Client: SWR Corporation
Product Name: SWR One
Test Period: 8/19/10 to 8/23/10
CBI Project ID: SWRC1001

Coastal Bioanalysts, Inc.

Report of Analysis: SWR One Standard NCP Toxicity Test

Submitted To:	**Prepared By:**
Mr. Paul Rosenbaum SWR Corporation 2945 N.W. Luray Terrace Portland, OR 97210	Coastal Bioanalysts, Inc. 6400 Enterprise Court Gloucester, VA 23061 (804) 694-8285 www.coastalbio.com Contact: Peter F. De Lisle, Technical Director

Summary Results:

Product-only Toxicity	**SWR One LC50 (ppm)**			
	24-h	**48-h**	**72-h**	**96-h**
Mysidopsis bahia	966	406	N/A	N/A
Menidia beryllina	536	518	518	518

Oil-only Toxicity	**Oil LC50 (ppm)**			
	24-h	**48-h**	**72-h**	**96-h**
Mysidopsis bahia	23.5	4.1	N/A	N/A
Menidia beryllina	5.3	3.3	3.1	3.1

Oil + Product (10:1) Toxicity	**Oil + SWR One LC50 (ppm)**			
	24-h	**48-h**	**72-h**	**96-h**
Mysidopsis bahia	9.0	3.0	N/A	N/A
Menidia beryllina	6.5	3.7	3.5	3.4

SDS Reference Standard Toxicity	**SDS LC50 (ppm)**			
	24-h	**48-h**	**72-h**	**96-h**
Mysidopsis bahia	27	23	N/A	N/A
Menidia beryllina	11.0	11.1	11.1	11.1

Methods:

Toxicity tests were conducted in accordance with procedures described in 40 CFR Pt 300 Appendix C Section 3.0. EPA/API standard reference fuel oil No. 2 (certificate of analysis attached) was obtained from RTC (Laramie, WY). Single-use 20 ml glass ampoules were stored at 4° C in the dark until use. SWR One was provided by the client and stored in the dark at room temperature. ACS reagent-grade sodium dodecyl sulfate was obtained from Sigma. Dilution water consisted of filtered natural seawater collected from the Chesapeake Bay @ Ware River on 8/18/10. Water salinity was 20 g/kg at collection. Seawater was aerated at test temperature (25° C) prior to use.

A range finding test of SWR One toxicity was conducted to determine test concentrations for definitive tests. Concentrations for toxicity testing of SDS and oil-only were based on previous data. Because toxicity in the oil+product test is generally controlled by the more abundant oil, the relatively low toxicity of the product precluded the need for a range finding test of oil+product.

Note: Although the name of *Mysidopsis bahia* has officially been changed to *Americamysis bahia*, the former name is referenced because of its use in the EPA method manuals and 40 CFR Pt 300.

VELAP# 460030
EPA# VA01116

NELAP ACCREDITED TNI LABORATORY

Coastal Bioanalysts, Inc.

Results:

Daily % Survival (Product-only Test)		SWR One Concentration (ppm)					
		Control	**250**	**500**	**1000**	**2000**	**4000**
Mysidopsis bahia	24-h	100	100	100	45	0	0
	48-h	100	100	20	0	0	0
Menidia beryllina		**Control**	**62.5**	**125**	**250**	**500**	**1000**
	24-h	100	100	100	100	60	0
	48-h	100	100	100	100	55	0
	72-h	100	100	100	100	55	0
	96-h	100	100	100	100	55	0

Daily % Survival (Oil-only Test)		Oil Concentration (ppm)					
		Control	**2.0**	**3.5**	**6.2**	**11**	**20**
Mysidopsis bahia	24-h	100	100	100	100	75	65
	48-h	95	85	65	5	0	0
Menidia beryllina	24-h	100	100	90	25	5	0
	48-h	100	95	45	0	0	0
	72-h	100	90	40	0	0	0
	96-h	100	90	40	0	0	0

Daily % Survival (10:1 Oil+Product Test)		Oil + SWR One (10:1) Concentration (ppm)							
		Control	**1.1**	**2.0**	**3.5**	**6.2**	**11**	**20**	**35**
Mysidopsis bahia	24-h	100	100	100	100	100	15	0	0
	48-h	95	100	70	40	10	0	0	0
Menidia beryllina	24-h	100	100	100	95	50	5	5	0
	48-h	100	100	100	45	10	0	0	0
	72-h	100	100	95	45	10	0	0	0
	96-h	100	100	95	45	5	0	0	0

Daily % Survival (SDS Reference Test)		SDS Concentration (ppm)					
		Control	**3.2**	**5.8**	**10**	**18**	**32**
Mysidopsis bahia	24-h	100	100	100	100	100	30
	48-h	100	100	100	100	95	0
Menidia beryllina	24-h	100	100	100	65	0	0
	48-h	95	95	100	65	0	0
	72-h	95	95	100	65	0	0
	96-h	95	95	100	65	0	0

VELAP# 460030
EPA# VA01116

Client: SWR Corporation
Product Name: SWR One
Test Period: 8/19/10 to 8/23/10
CBI Project ID: SWRC1001

Coastal Bioanalysts, Inc.

Test Set-up Information	Start Date/Time End Date/Time	Organism Source	Hatch Date	Acclimation Temp.	Acclimation Water	Test Aerated?
Mysidopsis bahia	8/19/10 1510 8/21/10 1505-1520	CBI Stock	8/12/10	25° C	HWM ASW 20 g/kg sal.	Yes*
Menidia beryllina	8/19/10 1520 8/23/10 1535-1545	ABS	8/12/10	25° C	HWM ASW 20 g/kg sal.	Yes*

*SDS Tests and *M. beryllina* product test only.

Water Quality (Mean/Std. Dev.): Product-only Test

Conc.	*Mysidopsis bahia*						*Menidia beryllina*					
ppm:	LC*	250	500	1000	2000	4000	LC	62.5	125	250	500	1000
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	7.1	7.0	6.8	6.3	6.7	6.7	6.3	6.2	6.2	6.2	6.1	6.4
(mg/l)	0.2	0.3	0.4	1.0	0.7	0.8	1.3	1.3	1.3	1.4	1.6	1.2
pH	7.75	8.07	8.26	8.54	8.91	9.09	7.73	7.77	7.94	8.11	8.31	8.73
(S.U.)	0.04	0.28	0.37	0.40	0.40	0.43	0.13	0.14	0.21	0.27	0.40	0.52

*LC = Lab Control.

Water Quality (Mean/Std. Dev.): Oil-only Test

Conc.	*Mysidopsis bahia*						*Menidia beryllina*					
ppm:	LC*	2.0	3.5	6.2	11	20	LC	2.0	3.5	6.2	11	20
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	6.7	6.7	6.7	6.7	6.7	6.7	5.8	5.7	5.9	6.1	6.2	6.6
(mg/l)	0.5	0.5	0.4	0.4	0.4	0.5	0.8	0.8	0.8	1.1	1.1	0.8
pH	7.76	7.73	7.77	7.77	7.77	7.76	7.66	7.66	7.68	7.69	7.68	7.71
(S.U.)	0.09	0.03	0.06	0.05	0.05	0.05	0.04	0.08	0.06	0.10	0.08	0.01

Water Quality (Mean/Std. Dev.): Oil + Product Test

Conc.	*Mysidopsis bahia*								*Menidia beryllina*							
ppm:	LC*	1.1	2.0	3.5	6.2	11	20	35	LC	1.1	2.0	3.5	6.2	11	20	35
Temp.	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	6.5	6.5	6.6	6.6	6.7	6.7	6.9	6.9	5.8	5.8	5.7	5.7	6.2	6.0	6.0	6.6
(mg/l)	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.4	0.8	0.8	1.0	1.0	1.2	1.2	1.3	0.8
pH	7.74	7.70	7.72	7.75	7.75	7.75	7.74	7.76	7.66	7.64	7.65	7.65	7.62	7.68	7.67	7.72
(S.U.)	0.03	0.03	0.05	0.03	0.03	0.04	0.04	0.06	0.04	0.07	0.08	0.08	0.10	0.08	0.10	0.01

VELAP# 460030
EPA# VA01116

Client: SWR Corporation
Product Name: SWR One
Test Period: 8/19/10 to 8/23/10
CBI Project ID: SWRC1001

Coastal Bioanalysts, Inc.

Water Quality (Mean/Std. Dev.): SDS Reference Test												
Conc.	*Mysidopsis bahia*						*Menidia beryllina*					
ppm:	**LC***	**3.2**	**5.8**	**10**	**18**	**32**	**LC**	**3.2**	**5.8**	**10**	**18**	**32**
Temp.	25	25	25	25	25	25	25	25	25	25	25	25
(°C)	0	0	0	0	0	0	0	0	0	0	0	0
D.O.	6.9	6.7	6.5	6.6	6.4	5.2	6.8	6.5	6.2	6.0	3.6	3.8
(mg/l)	0.5	0.8	1.2	1.1	1.4	3.3	0.9	1.5	2.1	2.7	5.1	4.8
pH	7.74	7.75	7.73	7.68	7.67	7.60	7.72	7.79	7.80	7.78	7.50	7.64
(S.U.)	0.11	0.15	0.21	0.28	0.30	0.27	0.15	0.18	0.25	0.29	0.31	0.12

The results of analysis contained within this report relate only to the sample as received in the laboratory. This report shall not be reproduced except in full without written approval from the laboratory.

APPROVED:

Peter F. De Lisle, Ph.D.
Technical Director

8/25/10
Date

VELAP# 460030
EPA# VA01116

Species: *Mysidopsis (Americamysis) bahia*

Source: CBI stock cultures ✓

Other:

Harvest: Date/time start: 8/12/10

Date /time end: 8/12/10

Acclimation: Water: ASW 20 g/kg salinity ✓

Other

Temperature (°C): 25

Dilution Water Source: WATER.

