample I.D.: Station 7 — Laboratory Sample I.D.: 08050315-007
Date/Time Sampled: 05/22/08 10:40

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	8 mpn/100mL	2	05/22/08 15:55	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:23	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/02/08 14:23	CGT
Zinc	EPA200.7/R4.4	0.017 mg/L	0.010	06/02/08 14:23	CGT

Sample I.D.: Pond 1 — Laboratory Sample I.D.: 08050315-008
Date/Time Sampled: 05/22/08 11:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	170 mpn/100mL	2	05/22/08 16:00	CGT

Sample I.D.: Pond 2 — Laboratory Sample I.D.: 08050315-009
Date/Time Sampled: 05/22/08 11:32

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	130 mpn/100mL	2	05/22/08 16:00	CGT

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Final Report

Laboratory Order ID 08050315

Client Name:	Omega Protein P.O. Box 175 610 Menhaden Road Reedville,Virginia 22539	Date Received: Date Issued:	May 22, 2008 June 02, 2008
Submitted To:	Bill Purcell	Project Number:	NA
Client Site I.D.:	Cockrell Creek	Purchase Order	NA

Ted Soyars

Laboratory Manager

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Laboratory Order ID 08050315

Client Name:	Omega Protein P.O. Box 175 610 Menhaden Road Reedville,Virginia 22539	Date Received: Date Issued:	May 22, 2008 June 02, 2008
Submitted To:	Bill Purcell	Project Number:	NA
Client Site I.D.:	Cockrell Creek	Purchase Order	NA

Ted Soyars

Laboratory Manager

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Final Report

Laboratory Order ID 08060365

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: June 25, 2008
Date Issued: July 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 1 — Laboratory Sample I.D.: 08060365-001
Date/Time Sampled: 06/25/08 09:33

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	23 mpn/100mL	2	06/25/08 14:15	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:09	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:09	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:09	CGT

Sample I.D.: Station 2 — Laboratory Sample I.D.: 08060365-002
Date/Time Sampled: 06/25/08 09:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	14 mpn/100mL	2	06/25/08 14:25	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:18	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:18	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:18	CGT

Sample I.D.: Station 3 — Laboratory Sample I.D.: 08060365-003
Date/Time Sampled: 06/25/08 10:33

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	240 mpn/100mL	2	06/25/08 14:30	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:51	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:51	CGT
Zinc	EPA200.7/R4.4	0.011 mg/L	0.010	07/02/08 14:51	CGT

Sample I.D.: Station 4 — Laboratory Sample I.D.: 08060365-004
Date/Time Sampled: 06/25/08 09:55

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	23 mpn/100mL	2	06/25/08 14:30	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:20	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:20	CGT
Zinc	EPA200.7/R4.4	0.011 mg/L	0.010	07/02/08 14:20	CGT

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Final Report

Laboratory Order ID 08060365

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: June 25, 2008
Date Issued: July 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 5 — Laboratory Sample I.D.: 08060365-005
Date/Time Sampled: 06/25/08 10:37

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	900 mpn/100mL	2	06/25/08 14:30	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT

Sample I.D.: Station 6 — Laboratory Sample I.D.: 08060365-006
Date/Time Sampled: 06/25/08 10:05

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	50 mpn/100mL	2	06/25/08 14:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT

Sample I.D.: Station 7 — Laboratory Sample I.D.: 08060365-007
Date/Time Sampled: 06/25/08 10:13

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	220 mpn/100mL	2	06/25/08 14:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT

Sample I.D.: Station 8 — Laboratory Sample I.D.: 08060365-008
Date/Time Sampled: 06/25/08 09:43

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT

Ted Soyars

Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 08060365

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville, Virginia 22539

Date Received: June 25, 2008
Date Issued: July 02, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 5 — Laboratory Sample I.D.: 08060365-005
Date/Time Sampled: 06/25/08 10:37

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	900 mpn/100mL	2	06/25/08 14:30	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:23	CGT

Sample I.D.: Station 6 — Laboratory Sample I.D.: 08060365-006
Date/Time Sampled: 06/25/08 10:05

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	50 mpn/100mL	2	06/25/08 14:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:26	CGT

Sample I.D.: Station 7 — Laboratory Sample I.D.: 08060365-007
Date/Time Sampled: 06/25/08 10:13