Dilution Water Collection Date: 8/18/10

Feeding: **Prior to test:** *Artemia ad libitum*
During test: ~50 *Artemia*/mysid/day

Illumination: 16L:8D 10-20 uE/m^2/s

Test chamber: ✓ **1000 ml glass beaker**

Solution volume: ✓ **1000 ml**

Number of replicates/treatment: 2

Initial number of mysids/replicate: 10

Reference Oil "A" No. A200

SDS Ref. Toxicant "A" No. A53

Set up: Date (Day 0): 8/19/10

Time water added: 1400 - 1500

Time mysids added: 1510

Set up by (initials): 10/PB

NOTES:

① All alive PD; D.O. = 7.2 + 7.2 @ 1650 PD.

② CB Aeration begun 1115

Peer Rev by: PB **Date:** 8/24/10

SDS (ppm)	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Lab Control	C-A	10	10	10	100
	C-B	10	10	10	
3.2 ppm	1-A	10	10	10	100
	1-B	10	10	10	
5.8 ppm	2-A	10	10	10	100
	2-B	10	10	10	
10 ppm	3-A	10	10	10	100
	3-B	10	10	10	
18 ppm	4-A	10	10	9	95
	4-B	10	10	10	
32 ppm	5-A	10	2	0	0
	5-B	10	4	0	
Initials:		PD	GB	GB	
Count Time:		1510	1100	1520*	*Test End Time

SDS Test Water Quality

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.70	7.66	7.86
	1	7.71	7.62	7.91
	2	7.71	7.53	7.94
	3	7.71	7.38	7.94
	4	7.71	7.35	7.94
	5	7.72	7.30	7.79
D.O. (mg/l)	C	7.2	6.3	7.2
	1	7.2	5.8	7.2
	2	7.2	5.1	7.2
	3	7.2	5.3	7.2
	4	7.2 ①	4.8	7.1
	5	7.2 ①	1.4 ②	7.1
Salinity (g/kg)	C	20		20
	1			
	2			
	3			
	4			
	5	20		20
Replicate Measured:		A	B	B
Initials:		PD	GB	GB

TEST I.D. SWRC10PD01 -AMB

Acute Mysid Test-24 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001C	Sample ID:	SWR ONE
End Date:	8/21/2010 15:20	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

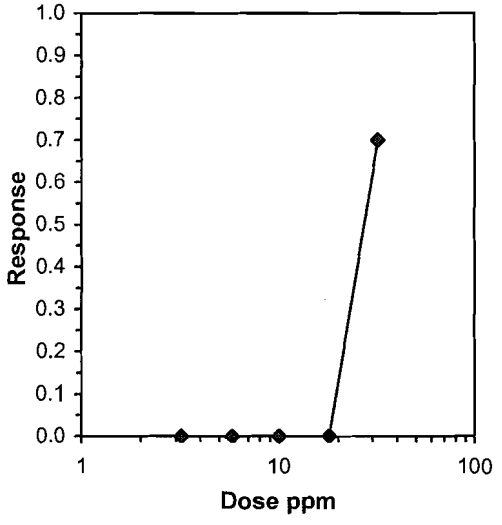
Conc-ppm	1	2
CONTROL	1.0000	1.0000
3.2	1.0000	1.0000
5.8	1.0000	1.0000
10	1.0000	1.0000
18	1.0000	1.0000
32	0.2000	0.4000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
5.8	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
10	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
18	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
32	0.3000	0.3000	0.5742	0.4636	0.6847	27.225	2	14	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%			
5.0%			
10.0%			
20.0%			
Auto-30.0%	27.149	24.071	30.620



Acute Mysid Test-48 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001C	Sample ID:	SWR ONE
End Date:	8/21/2010 15:20	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

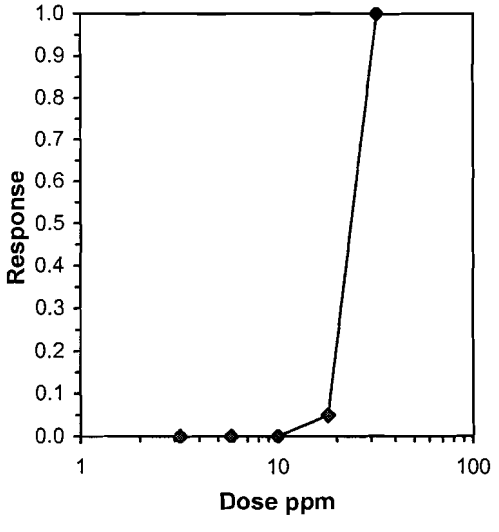
Conc-ppm	1	2
CONTROL	1.0000	1.0000
3.2	1.0000	1.0000
5.8	1.0000	1.0000
10	1.0000	1.0000
18	0.9000	1.0000
32	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
5.8	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
10	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
18	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20
32	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	23.312	22.027	24.672
5.0%	23.639	22.916	24.385
10.0%	23.639	22.916	24.385
20.0%	23.639	22.916	24.385
Auto-0.0%	23.312	22.027	24.672



MYSIDOPSIS BAHIA STATIC 48-H ACUTE TEST
(NCP PRODUCT REGISTRATION) FORM ETF3011B

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 10/21/08

PRODUCT (ppm)	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Seawater Control	C-A	10	10	10	100
	C-B	10	10	10	
250	1-A	10	10	10	100
	1-B	10	10	10	
500	2-A	10	10	2	20
	2-B	10	10	2	
1000	3-A	10	5	0	0
	3-B	10	4	0	
2000	4-A	10	0	0	0
	4-B	10	0	0	
4000	5-A	10	0	0	0
	5-B	10	0	0	
Initials:		LB	LB	LB	
Count Time:		1510	1040	1505	*Test End Time

OIL (ppm)	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Seawater Control	C-A	10	10	10	95
	C-B	10	10	9	
2.0 ppm	1-A	10	10	9	95
	1-B	10	10	8	
3.5 ppm	2-A	10	10	5	65
	2-B	10	10	8	
6.2 ppm	3-A	10	10	1	5
	3-B	10	10	0	
11 ppm	4-A	10	8	0	0
	4-B	10	7	0	
20 ppm	5-A	10	6	0	0
	5-B	10	7	0	
Initials:		LB	LB	LB	
Count Time:		1510	1040	1510	*Test End Time

Product Test Water Quality

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	—
	5	25	25	—
pH (S.U.)	C	7.71	7.76	7.75
	1	8.38	7.98	7.84
	2	8.65	8.21	7.92
	3	8.97	8.48	8.17
	4	9.19	8.62	—
	5	9.39	8.78	—
D.O. (mg/l)	C	7.2	7.2	6.4
	1	7.2	7.0	6.8
	2	7.2	6.8	6.4
	3	7.2	6.4	5.3
	4	7.2	6.2	—
	5	7.2	6.1	—
Salinity (g/kg)	C	20		20
	1			
	2			
	3			20
	4			—
	5	20		—
Replicate Measured:		A	B	B
Initials:		LB	LB	LB

Oil Test Water Quality

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
pH (S.U.)	C	7.72	7.75	7.86
	1	7.72	7.80	7.76
	2	7.71	7.77	7.82
	3	7.71	7.75	7.80
	4	7.71	7.81	7.78
	5	7.71	7.81	7.75
D.O. (mg/l)	C	7.2	6.3	6.5
	1	7.2	6.3	6.5
	2	7.2	6.4	6.5
	3	7.2	6.4	6.6
	4	7.2	6.5	6.5
	5	7.2	6.6	6.3
Salinity (g/kg)	C	20		20
	1			
	2			
	3			
	4			
	5	20		20
Replicate Measured:		A	B	B
Initials:		LB	LB	LB

TEST I.D. SWRC1001 -AMB

Acute Mysid Test-24 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001	Sample ID:	SWR ONE
End Date:	8/21/2010 15:05	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

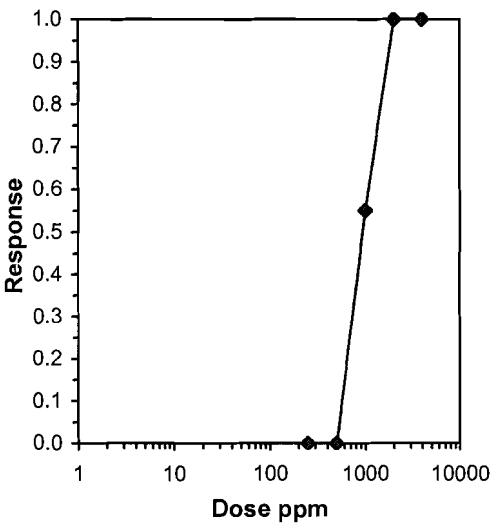
Conc-ppm	1	2
CONTROL	1.0000	1.0000
250	1.0000	1.0000
500	1.0000	1.0000
1000	0.5000	0.4000
2000	0.0000	0.0000
4000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1000	0.4500	0.4500	0.7351	0.6847	0.7854	9.685	2	11	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
4000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL		
0.0%	965.94	827.89	1127.00	
5.0%	962.60	811.30	1142.11	
10.0%	959.28	792.34	1161.40	
20.0%	952.73	743.00	1221.66	
Auto-0.0%	965.94	827.89	1127.00	✓



Acute Mysid Test-48 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001	Sample ID:	SWR ONE
End Date:	8/21/2010 15:05	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

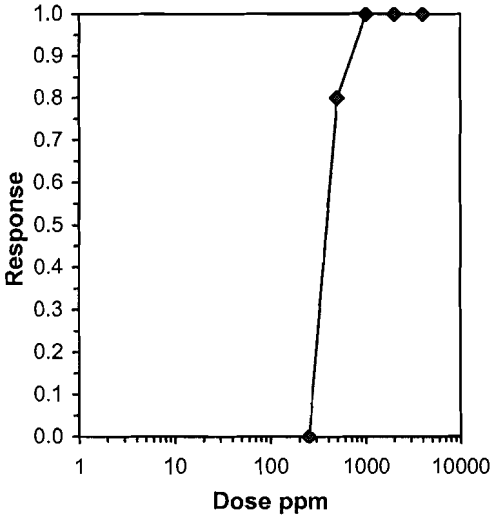
Conc-ppm	1	2
CONTROL	1.0000	1.0000
250	1.0000	1.0000
500	0.2000	0.2000
1000	0.0000	0.0000
2000	0.0000	0.0000
4000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	0.2000	0.2000	0.4636	0.4636	0.4636	0.000	2	16	20
1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
2000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
4000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	406.13	358.77	459.74
5.0%	398.29	348.43	455.28
10.0%	391.87	341.76	449.33
20.0%	385.55	349.96	424.77
Auto-0.0%	406.13	358.77	459.74 ✓



Acute Mysid Test-24 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001A	Sample ID:	SWR ONE
End Date:	8/21/2010 15:10	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
2	1.0000	1.0000
3.5	1.0000	1.0000
6.2	1.0000	1.0000
11	0.8000	0.7000
20	0.6000	0.7000

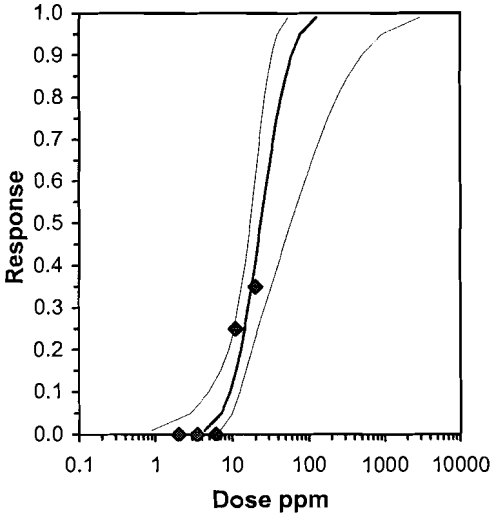
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
6.2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
11	0.7500	0.7500	1.0492	0.9912	1.1071	7.818	2	5	20
20	0.6500	0.6500	0.9386	0.8861	0.9912	7.916	2	7	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	3.18598	0.94189	1.33988	5.03207	0	2.7772	7.81473	0.43	1.37076	0.31388	7
Intercept	0.63278	1.07356	-1.4714	2.73696							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	4.371	0.89912	6.96173
EC05	3.355	7.15295	2.78026	9.9198
EC10	3.718	9.30072	4.91681	12.3665
EC15	3.964	11.1033	6.97955	14.851
EC20	4.158	12.782	8.88923	17.8167
EC25	4.326	14.4231	10.5797	21.5361
EC40	4.747	19.5544	14.6463	38.8974
EC50	5.000	23.4836	17.0596	57.957
EC60	5.253	28.2022	19.5952	87.5698
EC75	5.674	38.2358	24.301	176.557
EC80	5.842	43.1448	26.3909	233.886
EC85	6.036	49.6678	29.0174	325.019
EC90	6.282	59.2941	32.6496	492.427
EC95	6.645	77.098	38.8065	913.392
EC99	7.326	126.168	53.4464	2922.11



ToxCalc v5.0.23

Reviewed by: PO

Acute Mysid Test-48 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001A	Sample ID:	SWR ONE
End Date:	8/21/2010 15:10	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	0.9000
2	0.9000	0.8000
3.5	0.5000	0.8000
6.2	0.1000	0.0000
11	0.0000	0.0000
20	0.0000	0.0000

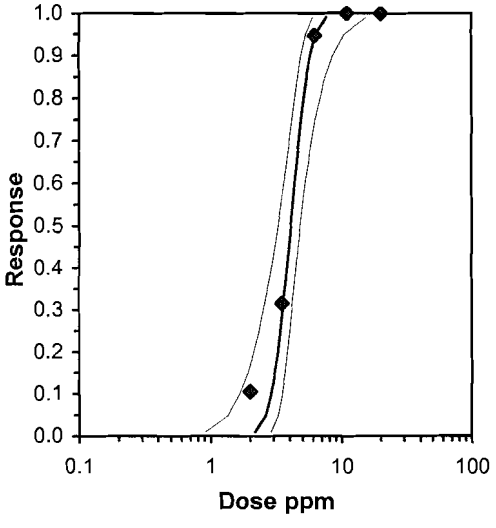
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
2	0.8500	0.8947	1.1781	1.1071	1.2490	8.517	2	3	20
3.5	0.6500	0.6842	0.9463	0.7854	1.1071	24.043	2	7	20
6.2	0.0500	0.0526	0.2403	0.1588	0.3218	47.963	2	19	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Bartlett's Test indicates equal variances (p = 0.88)	0.67296	11.3449		

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	8.53898	2.37462	3.88473	13.1932	0.05	0.57057	7.81473	0.9	0.60851	0.11711	10
Intercept	-0.196	1.52554	-3.1861	2.79402							
TSCR	0.09598	0.04836	0.00119	0.19077							

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	2.16805	0.91137	2.85933
EC05	3.355	2.60543	1.35134	3.25297
EC10	3.718	2.87359	1.66202	3.49514
EC15	3.964	3.06995	1.90708	3.67628
EC20	4.158	3.23553	2.12359	3.83373
EC25	4.326	3.38468	2.32479	3.98107
EC40	4.747	3.79174	2.88795	4.42715
EC50	5.000	4.05983	3.25085	4.77679
EC60	5.253	4.34688	3.61116	5.22282
EC75	5.674	4.86964	4.16362	6.25766
EC80	5.842	5.09413	4.36407	6.78706
EC85	6.036	5.36889	4.58775	7.49701
EC90	6.282	5.73575	4.85961	8.54207
EC95	6.645	6.32611	5.2554	10.438
EC99	7.326	7.60232	6.01501	15.384



MYSIDOPSIS BAHIA STATIC 48-H ACUTE TEST
(NCP PRODUCT REGISTRATION) FORM ETF3011B

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 10/21/08

PRODUCT +OIL (ppm)	I.D.	Day 0 Live	Day 1 Live	Day 2 Live	Final % Survival
Seawater Control	C-A	10	10	9	95
	C-B	10	10	10	
1.1 ppm	1-A	10	10	10	100
	1-B	10	10	10	
2.0 ppm	2-A	10	10	8	70
	2-B	10	10	6	
3.5 ppm	3-A	10	10	4	40
	3-B	10	10	2	
6.2 ppm	4-A	10	10	1	10
	4-B	10	10	1	
11 ppm	5-A	10	0	0	0
	5-B	10	3	0	
20 ppm	6-A	10	0	0	0
	6-B	10	0	0	
35 ppm	7-A	10	0	0	0
	7-B	10	0	0	
Initials:		PP	CB	CB	
Count Time:		1510	1050	1515	*Test End Time

Oil+Product Test Water Quality

Parameter	Treatment I.D.	Day 0	Day 1	Day 2
Temp. (°C)	C	25	25	25
	1	25	25	25
	2	25	25	25
	3	25	25	25
	4	25	25	25
	5	25	25	25
	6	25	25	—
	7	25	25	—
pH (S.U.)	C	7.72	7.73	7.77
	1	7.71	7.73	7.67
	2	7.71	7.67	7.77
	3	7.71	7.77	7.77
	4	7.72	7.77	7.77
	5	7.71	7.77	7.78
	6	7.71	7.76	—
	7	7.71	7.80	—
D.O. (mg/l)	C	7.2	6.0	6.4
	1	7.2	6.0	6.4
	2	7.2	6.1	6.5
	3	7.2	6.0	6.5
	4	7.2	6.3	6.6
	5	7.2	6.4	6.6
	6	7.2	6.5	—
	7	7.2	6.6	—
Salinity (g/kg)	C	20		
	1			
	2			
	3			
	4			
	5			
	6			—
	7	20		—
Replicate Measured:		A	B	B
Initials:		PP	CB	CB

TEST I.D. SWRC100 -AMB

Acute Mysid Test-24 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001B	Sample ID:	SWR ONE
End Date:	8/21/2010 15:15	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

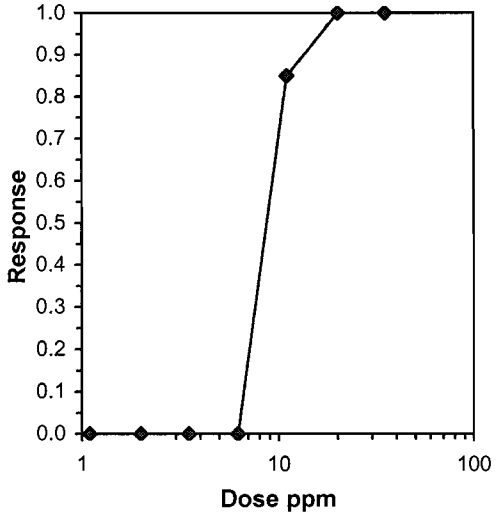
Conc-ppm	1	2
CONTROL	1.0000	1.0000
1.1	1.0000	1.0000
2	1.0000	1.0000
3.5	1.0000	1.0000
6.2	1.0000	1.0000
11	0.0000	0.3000
20	0.0000	0.0000
35	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
6.2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
11	0.1500	0.1500	0.3692	0.1588	0.5796	80.603	2	17	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	9.0165	8.2116	9.9004
5.0%	8.8481	8.0207	9.7610
10.0%	8.7319	7.9711	9.5654
20.0%	8.6869	8.1535	9.2551
Auto-0.0%	9.0165	8.2116	9.9004 ✓



Acute Mysid Test-48 Hr Survival

Start Date:	8/19/2010 15:10	Test ID:	SWRC1001B	Sample ID:	SWR ONE
End Date:	8/21/2010 15:15	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MY-Mysidopsis bahia
Comments:					