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	220 mpn/100mL	2	06/25/08 14:45	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:35	CGT

Sample I.D.: Station 8 — Laboratory Sample I.D.: 08060365-008
Date/Time Sampled: 06/25/08 09:43

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	07/02/08 14:38	CGT

Ted Soyars

Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 08080398

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville, Virginia 22539

Date Received: August 27, 2008
Date Issued: September 04, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Outfall 002 — Laboratory Sample I.D.: 08080398-001
Date/Time Sampled: 08/27/08 08:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	08/27/08 15:20	CGT
Copper	EPA200.7/R4.4	0.016 mg/L	0.010	09/04/08 13:51	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 13:51	DMH
Zinc	EPA200.7/R4.4	0.014 mg/L	0.010	09/04/08 13:51	DMH

Sample I.D.: Station 5 — Laboratory Sample I.D.: 08080398-002
Date/Time Sampled: 08/27/08 08:45

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	900 mpn/100mL	2	08/27/08 15:25	CGT
Copper	EPA200.7/R4.4	0.015 mg/L	0.010	09/04/08 13:53	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 13:53	DMH
Zinc	EPA200.7/R4.4	0.014 mg/L	0.010	09/04/08 13:53	DMH

Sample I.D.: Outfall 995 — Laboratory Sample I.D.: 08080398-003
Date/Time Sampled: 08/27/08 10:10

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	500 mpn/100mL	2	08/27/08 15:30	CGT
Copper	EPA200.7/R4.4	0.013 mg/L	0.010	09/04/08 14:02	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:02	DMH
Zinc	EPA200.7/R4.4	0.026 mg/L	0.010	09/04/08 14:02	DMH

Sample I.D.: Station 3 — Laboratory Sample I.D.: 08080398-004
Date/Time Sampled: 08/27/08 08:58

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	300 mpn/100mL	2	08/27/08 15:40	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:04	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:04	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:04	DMH

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Certificate of Analysis

Final Report

Laboratory Order ID 08080398

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: August 27, 2008
Date Issued: September 04, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 1 — Laboratory Sample I.D.: 08080398-005
Date/Time Sampled: 08/27/08 09:16

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	08/27/08 15:50	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:07	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:07	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:07	DMH

Sample I.D.: Station 8 — Laboratory Sample I.D.: 08080398-006
Date/Time Sampled: 08/27/08 09:25

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	500 mpn/100mL	2	08/27/08 15:55	CGT

Sample I.D.: Station 2 — Laboratory Sample I.D.: 08080398-007
Date/Time Sampled: 08/27/08 09:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	30 mpn/100mL	2	08/27/08 16:00	CGT
Copper	EPA200.7/R4.4	0.015 mg/L	0.010	09/04/08 14:17	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:17	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:17	DMH

Sample I.D.: Station 4 — Laboratory Sample I.D.: 08080398-008
Date/Time Sampled: 08/27/08 09:35

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	11 mpn/100mL	2	08/27/08 16:10	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:20	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:20	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:20	DMH

Sample I.D.: Station 7 — Laboratory Sample I.D.: 08080398-009
Date/Time Sampled: 08/27/08 09:41

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	08/27/08 16:20	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:22	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:22	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:22	DMH

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Certificate of Analysis

Final Report

Laboratory Order ID 08080398

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: August 27, 2008
Date Issued: September 04, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek

Purchase Order NA

Sample I.D.: Station 6 — Laboratory Sample I.D.: 08080398-010
Date/Time Sampled: 08/27/08 09:50

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	4 mpn/100mL	2	08/27/08 16:25	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:25	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:25	DMH
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:25	DMH

Sample I.D.: Condensate — Laboratory Sample I.D.: 08080398-011
Date/Time Sampled: 08/27/08

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	0.020 mg/L	0.010	09/04/08 14:28	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:28	DMH
Zinc	EPA200.7/R4.4	0.013 mg/L	0.010	09/04/08 14:28	DMH

Sample I.D.: Outfall 001 — Laboratory Sample I.D.: 08080398-012
Date/Time Sampled: 08/27/08

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	1600 mpn/100mL	2	08/27/08 16:30	CGT
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:30	DMH
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	09/04/08 14:30	DMH
Zinc	EPA200.7/R4.4	0.013 mg/L	0.010	09/04/08 14:30	DMH