Conc-ppm	1	2
CONTROL	0.9000	1.0000
1.1	1.0000	1.0000
2	0.8000	0.6000
3.5	0.6000	0.2000
6.2	0.1000	0.1000
11	0.0000	0.0000
20	0.0000	0.0000
35	0.0000	0.0000

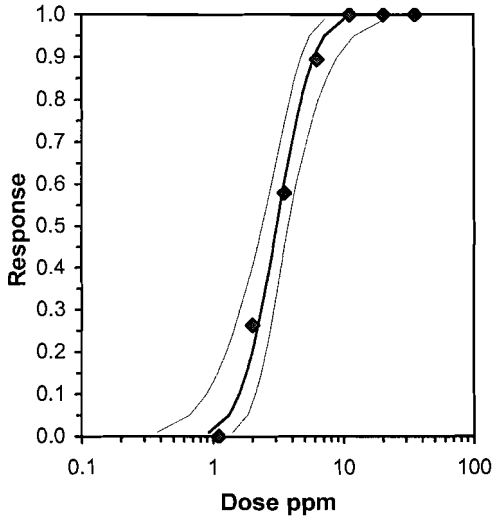
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
1.1	1.0000	1.0526	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.7000	0.7368	0.9966	0.8861	1.1071	15.685	2	6	20
3.5	0.4000	0.4211	0.6749	0.4636	0.8861	44.261	2	12	20
6.2	0.1000	0.1053	0.3218	0.3218	0.3218	0.000	2	18	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	4.49991	0.90528	2.72556	6.27426	0.05	1.92206	11.0705	0.86	0.48313	0.22223	13
Intercept	2.82594	0.50996	1.82642	3.82547							
TSCR	0.0288	0.03309	-0.0361	0.09365							

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	0.92503	0.37315	1.40092
EC05	3.355	1.311	0.65584	1.82037
EC10	3.718	1.57884	0.88275	2.10048
EC15	3.964	1.78982	1.07614	2.31893
EC20	4.158	1.97744	1.25711	2.51366
EC25	4.326	2.15399	1.43366	2.69895
EC40	4.747	2.67198	1.97196	3.26874
EC50	5.000	3.04182	2.35741	3.71684
EC60	5.253	3.46285	2.77772	4.28797
EC75	5.674	4.29559	3.51923	5.63809
EC80	5.842	4.67912	3.82375	6.354
EC85	6.036	5.1696	4.1881	7.34591
EC90	6.282	5.86042	4.66623	8.87353
EC95	6.645	7.05771	5.43038	11.8422
EC99	7.326	10.0025	7.11274	20.6481



MENIDIA BERYLLINA STATIC 96-H ACUTE TEST
(NCP PRODUCT REGISTRATION) FORM ETF3012B

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 10/21/08

Species: *Menidia beryllina*

Source: CBI stock cultures_____

Other: ABS

Hatch: Date/time start: 8/12/10

Date /time end:_____

Acclimation: **Water:** ASW, 20 g/kg salinity ✓

Other_____

Temperature (°C): 25

Dilution Water Source: WAFE 1

Dilution Water Collection Date: 8/18/10

Feeding: **Prior to test:** Rotifers & *Artemia ad libitum*
During test: ~50 *Artemia*/fish/day

Illumination: 16L:8D 10-20 uE/m^2/s

Test chamber: 1000 ml glass beaker

Solution volume: ✓ 1000 ml

Number of replicates/treatment: 2

Initial number of fish/replicate: 10

Reference Oil "A" No. A200

SDS Ref. Toxicant "A" No. A53

Set up: Date (Day 0): 8/19/10

Time water added: 1330 - 1445

Time fish added: 1520

Set up by (initials): PD/CB

NOTES:

① All dead ; D.O. = 7.2 mg/L (both) @ 1650 PD

② CB Aeration began 1115

Peer Rev PB **Date** 8/24/10

SDS (ppm)	I.D.	D 0 Live	D 1 Live	D 2 Live	D 3 Live	D 4 Live	Final % Survival
Seawater Control	C-A	10	10	9	9	9	95
	C-B	10	10	10	10	10	
3.2 ppm	1-A	10	10	9	9	9	95
	1-B	10	10	10	10	10	
5.8 ppm	2-A	10	10	10	10	10	100
	2-B	10	10	10	10	10	
10 ppm	3-A	10	8	8	8	8	65
	3-B	10	5	5	5	5	
18 ppm	4-A	10	0	0	0	0	0
	4-B	10	0	0	0	0	
32 ppm	5-A	10	0	0	0	0	0
	5-B	10	0	0	0	0	
Initials:		PD	CB	CB	AG	PD	
Count Time:		1520	1110	0950	1100	1540	Test end time

SDS Test Water Quality

Parameter	Trt I.D.	Day 0	Day 1	Day 2	Day 3	Day 4
Temp. (°C)	C	25	25	25	25	25
	1	25	25	25	25	25
	2	25	25	25	25	25
	3	25	25	25	25	25
	4	25	25	—	—	—
	5	25	25	—	—	—
pH (S.U.)	C	7.71	7.62	7.57	7.75	7.92
	1	7.71	7.51	7.90	7.86	7.97
	2	7.72	7.40	7.45	7.94	8.00
	3	7.72	7.29	7.45	7.94	8.00
	4	7.72	7.28	—	—	—
	5	7.72	7.55	—	—	—
D.O. (mg/l)	C	7.2	5.2	7.2	7.2	7.2
	1	7.2	3.8	7.2	7.2	7.1
	2	7.2	2.5	7.1	7.2	7.1
	3	7.2	1.2②	7.1	7.2	7.1
	4	7.2①	0.5	—	—	—
	5	7.2①	3.5	—	—	—
Salin. (g/kg)	C	20		20		20
	1					
	2					
	3			20		20
	4			—		—
	5	20		—		—
Replicate Measured:		A	B	B	A	B
Initials:		PD	LA	CB	AG	LB

TEST I.D. SWRL1001 -AMBr

Acute Fish Test-24 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001G	Sample ID:	SWR ONE
End Date:	8/23/2010 15:40	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

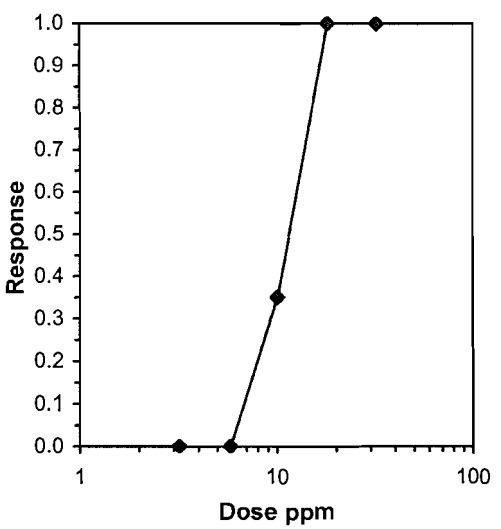
Conc-ppm	1	2
CONTROL	1.0000	1.0000
3.2	1.0000	1.0000
5.8	1.0000	1.0000
10	0.8000	0.5000
18	0.0000	0.0000
32	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
5.8	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
10	0.6500	0.6500	0.9463	0.7854	1.1071	24.043	2	7	20
18	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
32	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	11.004	9.752	12.417
5.0%	11.085	9.684	12.689
10.0%	11.165	9.561	13.037
20.0%	11.314	9.052	14.140
Auto-0.0%	11.004	9.752	12.417 ✓



Acute Fish Test-48 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001G	Sample ID:	SWR ONE
End Date:	8/23/2010 15:40	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

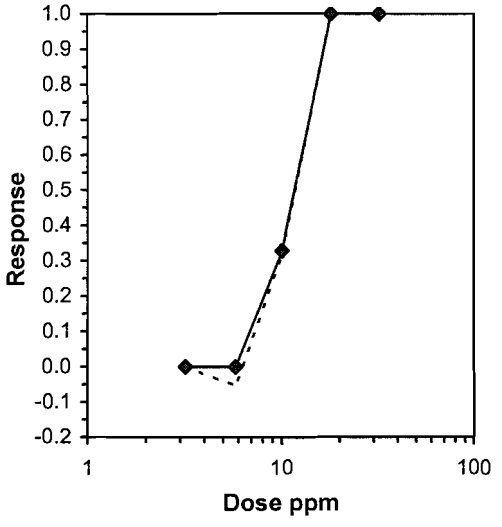
Conc-ppm	1	2
CONTROL	0.9000	1.0000
3.2	0.9000	1.0000
5.8	1.0000	1.0000
10	0.8000	0.5000
18	0.0000	0.0000
32	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
3.2	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
5.8	1.0000	1.0526	1.4120	1.4120	1.4120	0.000	2	0	20
10	0.6500	0.6842	0.9463	0.7854	1.1071	24.043	2	7	20
18	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
32	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	11.145	9.896	12.551
5.0%	11.241	9.839	12.842
10.0%	11.334	9.721	13.214
20.0%	11.503	9.190	14.398
Auto-0.0%	11.145	9.896	12.551



Acute Fish Test-72 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001G	Sample ID:	SWR ONE
End Date:	8/23/2010 15:40	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

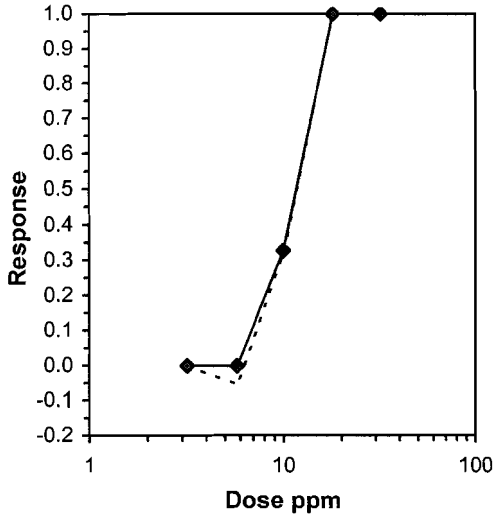
Conc-ppm	1	2
CONTROL	0.9000	1.0000
3.2	0.9000	1.0000
5.8	1.0000	1.0000
10	0.8000	0.5000
18	0.0000	0.0000
32	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
3.2	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
5.8	1.0000	1.0526	1.4120	1.4120	1.4120	0.000	2	0	20
10	0.6500	0.6842	0.9463	0.7854	1.1071	24.043	2	7	20
18	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
32	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	11.145	9.896	12.551
5.0%	11.241	9.839	12.842
10.0%	11.334	9.721	13.214
20.0%	11.503	9.190	14.398
Auto-0.0%	11.145	9.896	12.551



Acute Fish Test-96 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001G	Sample ID:	SWR ONE
End Date:	8/23/2010 15:40	Lab ID:	CBI	Sample Type:	SDS
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

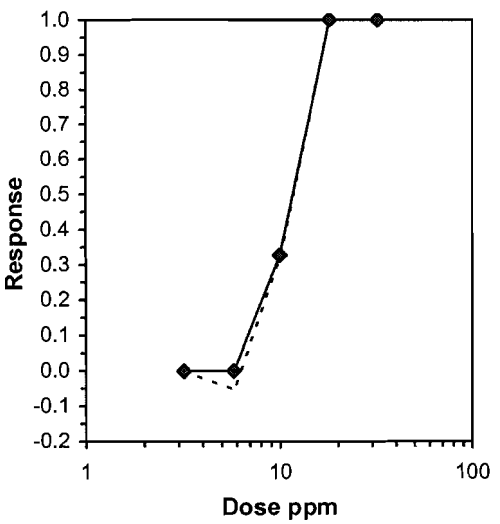
Conc-ppm	1	2
CONTROL	0.9000	1.0000
3.2	0.9000	1.0000
5.8	1.0000	1.0000
10	0.8000	0.5000
18	0.0000	0.0000
32	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
3.2	0.9500	1.0000	1.3305	1.2490	1.4120	8.661	2	1	20
5.8	1.0000	1.0526	1.4120	1.4120	1.4120	0.000	2	0	20
10	0.6500	0.6842	0.9463	0.7854	1.1071	24.043	2	7	20
18	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
32	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	11.145	9.896	12.551
5.0%	11.241	9.839	12.842
10.0%	11.334	9.721	13.214
20.0%	11.503	9.190	14.398
Auto-0.0%	11.145	9.896	12.551



MENIDIA BERYLLINA STATIC 96-H ACUTE TEST
(NCP PRODUCT REGISTRATION) FORM ETF3012B

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 10/21/08

Product (ppm)	I.D.	D 0 Live	D 1 Live	D 2 Live	D 3 Live	D 4 Live	Final % Survival
Seawater Control	C-A	10	10	10	10	10	100
	C-B	10	10	10	10	10	
62.5	1-A	10	10	10	10	10	100
	1-B	10	10	10	10	10	
125	2-A	10	10	10	10	10	100
	2-B	10	10	10	10	10	
250	3-A	10	10	10	10	10	100
	3-B	10	10	10	10	10	
500	4-A	10	5	4	4	4	55
	4-B	10	7	7	7	7	
1000	5-A	10	0	0	0	0	0
	5-B	10	0	0	0	0	
Initials:		PD	OB	GB	AG	PD	
Count Time:		1520	1435	0430	1055	1535	*Test end time

OIL (ppm)	I.D.	D 0 Live	D 1 Live	D 2 Live	D 3 Live	D 4 Live	Final % Survival
Seawater Control	C-A	10	10	10	10	10	100
	C-B	10	10	10	10	10	
2.0 ppm	1-A	10	10	9	8	8	90
	1-B	10	10	10	10	10	
3.5 ppm	2-A	10	8	6	5	5	40
	2-B	10	10	3	3	3	
6.2 ppm	3-A	10	0	0	0	0	0
	3-B	10	5	0	0	0	
11 ppm	4-A	10	0	0	0	0	0
	4-B	10	1	0	0	0	
20 ppm	5-A	10	0	0	0	0	0
	5-B	10	0	0	0	0	
Initials:		PP	GB	GB	AG	PD	
Count Time:		1520	1045	0440	1050	1535	*Test end time

Product Test Water Quality

Parameter	Trt I.D.	Day 0	Day 1	Day 2	Day 3	Day 4
Temp. (°C)	C	25	25	25	25	25
	1	25	25	25	25	25
	2	25	25	25	25	25
	3	25	25	25	25	25
	4	25	25	25	25	25
	5	25	25	—	—	—
pH (S.U.)	C	7.72	7.63	7.58	7.82	7.90
	1	8.08	7.82	7.57	7.80	7.84
	2	8.25	8.05	7.71	7.82	7.84
	3	8.50	8.28	7.89	7.92	7.96
	4	8.82	8.54	8.26	7.88	7.98
	5	9.15	8.90	—	—	—
D.O. (mg/l)	C	7.2	4.9	4.9	7.2	2.2
	1	7.2	5.0	4.6	7.2	2.1
	2	7.2	5.1	4.5	7.2	2.1
	3	7.2	5.2	4.2	7.2	2.1
	4	7.2	5.3	3.5①	7.2	2.1
	5	7.2	5.5	—	—	—
Salin. (g/kg)	C	20		20		21
	1					
	2					
	3					
	4			20		20
	5	20		—		—
Replicate Measured:		A	B	B	A	B
Initials:		PP	GB	GB	AG	GB

① Aeration began 0435. GB

Oil Test Water Quality

Parameter	Trt I.D.	Day 0	Day 1	Day 2	Day 3	Day 4
Temp. (°C)	C	25	25	25	25	25
	1	25	25	25	25	25
	2	25	25	25	25	25
	3	25	25	25	—	—
	4	25	25	25	—	—
	5	25	25	—	—	—
pH (S.U.)	C	7.72	7.68	7.66	7.64	7.61
	1	7.72	7.75	7.69	7.58	7.58
	2	7.71	7.78	7.66	7.64	7.63
	3	7.71	7.78	7.59	—	—
	4	7.72	7.74	7.59	—	—
	5	7.72	7.70	—	—	—
D.O. (mg/l)	C	7.2	5.5	5.4	5.8	5.3
	1	7.2	5.6	5.3	5.2	5.3
	2	7.2	5.6	5.2	5.8	5.5
	3	7.2	6.0	5.0	—	—
	4	7.2	6.3	5.0	—	—
	5	7.2	6.0	—	—	—
Salin. (g/kg)	C	20		20		
	1					
	2					
	3					—
	4			—		—
	5	20		—		—
Replicate Measured:		A	B	B	A	B
Initials:		PP	GB	GB	AG	GB

TEST I.D. SWRC1001 -AMBr

Acute Fish Test-24 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001D	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

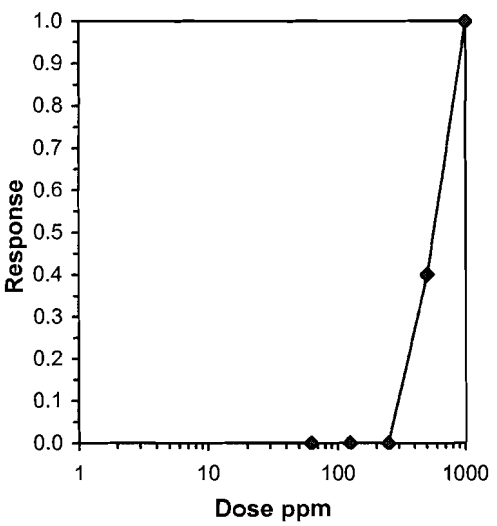
Conc-ppm	1	2
CONTROL	1.0000	1.0000
62.5	1.0000	1.0000
125	1.0000	1.0000
250	1.0000	1.0000
500	0.5000	0.7000
1000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
62.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
125	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	0.6000	0.6000	0.8883	0.7854	0.9912	16.379	2	8	20
1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	535.89	460.38	623.77
5.0%	539.60	455.48	639.25
10.0%	543.29	447.88	659.03
20.0%	550.53	419.98	721.66
Auto-0.0%	535.89	460.38	623.77



Acute Fish Test-48 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001D	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

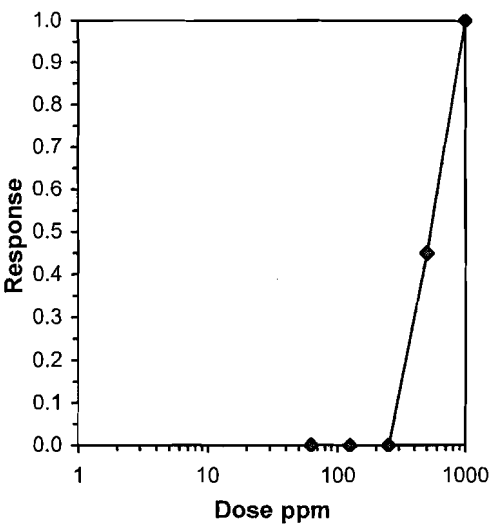
Conc-ppm	1	2
CONTROL	1.0000	1.0000
62.5	1.0000	1.0000
125	1.0000	1.0000
250	1.0000	1.0000
500	0.4000	0.7000
1000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
62.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
125	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	0.5500	0.5500	0.8379	0.6847	0.9912	25.859	2	9	20
1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	517.63	443.66	603.94
5.0%	519.43	437.48	616.73
10.0%	521.22	429.16	633.03
20.0%	524.81	402.47	684.34
Auto-0.0%	517.63	443.66	603.94



Acute Fish Test-72 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001D	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