Ted Soyars

Ted Soyars
Laboratory Manager

AIR WATER & SOIL LABORATORIES, INC.
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CHAIN OF CUSTODY

PAGE ____ OF ____

CLIENT NAME: OMEGA PROTEIN	PROJECT NAME: COCKRELL CREEK
CLIENT CONTACT: BILL PURCELL	SITE NAME:
CLIENT ADDRESS: PO BOX 175 REEDVILLE VA 22539	PROJECT NUMBER:
CLIENT PHONE NUMBER: 804 453 4211 x 202	P.O. NUMBER:
CLIENT FAX NUMBER: 4123	EMAIL: bpurcell@omegapro tein.com REGULATORY AUTHORITY:
Is sample for compliance reporting? YES NO	Is sample from a chlorinated supply? YES NO PWS I.D. #:
SAMPLER NAME (PRINT): Bill PURCELL	SAMPLER SIGNATURE: [signature] Turn Around Time: Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other	Acid	Metals Cu Ag Zn	metals not preserved.					COMMENTS Quote I.D.: PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min)
1) Outfall 002	8/27			8:30	2	✓									✓	✓						
2) Station 5				8:45	2	✓									✓	✓						
3) Outfall 995				10:10	2	✓									✓	✓						
4) Station 3				8:58	2	✓									✓	✓						
5) Station 1				9:16	2	✓									✓	✓						
6) Station 8				9:25	1	✓									✓							
7) Station 2				9:30	2	✓									✓	✓						
8) Station 4				9:35	2	✓									✓	✓						
9) Station 7				9:41	2	✓									✓	✓						
10) Station 6				9:50	2	✓									✓	✓						

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	8/26 10:45	[signature]	8-27-08 1045
[signature]	8-27-08 1:00	[signature]	8/27/08 1300

QC Data Package: Level I ☐ Level II ☐ Level III ☐ Level IV ☐

LAB USE ONLY

COOLER TEMP 6.4 °C

OP
Cockrell Creek

08080398
DUE: 5 Days
Recd: 08/27/08

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CHAIN OF CUSTODY

PAGE ____ OF ____

CLIENT NAME: OMEGA PROTEIN
CLIENT CONTACT: BILL PURCELL
CLIENT ADDRESS: PO BOX 175 REEDVILLE VA 22539
CLIENT PHONE NUMBER: 804 453 4211 x 202
CLIENT FAX NUMBER: 4123
EMAIL: bpurcell@omegapro[illegible]

PROJECT NAME: COCKRELL CREEK
SITE NAME:
PROJECT NUMBER:
P.O. NUMBER:
REGULATORY AUTHORITY:

Is sample for compliance reporting? YES (NO)
Is sample from a chlorinated supply? YES (NO)
PWS I.D. #:

SAMPLER NAME (PRINT): Bill Purcell
SAMPLER SIGNATURE: [signature]
Turn Around Time: Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other	Fecal	Cu, Ag, Zn	metals not preserved					COMMENTS (Quote I.D.: / PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min))
1) Condensate	8/27				2	✓									✓	✓						
2) OutFALL001	8/27/08				2										✓	✓		BW	Rec'd not on COC			
3)																						
4)																						
5)																						
6)																						
7)																						
8)																						
9)																						± ca
10)																						

Not rec'd [illegible]

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	8/27 10:45	[signature]	8-27-08 1045
[signature]	8/27/08 1:00	[signature]	8/27/08 1300

QC Data Package: Level I ☐ Level II ☐ Level III ☐ Level IV ☐

LAB USE ONLY

COOLER TEMP 0.4 °C

OP
Cockrell Creek

08080398
DUE: 5 Days
Recd: 08/27/08

'1214.xls

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OP
Cockrell Creek

08080398
DUE: 5 Days
Recd: 08/27/08

Sample Conditions Checklist

Opened by: (print) GW

(sign) GW

Lab ID No.:

Date Cooler Opened: 8/27/08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

Metals containers preserved with Nitric Acid at the laboratory upon receipt. GW 8/28/08

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Certificate of Analysis

Final Report

Laboratory Order ID 08040364

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: April 24, 2008
Date Issued: May 01, 2008