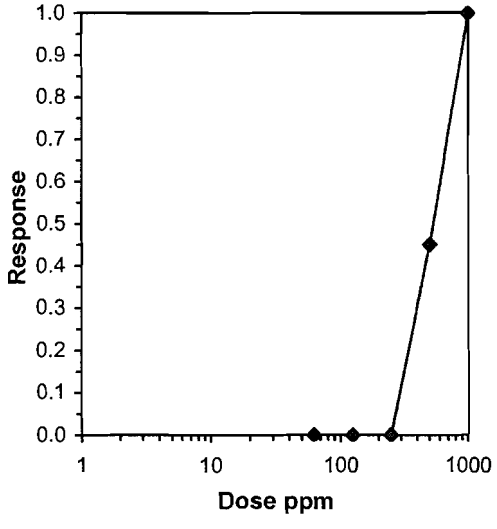
Conc-ppm	1	2
CONTROL	1.0000	1.0000
62.5	1.0000	1.0000
125	1.0000	1.0000
250	1.0000	1.0000
500	0.4000	0.7000
1000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
62.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
125	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	0.5500	0.5500	0.8379	0.6847	0.9912	25.859	2	9	20
1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	517.63	443.66	603.94
5.0%	519.43	437.48	616.73
10.0%	521.22	429.16	633.03
20.0%	524.81	402.47	684.34
Auto-0.0%	517.63	443.66	603.94



Acute Fish Test-96 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001D	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	PRODUCT
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

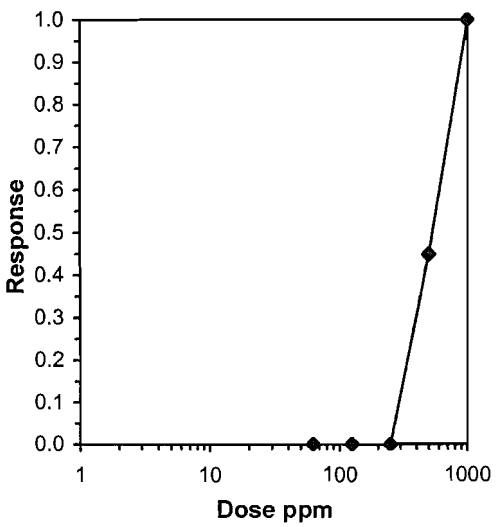
Conc-ppm	1	2
CONTROL	1.0000	1.0000
62.5	1.0000	1.0000
125	1.0000	1.0000
250	1.0000	1.0000
500	0.4000	0.7000
1000	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
62.5	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
125	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
250	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
500	0.5500	0.5500	0.8379	0.6847	0.9912	25.859	2	9	20
1000	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Trimmed Spearman-Karber

Trim Level	EC50	95% CL	
0.0%	517.63	443.66	603.94
5.0%	519.43	437.48	616.73
10.0%	521.22	429.16	633.03
20.0%	524.81	402.47	684.34
Auto-0.0%	517.63	443.66	603.94



Acute Fish Test-24 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001E	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
2	1.0000	1.0000
3.5	0.8000	1.0000
6.2	0.0000	0.5000
11	0.0000	0.1000
20	0.0000	0.0000

			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.5	0.9000	0.9000	1.2596	1.1071	1.4120	17.115	2	2	20
6.2	0.2500	0.2500	0.4721	0.1588	0.7854	93.856	2	15	20
11	0.0500	0.0500	0.2403	0.1588	0.3218	47.963	2	19	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

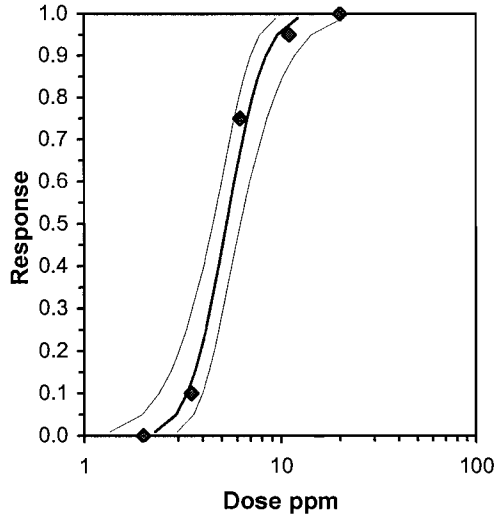
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	6.38585	1.20998	4.0143	8.7574	0	1.57715	7.81473	0.66	0.72329	0.1566	4
Intercept	0.38119	0.89815	-1.3792	2.14157							

TSCR

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	2.28555	1.34893	2.9641
EC05	3.355	2.9222	1.97007	3.58912
EC10	3.718	3.33121	2.40139	3.99018
EC15	3.964	3.63903	2.73721	4.29733
EC20	4.158	3.90385	3.03045	4.56851
EC25	4.326	4.14634	3.29991	4.825
EC40	4.747	4.8263	4.03965	5.60605
EC50	5.000	5.28796	4.5112	6.20511
EC60	5.253	5.79377	4.98981	6.93423
EC75	5.674	6.74389	5.79235	8.49627
EC80	5.842	7.16279	6.11605	9.25402
EC85	6.036	7.68403	6.50056	10.2477
EC90	6.282	8.39409	6.99954	11.6831
EC95	6.645	9.56898	7.78017	14.2438
EC99	7.326	12.2345	9.4189	20.8066



Acute Fish Test-48 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001E	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
2	0.9000	1.0000
3.5	0.6000	0.3000
6.2	0.0000	0.0000
11	0.0000	0.0000
20	0.0000	0.0000

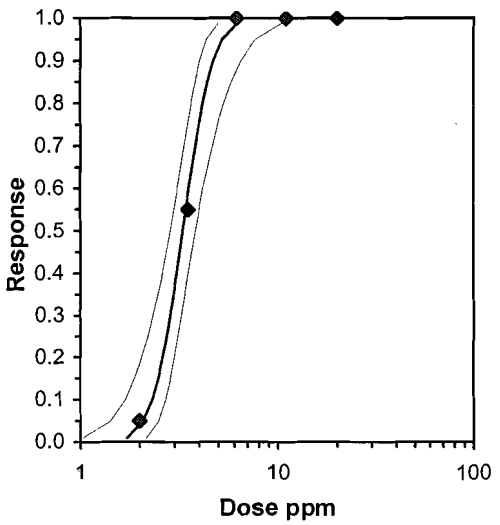
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20
3.5	0.4500	0.4500	0.7329	0.5796	0.8861	29.567	2	11	20
6.2	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	8.28934	1.82907	4.70436	11.8743	0	0.45002	7.81473	0.93	0.51731	0.12064	5
Intercept	0.71188	0.97377	-1.1967	2.62047							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.7245	1.02576	2.15579
EC05	3.355	2.08389	1.41691	2.48638
EC10	3.718	2.30517	1.67731	2.69225
EC15	3.964	2.46759	1.87497	2.84762
EC20	4.158	2.6048	2.0443	2.98366
EC25	4.326	2.72858	2.19731	3.11175
EC40	4.747	3.0672	2.6043	3.50101
EC50	5.000	3.29083	2.85257	3.80047
EC60	5.253	3.53076	3.09464	4.16537
EC75	5.674	3.96893	3.47904	4.94074
EC80	5.842	4.15754	3.62763	5.31166
EC85	6.036	4.38872	3.80024	5.79241
EC90	6.282	4.69794	4.01889	6.47608
EC95	6.645	5.19679	4.35097	7.66751
EC99	7.326	6.27984	5.01743	10.5929



Acute Fish Test-72 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001E	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
2	0.8000	1.0000
3.5	0.5000	0.3000
6.2	0.0000	0.0000
11	0.0000	0.0000
20	0.0000	0.0000

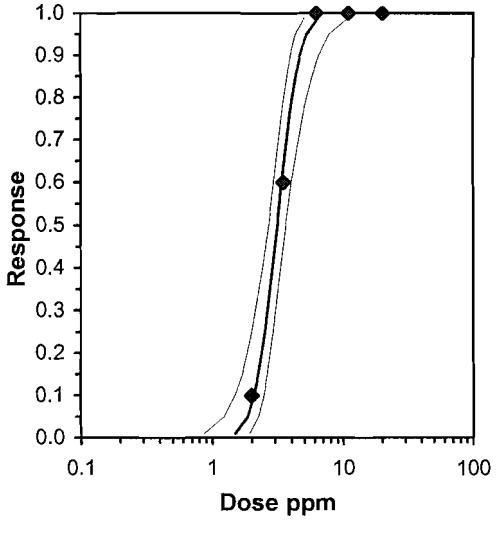
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.9000	0.9000	1.2596	1.1071	1.4120	17.115	2	2	20
3.5	0.4000	0.4000	0.6825	0.5796	0.7854	21.317	2	12	20
6.2	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	7.29541	1.53064	4.29536	10.2955	0	0.57528	7.81473	0.9	0.49262	0.13707	4
Intercept	1.4061	0.78881	-0.14	2.95216							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.49192	0.86452	1.90659
EC05	3.355	1.84995	1.23222	2.24489
EC10	3.718	2.07472	1.48314	2.45794
EC15	3.964	2.2416	1.6765	2.61952
EC20	4.158	2.38375	1.84408	2.76135
EC25	4.326	2.51287	1.99705	2.89505
EC40	4.747	2.8701	2.41131	3.30175
EC50	5.000	3.10903	2.66967	3.61517
EC60	5.253	3.36784	2.92583	3.99877
EC75	5.674	3.84661	3.34079	4.82256
EC80	5.842	4.05497	3.50364	5.22096
EC85	6.036	4.31212	3.69437	5.74124
EC90	6.282	4.65897	3.93822	6.48815
EC95	6.645	5.22503	4.313	7.80744
EC99	7.326	6.47892	5.07943	11.1257



Acute Fish Test-96 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001E	Sample ID:	SWR ONE
End Date:	8/23/2010 15:35	Lab ID:	CBI	Sample Type:	OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
2	0.8000	1.0000
3.5	0.5000	0.3000
6.2	0.0000	0.0000
11	0.0000	0.0000
20	0.0000	0.0000

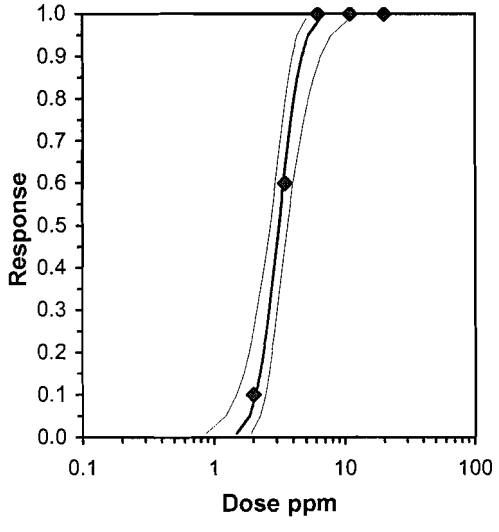
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.9000	0.9000	1.2596	1.1071	1.4120	17.115	2	2	20
3.5	0.4000	0.4000	0.6825	0.5796	0.7854	21.317	2	12	20
6.2	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	7.29541	1.53064	4.29536	10.2955	0	0.57528	7.81473	0.9	0.49262	0.13707	4
Intercept	1.4061	0.78881	-0.14	2.95216							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.49192	0.86452	1.90659
EC05	3.355	1.84995	1.23222	2.24489
EC10	3.718	2.07472	1.48314	2.45794
EC15	3.964	2.2416	1.6765	2.61952
EC20	4.158	2.38375	1.84408	2.76135
EC25	4.326	2.51287	1.99705	2.89505
EC40	4.747	2.8701	2.41131	3.30175
EC50	5.000	3.10903	2.66967	3.61517
EC60	5.253	3.36784	2.92583	3.99877
EC75	5.674	3.84661	3.34079	4.82256
EC80	5.842	4.05497	3.50364	5.22096
EC85	6.036	4.31212	3.69437	5.74124
EC90	6.282	4.65897	3.93822	6.48815
EC95	6.645	5.22503	4.313	7.80744
EC99	7.326	6.47892	5.07943	11.1257



MENIDIA BERYLLINA STATIC 96-H ACUTE TEST
(NCP PRODUCT REGISTRATION) FORM ETF3012B

COASTAL BIOANALYSTS, INC
EFFECTIVE DATE: 10/21/08

Product +Oil (ppm)	I.D.	D 0 Live	D 1 Live	D 2 Live	D 3 Live	D 4 Live	Final % Survival
Seawater Control	C-A	10	10	10	10	10	100
	C-B	10	10	10	10	10	
1.1 ppm	1-A	10	10	10	10	10	100
	1-B	10	10	10	10	10	
2.0 ppm	2-A	10	10	10	10	10	95
	2-B	10	10	10	9	9	
3.5 ppm	3-A	10	9	5	5	5	45
	3-B	10	10	4	4	4	
6.2 ppm	4-A	10	5	1	1	1	5
	4-B	10	5	1	1	0	
11 ppm	5-A	10	0	0	0	0	0
	5-B	10	1	0	0	0	
20 ppm	6-A	10	0	0	0	0	0
	6-B	10	0	0	0	0	
35 ppm	7-A	10	0	0	0	0	0
	7-B	10	0	0	0	0	
Initials:		PD	CD	CB	AG	PD	
Count Time:		1520	1055	0946	1100	1545	*Test end time

① CB 8/20/10

Oil+Product Test Water Quality

Parameter	Trt I.D.	Day 0	Day 1	Day 2	Day 3	Day 4
Temp. (°C)	C	25	25	25	25	25
	1	25	25	25	25	25
	2	25	25	25	25	25
	3	25	25	25	25	25
	4	25	25	25	25	25
	5	25	25	25	—	—
	6	25	25	25	—	—
	7	25	25	—	—	—
pH (S.U.)	C	7.71	7.64	7.64	7.62	7.68
	1	7.71	7.72	7.64	7.54	7.61
	2	7.71	7.70	7.65	7.50	7.51
	3	7.72	7.73	7.56	7.58	7.66
	4	7.72	7.73	7.55	7.52	7.54
	5	7.72	7.73	7.58	—	—
	6	7.72	7.74	7.56	—	—
	7	7.72	7.71	—	—	—
D.O. (mg/l)	C	7.2	5.5	5.5	5.6	5.4
	1	7.2	5.7	5.5	5.3	5.2
	2	7.2	6.0	5.6	5.0	4.7
	3	7.2	6.0	5.1	5.6	4.7
	4	7.2	6.1	5.0	5.0	4.6
	5	7.2	6.1	4.8	—	—
	6	7.2	6.1	4.6	—	—
	7	7.2	6.0	—	—	—
Salin. (g/kg)	C	20		20		20
	1					
	2					
	3					
	4					20
	5					—
	6			20		—
	7	20		—		—
Replicate Measured:		A	B, A	B, A	A	B
Initials:		PD	CB	LA	AG	CB

TEST I.D. SWFL1001 -AMBr

Acute Fish Test-24 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001F	Sample ID:	SWR ONE
End Date:	8/23/2010 15:45	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
1.1	1.0000	1.0000
2	1.0000	1.0000
3.5	0.9000	1.0000
6.2	0.5000	0.5000
11	0.0000	0.1000
20	0.1000	0.0000
35	0.0000	0.0000

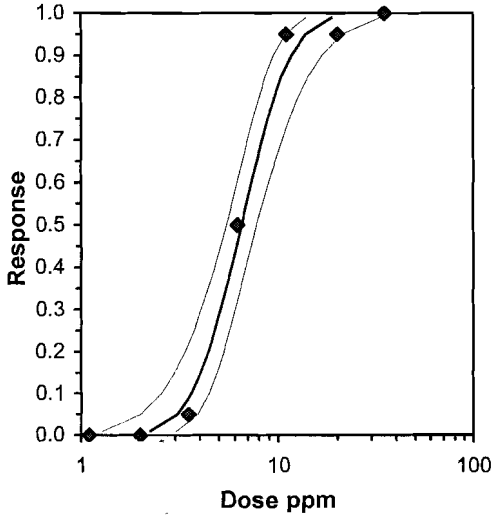
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.5	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20
6.2	0.5000	0.5000	0.7854	0.7854	0.7854	0.000	2	10	20
11	0.0500	0.0500	0.2403	0.1588	0.3218	47.963	2	19	20
20	0.0500	0.0500	0.2403	0.1588	0.3218	47.963	2	19	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	5.03872	0.85282	3.3672	6.71024	0	6.94327	11.0705	0.22	0.8134	0.19846	4
Intercept	0.90152	0.716	-0.5018	2.30489							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	2.24751	1.28059	3.03742
EC05	3.355	3.06869	2.01311	3.89045
EC10	3.718	3.62289	2.55085	4.45881
EC15	3.964	4.05231	2.98368	4.90316
EC20	4.158	4.42961	3.37103	5.30095
EC25	4.326	4.78118	3.73439	5.68119
EC40	4.747	5.79584	4.76793	6.85744
EC50	5.000	6.50723	5.45544	7.77422
EC60	5.253	7.30595	6.17774	8.90538
EC75	5.674	8.85641	7.44576	11.3869
EC80	5.842	9.55933	7.97659	12.6195
EC85	6.036	10.4494	8.62053	14.263
EC90	6.282	11.6879	9.47639	16.6889
EC95	6.645	13.7987	10.8572	21.1538
EC99	7.326	18.8404	13.9018	33.2649



Acute Fish Test-48 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001F	Sample ID:	SWR ONE
End Date:	8/23/2010 15:45	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
1.1	1.0000	1.0000
2	1.0000	1.0000
3.5	0.5000	0.4000
6.2	0.1000	0.1000
11	0.0000	0.0000
20	0.0000	0.0000
35	0.0000	0.0000

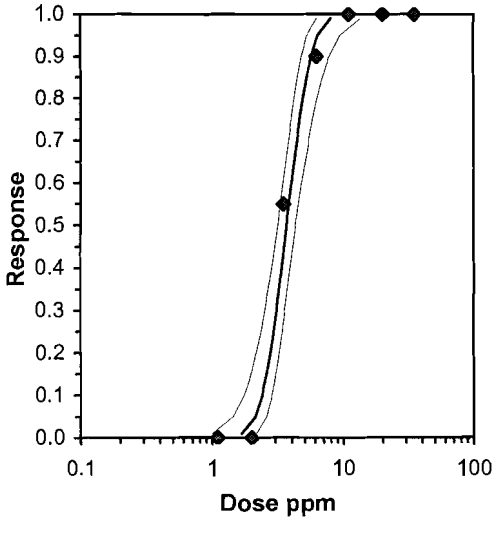
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
3.5	0.4500	0.4500	0.7351	0.6847	0.7854	9.685	2	11	20
6.2	0.1000	0.1000	0.3218	0.3218	0.3218	0.000	2	18	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	6.83191	1.33446	4.21637	9.44744	0	2.2366	11.0705	0.82	0.56407	0.14637	6
Intercept	1.14631	0.78169	-0.3858	2.67842							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.67325	0.99746	2.14605
EC05	3.355	2.10529	1.43035	2.56366
EC10	3.718	2.37952	1.72682	2.82927
EC15	3.964	2.58445	1.95575	3.03172
EC20	4.158	2.75983	2.15444	3.2099
EC25	4.326	2.91975	2.33609	3.37805
EC40	4.747	3.36504	2.83035	3.88843
EC50	5.000	3.66499	3.14201	4.27869
EC60	5.253	3.99168	3.45549	4.75239
EC75	5.674	4.60044	3.9748	5.76191
EC80	5.842	4.86701	4.18222	6.24891
EC85	6.036	5.1973	4.42726	6.88495
EC90	6.282	5.6449	4.74331	7.79891
EC95	6.645	6.38018	5.23396	9.41684
EC99	7.326	8.02759	6.25152	13.5057