Submitted To: Bill Purcell

Project Number: NA

Client Site I.D.: Cockrell Creek Study

Purchase Order: NA

Sample I.D.: Station 1 — Laboratory Sample I.D.: 08040364-001
Date/Time Sampled: 04/24/08 10:24

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	4 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Silver, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:28	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:31	CGT

Sample I.D.: Station 2 — Laboratory Sample I.D.: 08040364-002
Date/Time Sampled: 04/24/08 10:34

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:33	CGT

Sample I.D.: Station 3 — Laboratory Sample I.D.: 08040364-003
Date/Time Sampled: 04/24/08 11:12

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Silver, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:36	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:39	CGT

MAY 1 2008

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Certificate of Analysis

Final Report

Laboratory Order ID 08040364

Client Name: Omega Protein
P.O. Box 175
Reedville, Virginia 22539

Date Received: April 24, 2008
Date Issued: May 01, 2008

Submitted To: Bill Purcell
Project Number: NA
Client Site I.D.: Cockrell Creek Study
Purchase Order: NA

Sample I.D.: Station 4
Laboratory Sample I.D.: 08040364-004
Date/Time Sampled: 04/24/08 10:40

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	2 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:42	CGT

Sample I.D.: Station 5
Laboratory Sample I.D.: 08040364-005
Date/Time Sampled: 04/24/08 11:21

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	8 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:44	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:44	CGT
Zinc	EPA200.7/R4.4	0.012 mg/L	0.010	05/01/08 15:44	CGT

Sample I.D.: Station 6
Laboratory Sample I.D.: 08040364-006
Date/Time Sampled: 04/24/08 10:48

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	11 mpn/100mL	2	04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Copper, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:00	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 15:57	CGT
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:00	CGT

Sample I.D.: Station 7
Laboratory Sample I.D.: 08040364-007
Date/Time Sampled: 04/24/08 10:56

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Fecal Coliform	SM18/9221E	< 2 mpn/100mL		04/24/08 17:06	VLG
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT
Zinc	EPA200.7/R4.4	< 0.01 mg/L	0.010	05/01/08 16:03	CGT

MAY 14 2008

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Certificate of Analysis

Final Report

Laboratory Order ID 08040364

Client Name:	Omega Protein P.O. Box 175 Reedville, Virginia 22539	Date Received: Date Issued:	April 24, 2008 May 01, 2008
Submitted To:	Bill Purcell	Project Number:	NA
Client Site I.D.:	Cockrell Creek Study	Purchase Order:	NA

Ted Soyars

Laboratory Manager

MAY 14 2008

AIR WATER SOIL LABORATORIES, INC.

RICHMOND, VIRGINIA 23230
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CHAIN OF CUSTODY

PAGE _____ OF _____

CLIENT NAME: Omega Protein	PROJECT NAME:
CLIENT CONTACT: Bill Purcell	SITE NAME:
CLIENT ADDRESS: PO Box 175 Reedville Va 22539	PROJECT NUMBER:
CLIENT PHONE NUMBER: 804 453 4211	P.O. NUMBER:
CLIENT FAX NUMBER: / EMAIL:	REGULATORY AUTHORITY:
Is sample for compliance reporting? YES (NO)	Is sample from a chlorinated supply? YES (NO) / PWS I.D. #:
SAMPLER NAME (PRINT): Bill Purcell	SAMPLER SIGNATURE: [signature] / Turn Around Time: Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

MAY 14 2008

CLIENT SAMPLE I.D.	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other	Fecal	Dissolved Ag Cu Zn	Total Ag Cu Zn					COMMENTS
																						Quote I.D.:
1) fecal Station 1			4/24	10:24	3	✓									X	X	X					
2) "	2		"	10:34	2	✓																
3) "	3		"	11:12	3	✓										X						4°C ICE
4) "	4		"	10:40	2	✓																
5) "	5		"	11:21	2	✓																
6) "	6		"	10:48	3	✓										X						
7) "	7		"	10:56	2	✓																
8) dissolved Ag Zn, Cu				10:24				10:28														
9) "				11:12				11:15														
10)				10:50				10:50														

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	4/24 3:50	[signature]	4/24/08 1550
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
- Level I ☐
- Level II ☐
- Level III ☐
- Level IV ☐

LAB USE ONLY

COOLER TEMP _____ °C

OP

08040364

DUE: 5 Days
Recd: 04/24/08

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CHAIN OF CUSTODY

PAGE ___ OF ___

CLIENT NAME: Omega Protein	PROJECT NAME: Cockrell Creek Project
CLIENT CONTACT: Bill Purcell	SITE NAME:
CLIENT ADDRESS: PO Box 175 Reedville VA 22539	PROJECT NUMBER:
CLIENT PHONE NUMBER: 804 ~~730~~ 453 4211	P.O. NUMBER:
CLIENT FAX NUMBER: / EMAIL:	REGULATORY AUTHORITY: CWA

Is sample for compliance reporting? YES (NO) | Is sample from a chlorinated supply? YES (NO) | PWS I.D. #:

SAMPLER NAME (PRINT): Bill Purcell SAMPLER SIGNATURE: [signature] Turn Around Time: Day(s)

Have ammonia and TKN samples been verified to be dechlorinated at the time of sampling?: YES NO

CLIENT SAMPLE I.D. (MAY 14 2008)	Composite Start Date	Composite Start Time	Grab Date or Composite Stop Date	Grab Time or Composite Stop Time	Number of Containers	Grab	Composite	Field Filtered (Dissolved Metals)	Ground Water / Surface Water	Waste Water / Storm Water	Drinking Water	Soil	Solids	Other Seawater	ANALYSIS							COMMENTS (Quote I.D.: / PLEASE NOTE PRESERVATIVE(S) or PUMP RATE (L/min))
1) Total Cu, Ag, Zn						✓																Not acidified
2) "						✓																
3) "						✓																
4) "						✓																
5) "						✓																
6) "						✓																
7) "						✓																
8)																						
9)																						
10)																						

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package: Level I ☐ Level II ☐ Level III ☐ Level IV ☐

LAB USE ONLY — COOLER TEMP _____°C

OP
Cockrell Creek Study

08040364
DUE: 5 Days
Recd: 04/24/08

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OP

08040364

DUE: 5 Days
Recd: 04/24/08

Sample Conditions Checklist

Opened by: (print) GW

(sign) GW

Lab ID No.:

Date Cooler Opened: 4-24-08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08060101

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Submitted To: Ted Schultz

Client Site I.D.:

Date Received: June 06, 2008
Date Issued: June 16, 2008

Project Number: NA

Purchase Order: NA

Sample I.D.: 6Jun08-995-A
Laboratory Sample I.D.: 08060101-001
Date/Time Sampled: 06/06/08 12:00

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 10 ug/L	10.0	06/10/08 15:53	CGT

Sample I.D.: 6Jun08-995-B
Laboratory Sample I.D.: 08060101-002
Date/Time Sampled (Start/Stop): 06/05/08 12:00 to 06/06/08 12:00

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	5.3 ug/L	3.0	06/13/08 15:29	DMH
Silver	EPA200.9/R2.2	< 0.15 ug/L	0.15	06/12/08 11:53	DMH

Ted Soyars

Laboratory Manager

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Certificate of Analysis

Final Report

Laboratory Order ID 08060101

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: June 06, 2008
Date Issued: June 13, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.:

Purchase Order NA

Sample I.D.: 6Jun08-995-A
Laboratory Sample I.D.: 08060101-001
Date/Time Sampled: 06/06/08 12:00

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 0.01 mg/L	0.010	06/10/08 15:53	CGT

Sample I.D.: 6Jun08-995-B
Laboratory Sample I.D.: 08060101-002
Date/Time Sampled (Start/Stop): 06/05/08 12:00 to 06/06/08 12:00

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	0.005 mg/L	0.003	06/13/08 15:29	DMH
Silver	EPA200.9/R2.2	< 0.0005 mg/L	0.0005	06/12/08 11:53	DMH

Ted Soyars

Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539
Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
[AWS]
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

							Requested Test Parameters										
							TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT	
Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers											
	6/6/08	12:00	X		6Jun08-995-A	1	X										
	6/6/08	12:00		X	6Jun08-995-B	1		X	X								

Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time
W J Burke	6/6/08	225	[illegible]	6/6/08	1425
Relinquished By	Date	Time	Received By	Date	Time

Comments:

6Jun08-995-A Field Filtered pH ≤ 2 (HNO3)
6Jun08-995-B pH ≤ 2 (HNO3)
Composited 6/5/08 12:00 – 6/6/08 12:00

VPDES samples OP

08060101

DUE: 5 Days
Recd: 06/06/08

6Jun08 995 VPDES AWS June 2008.doc

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OP 08060101

08060101

DUE: 5 Days
Recd: 06/06/08

Sample Conditions Chec

Opened by: (print) A McGinnis **Lab ID No.:**

(sign) A McGinnis **Date Cooler Opened:** 6-6-08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☐	☐	☑
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08070063

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: July 03, 2008
Date Issued: July 15, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.: Omega Protein

Purchase Order: 2429

Sample I.D.: 3Jul08-995-A
Laboratory Sample I.D.: 08070063-001
Date/Time Sampled: 07/03/08 10:30

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 10 ug/L	10.0	07/09/08 15:06	CGT

Sample I.D.: 3Jul08-995-B
Laboratory Sample I.D.: 08070063-002
Date/Time Sampled (Start/Stop): 07/02/08 10:00 to 07/03/08 10:30

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	5.5 ug/L	3.0	07/14/08 11:29	DMH
Silver	EPA200.9/R2.2	< 0.5 ug/L	0.50	07/15/08 16:27	CGT

Ted Soyars

Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539
Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
[AWS]
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

							Requested Test Parameters										
							TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT	
Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers											
	7/3/08	10:30	X		3Jul08-995-A	1	X										
	7/3/08	10:30		X	3Jul08-995-B	1		X	X								

Relinquished By	Date	Time	Received By	Date	Time
W.A. Burke	7-3-08	1125	[illegible]	7/3/08	1325
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

Comments:

3Jul08-995-A Field Filtered pH ≤ 2 (HNO3)
3Jul08-995-B pH ≤ 2 (HNO3)
Composited 7/2/08 10:00 – 7/3/08 10:00

VPDES samples

OP
Omega Protein

08070063
DUE: 5 Days
Recd: 07/03/08

3Jul08 995 VPDES AWS July 2008.doc

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OP
Omega Protein

08070063
DUE: 5 Days
Recd: 07/03/08

Sample Conditions Checklist

Opened by: (print) A. McGinley
(sign) A. McGinley

Lab ID No.:
Date Cooler Opened: 7-3-08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☐	☐	☑
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08080138

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: August 08, 2008
Date Issued: August 15, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.: Omega Protein

Purchase Order 2429

Sample I.D.: 7Aug08-995-A

Laboratory Sample I.D.: 08080138-001

Date/Time Sampled: 08/07/08 10:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 10 ug/L	10.0	08/14/08 15:03	CGT

Sample I.D.: 7Aug08-995-B

Laboratory Sample I.D.: 08080138-002

Date/Time Sampled (Start/Stop): 08/06/08 10:00 to 08/07/08 10:00

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.7/R4.4	< 0.01 mg/L	0.010	08/14/08 15:10	CGT
Silver	EPA200.7/R4.4	< 0.01 mg/L	0.010	08/14/08 15:10	CGT

Ted Soyars

Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539
Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
AWS
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

							Requested Test Parameters										
							TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT	
Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers											
	8/7/08	10:30	X		7Aug08-995-A	1	X										
	8/7/08	10:30		X	7Aug08-995-B	1		X	X								

OP 08080138
Omega Protein
DUE: 5 Day
Recd: 08/08/0

Relinquished By	Date	Time	Received By	Date	Time
W. Burke	8/8	110			
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time
			J Wenrod	8/8/08	1410

Comments:

7Aug08-995-A Field Filtered pH ≤ 2 (HNO3)
7Aug08-995-B pH ≤ 2 (HNO3)
Composited sample 8/6/08 10:00 – 8/7/08 10:00

VPDES samples

Ice 2.3 °C

7Aug08 995 VPDES AWS Aug 2008.doc

PO 2429

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OP
Omega Protein

08080138
DUE: 5 Days
Recd: 08/08/08

Sample Conditions Checklist

Opened by: (print) A. McGinley
(sign) A. McGinley

Lab ID No.: —
Date Cooler Opened: 8-8-08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08090059

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: September 04, 2008
Date Issued: September 11, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.: Omega Protein