Acute Fish Test-72 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001F	Sample ID:	SWR ONE
End Date:	8/23/2010 15:45	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
1.1	1.0000	1.0000
2	1.0000	0.9000
3.5	0.5000	0.4000
6.2	0.1000	0.1000
11	0.0000	0.0000
20	0.0000	0.0000
35	0.0000	0.0000

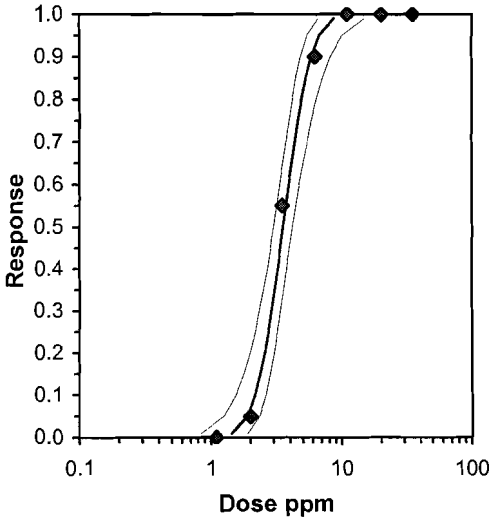
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20
3.5	0.4500	0.4500	0.7351	0.6847	0.7854	9.685	2	11	20
6.2	0.1000	0.1000	0.3218	0.3218	0.3218	0.000	2	18	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	5.98694	1.10287	3.82532	8.14856	0	0.69671	11.0705	0.98	0.54838	0.16703	3
Intercept	1.7169	0.63722	0.46796	2.96585							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.44479	0.84245	1.89541
EC05	3.355	1.87774	1.2541	2.32651
EC10	3.718	2.15933	1.54421	2.60547
EC15	3.964	2.3728	1.77214	2.82003
EC20	4.158	2.55741	1.97253	3.00998
EC25	4.326	2.72719	2.15773	3.19
EC40	4.747	3.20671	2.67124	3.73982
EC50	5.000	3.53489	3.00242	4.16306
EC60	5.253	3.89666	3.34153	4.68014
EC75	5.674	4.5818	3.91645	5.79547
EC80	5.842	4.88599	4.15038	6.34007
EC85	6.036	5.26613	4.42966	7.05743
EC90	6.282	5.78674	4.79416	8.09959
EC95	6.645	6.65451	5.3687	9.97389
EC99	7.326	8.64861	6.5894	14.8482



Acute Fish Test-96 Hr Survival

Start Date:	8/19/2010 15:20	Test ID:	SWRC1001F	Sample ID:	SWR ONE
End Date:	8/23/2010 15:45	Lab ID:	CBI	Sample Type:	PRODUCT + OIL
Sample Date:		Protocol:	EPAA 91-EPA Acute	Test Species:	MB-Menidia beryllina
Comments:					

Conc-ppm	1	2
CONTROL	1.0000	1.0000
1.1	1.0000	1.0000
2	1.0000	0.9000
3.5	0.5000	0.4000
6.2	0.1000	0.0000
11	0.0000	0.0000
20	0.0000	0.0000
35	0.0000	0.0000

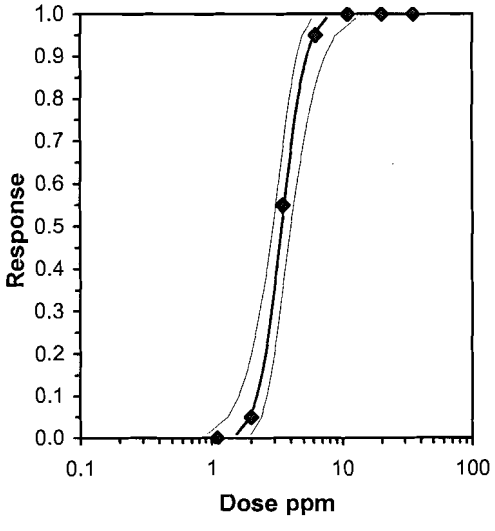
			Transform: Arcsin Square Root					Number	Total
Conc-ppm	Mean	N-Mean	Mean	Min	Max	CV%	N	Resp	Number
CONTROL	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1.1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20
3.5	0.4500	0.4500	0.7351	0.6847	0.7854	9.685	2	11	20
6.2	0.0500	0.0500	0.2403	0.1588	0.3218	47.963	2	19	20
11	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
20	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20
35	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Maximum Likelihood-Probit

Parameter	Value	SE	95% Fiducial Limits		Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter
Slope	6.75634	1.31701	4.17501	9.33768	0	0.12601	11.0705	1	0.53425	0.14801	3
Intercept	1.39044	0.73425	-0.0487	2.82957							
TSCR											

Point	Probits	ppm	95% Fiducial Limits	
EC01	2.674	1.54855	0.91956	1.9904
EC05	3.355	1.95341	1.32347	2.38243
EC10	3.718	2.21088	1.60089	2.63208
EC15	3.964	2.40351	1.81547	2.82249
EC20	4.158	2.5685	2.00194	2.99017
EC25	4.326	2.71904	2.17258	3.14847
EC40	4.747	3.1387	2.63763	3.6294
EC50	5.000	3.42174	2.93131	3.99762
EC60	5.253	3.73031	3.22697	4.4451
EC75	5.674	4.30603	3.71732	5.40033
EC80	5.842	4.55842	3.91338	5.86177
EC85	6.036	4.87134	4.14515	6.46494
EC90	6.282	5.29576	4.44434	7.33261
EC95	6.645	5.99377	4.90931	8.87095
EC99	7.326	7.56079	5.87539	12.7694



Environmental Monitoring and Support Laboratory - Cincinnati

American Petroleum Institute
Department of Environmental Affairs

STANDARD REFERENCE OIL SAMPLE

FUEL OIL NO. 2

* * * * * * * * * * * *
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* This sample is made available for the sole purpose of providing *
* a reference oil for research and laboratory testing purposes. *
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* * * * * * * * * * * *

Storage and Handling

Store reference oil samples at a temperature of no more than 20°C, eferably in a dark area.

Ampuls, 20 mL - open the ampul by snapping off the top at the break area on the neck.

To retain a portion of the ampul contents, immediately transfer the oil to a clean, dry glass flask or vial, and seal. Do not use a plastic container. Non-glass stoppers must contain a Teflon insert to prevent oil contact with plastic or metal.

Bottles, one-pint - bottles of reference oils are closed with a plastic screw cap containing a Teflon insert. If bottle is used to store a portion of the oil contents after opening, be sure that the Teflon insert remains in the cap.

ASTM Standard Methods for Waterborne Oil Samples

Analyte	ASTM Method*
Specific and API gravity	D1298-80 (Part 23)
Nitrogen, sulfur, nickel and vanadium	D3327-79 (Part 31)
Sulfur compounds, profile	D3328-78 (Part 31)
Simulated distillation profile	D2887-73 (Part 24)
Infrared spectrum	D3414-79 (Part 31)
UV fluorescence spectrum	D3650-78 (Part 31)

STM series available from: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

A-200

Fuel Oil No. 2

is oil has been analyzed by skilled oil testing and research laboratories to aracterize it and to ensure that substantial compositional changes have not curred during storage and sample preparation. Results for various selected rameters were as follows:

Analyte	Result
Specific gravity*	0.856 kg/L
API gravity*	33.7 degrees
Sulfur	0.12 weight %
Sulfur compounds, profile	See Fig. 1
Nitrogen	0.009 weight %
Vanadium	0.2 mg/L
Nickel	0.1 mg/L
Simulated distillation profile	See Fig. 2 and Table 1
Infrared spectrum	See Fig. 3
UV fluorescence spectrum	See Fig. 4
Pour point	-20°F
Viscosity,	
at 40°C	2.384
at 100°	1.034
Index	**
Saturates	57.2 weight %
Aromatics	41.8 weight %
Aromatics analyses, weight %:	
Alkylbenzenes	12.1
Naphthenebenzenes	12.1
Dinaphthenebenzene	2.6
Naphthalenes	8.2
Acenaphthenes	3.3
Fluorenes	1.6

Fuel Oil No. 2

Continued

Analyte	Result
Phenanthrenes	1.5
Naphthenephenanthrenes	0
Pyrenes	0.1
Chrysenes	0
Perylenes	0
Dibenzanthracenes	0
Benzothiophenes	0
Dibenzothiophenes	0.1
Naphthabenzothiophenes	0.2
Class II-Class VII Unidentified	0

At 15/15°C
Not calculable when viscosity at 100°C is less than 2.0.

Boiling Range Distribution for
Fuel Oil No. 2

Percent ecovered	Temperature Degrees F	Percent Recovered	Temperature Degrees F	Percent Recovered	Temperature Degrees F
IBP	280	36	477	72	574
1	299	37	480	73	577
2	322	38	482	74	579
3	336	39	485	75	581
4	345	40	487	76	585
5	357	41	489	77	588
6	366	42	491	78	592
7	375	43	494	79	596
8	382	44	497	80	600
9	386	45	501	81	604
10	391	46	504	82	607
11	395	47	507	83	610
12	399	48	510	84	613
13	403	49	513	85	617
14	406	50	516	86	621
15	410	51	519	87	625
16	413	52	521	88	630
17	415	53	523	89	633
18	418	54	524	90	637
19	422	55	527	91	643
20	426	56	530	92	649
21	429	57	532	93	654
22	433	58	534	94	659
23	436	59	537	95	665
24	439	60	539	96	673
25	441	61	541	97	681
26	444	62	544	98	693
27	448	63	546	99	712
28	450	64	548	FBP	729
29	452	65	550		
30	455	66	553		
31	458	67	557		
32	462	68	561		
33	466	69	564		
34	470	70	567		
35	473	71	571		

' - initial boiling point; FBP-final boiling point