Purchase Order: 2480

Sample I.D.: 4Sep08-995-A

Laboratory Sample I.D.: 08090059-001

Date/Time Sampled: 09/04/08 07:30

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 10 ug/L	10.0	09/11/08 16:19	CGT

Sample I.D.: 4Sep08-995-B

Laboratory Sample I.D.: 08090059-002

Date/Time Sampled (Start/Stop): 09/03/08 07:30 to 09/04/08 07:30

Parameter	Method	Sample Results	Rep Limit	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	5.0 ug/L	3.0	09/11/08 11:20	DMH
Silver	EPA200.9/R2.2	< 0.5 ug/L	0.50	09/11/08 13:48	DMH

Ted Soyars

Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539
Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
AWS
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

							Requested Test Parameters										
							TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT	
Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers											
	9/4/08	7:30	X		4Sep08-995-A	1	X										
	9/4/08	7:30		X	4Sep08-995-B	1		X	X								

Relinquished By	Date	Time	Received By	Date	Time
W Burke	9-4	152	G Wenrich	9/4/08	1352
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

Comments:

4Sep08-995-A Field Filtered pH ≤ 2 (HNO3)
4Sep08-995-B pH ≤ 2 (HNO3)
Composited sample 9/3/08 7:30 – 9/4/08 7:30

0.7°C
Ice

VPDES samples

PO 2429 80

4Sep08 995 VPDES AWS Sep 2008.doc

OP
Omega Protein

08090059
DUE: 5 Days
Recd: 09/04/08

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OP
Omega Protein

08090059
DUE: 5 Days
Recd: 09/04/08

Sample Conditions Checklist

Opened by: (print) GW

(sign) MN

Lab ID No.:

Date Cooler Opened: 9/4/08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08100266

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: October 15, 2008
Date Issued: October 22, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.:

Purchase Order 2575

Sample I.D.: 15Oct08-995-A
Laboratory Sample I.D.: 08100266-001
Date/Time Sampled: 10/15/08 07:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	15.7 ug/L	10.0	10/21/08 17:08	CGT

Sample I.D.: 15Oct08-995-B
Laboratory Sample I.D.: 08100266-002
Date/Time Sampled (Start/Stop): 10/14/08 07:30 to 10/15/08 07:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	5.3 ug/L	3.0	10/20/08 16:17	DMH
Silver	EPA200.9/R2.2	< 0.5 ug/L	0.50	10/22/08 13:10	DMH

Ted Soyars

Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539

Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
[AWS]
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers	TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT
	10/15/08	7:30	X		15Oct08-995-A	1	X			pH=2 HNO3						
	10/15/08	7:30		X	15Oct08-995-B	1		X	X							

Requested Test Parameters

on ice

Relinquished By	Date	Time	Received By	Date	Time
[signature]	10-15	1:30	[signature]	10-15-08	13:30
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

Comments:

3.6°

15Oct08-995-A Field Filtered pH ≤ 2 (HNO3)
15Oct08-995-B pH ≤ 2 (HNO3)
Composited sample 10/14/08 7:30 – 10/15/08 7:30

VPDES samples

PO 2575

OP

08100266

DUE: 5 Days
Recd: 10/15/08

15Oct08 995 VPDES AWS Oct 2008.doc

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OP

08100266

DUE: 5 Days
Recd: 10/15/08

Sample Conditions Checklist

Opened by: (print) A. McGinley **Lab ID No.:**

(sign) A McGinley **Date Cooler Opened:** 10-15-08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

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Certificate of Analysis

Final Report

Laboratory Order ID 08110310

Client Name: Omega Protein
P.O. Box 175
610 Menhaden Road
Reedville,Virginia 22539

Date Received: November 19, 2008
Date Issued: November 26, 2008

Submitted To: Ted Schultz

Project Number: NA

Client Site I.D.: Omega Protein

Purchase Order 2575

Sample I.D.: 19Nov08-995-A

Laboratory Sample I.D.: 08110310-001

Date/Time Sampled: 11/19/08 07:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Zinc, Dissolved	EPA200.7/R4.4	< 10 ug/L	10.0	11/24/08 16:52	CGT

Sample I.D.: 19Nov08-995-B

Laboratory Sample I.D.: 08110310-002

Date/Time Sampled (Start/Stop): 11/18/08 07:30 to 11/19/08 07:30

Parameter	Method	Sample Results	Rep Limi	Analysis Date/Time	Analyst
Copper	EPA200.9/R2.2	3.2 ug/L	3.0	11/25/08 11:32	DMH
Silver	EPA200.9/R2.2	< 0.5 ug/L	0.50	11/26/08 10:11	DMH

Ted Soyars
Laboratory Manager

CHAIN OF CUSTODY RECORD

Client: Omega Protein, Inc.
Contact: Ted Schultz
Address: P.O. Box 175
Reedville, VA 22539
Phone: (804) 453-4211
Fax: (804) 453-4123
eMail: tschultz@omegaproteininc.com

Lab: F&R
AWS
Other _____

Project Name: Omega Protein

Sampled By: Ted Schultz

							Requested Test Parameters										
							TDZ	TRS	TRC	Salinity	NH3	TPH	Dis Cu	Dis Zn	Dis Pb	TBT	
Lab ID	Date Sampled	Time Sampled	Grab	Comp	Sample Identification	# of Containers											
	11/19/08	7:30	X		19Nov08-995-A	1	X										
	11/19/08	7:30		X	19Nov08-995-B	1		X	X								

Relinquished By	Date	Time	Received By	Date	Time
[illegible]	11-19	134	[illegible]	11/19/08	134
Relinquished By	Date	Time	Received By	Date	Time
Relinquished By	Date	Time	Received By	Date	Time

Comments: Ice 2°C

19Nov08-995-A Field Filtered pH ≤ 2 (HNO3)
19Nov08-995-B pH ≤ 2 (HNO3)
Composited sample 11/18/08 7:30 – 11/19/08 7:30

VPDES samples **PO 2575**

OP
Omega Protein

08110310
DUE: 5 Days
Recd: 11/19/08

19Nov08 995 VPDES AWS Oct 2008.doc

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OP
Omega Protein

08110310
DUE: 5 Days
Recd: 11/19/08

Sample Conditions Checklist

Opened by: (print) GW
(sign) GW

Lab ID No.:
Date Cooler Opened: 11/19/08

		YES	NO	N/A
1.	How were samples received? Fed Ex ☐ UPS ☐ Courier ☐ Walk In ☑			
2.	Were custody seals used?	☐	☐	☑
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	☐	☐	☑
4.	Are the custody papers filled out completely and correctly?	☑	☐	☐
5.	Do all bottle labels agree with custody papers?	☑	☐	☐
6.	Are the samples received on ice?	☑	☐	☐
7.	Is the temperature blank or representative sample within acceptable limits? (4 degrees Celsius +/-2)	☑	☐	☐
8.	Are all samples within holding time for requested tests?	☑	☐	☐
9	Is a sufficient amount of sample provided to perform the tests indicated?	☑	☐	☐
10	Are all samples in proper containers for the analyses requested?	☑	☐	☐
11	Are all samples appropriately preserved for the analyses requested?	☑	☐	☐
12	Are all volatile organic containers free of headspace?	☐	☐	☑

COMMENTS

Omega Protein, Inc.
VPDES Permit # VA0003867
Part I.B.3

Month of May, 2009

Chesapeake Bay Water Quality Monitoring Data

	Predischarge							After Discharge						
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH SU	Salinity ppt
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	17:10	2.2	9.51	<0.1	21.6	8.43	14	17:15	2.6	9.7	<0.1	21.6	8.45	15
29														
30														
31														
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH (SU)	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH (SU)	Salinity ppt

Name of Vessel: Smuggler's Point

Name of Sampler: Ted Schultz

CB Refrig Water #2 Smuggler's Point May 2009.xls

Omega Protein, Inc.
VPDES Permit # VA0003867
Part I.B.3

Month of May, 2009

Chesapeake Bay Water Quality Monitoring Data

	Predischarge							After Discharge						
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH SU	Salinity ppt
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
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17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28	16:55	7.3	9.92	0.19	21.9	8.32	15	17:05	2.4	9.93	<0.1	21.8	8.83	14
29														
30														
31														
Date	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH (SU)	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	Amm (mg/L)	Temp °C	pH (SU)	Salinity ppt

Name of Vessel: Shearwater

Name of Sampler: Ted Schultz