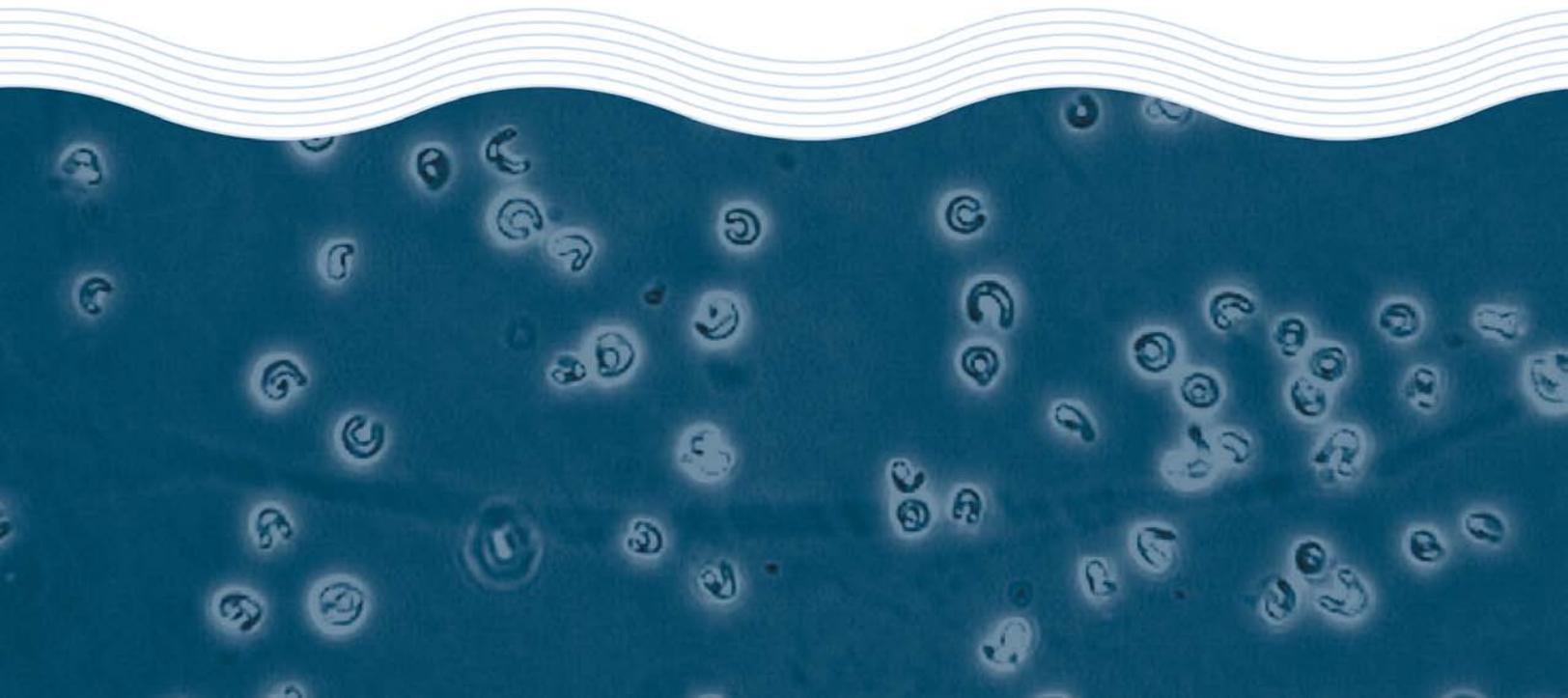


# **Toxicity Assessment of an Outfall Sample from the Adelaide Desalination Plant**

**Adelaide Aqua**

**Test Report**

**August 2013**



# **Toxicity Assessment of an Outfall Sample from the Adelaide Desalination Plant**

**Adelaide Aqua**

**Test Report**

**August 2013**

## Toxicity Test Report: TR0997/1

(Page 1 of 2)

This document is issued in accordance with NATA's accreditation requirements

<b>Client:</b>	Adelaide Aqua 16 Chrysler Rd Lonsdale SA 5160	<b>ESA Job #:</b>	PR0997
<b>Attention:</b>	Vanesa Ayala	<b>Date Sampled:</b>	19 August 2013
<b>Client Ref:</b>	Not supplied	<b>Date Received:</b>	22 August 2013
		<b>Sampled By:</b>	Client
		<b>ESA Quote #:</b>	PL0997_q01

<b>Lab ID No.:</b>	<b>Sample Name:</b>	<b>Sample Description:</b>
6234	Outfall	Aqueous sample, pH 8.0, salinity >70.0‰, total ammonia <2.0mg/L*. Sample received at 14°C in apparent good condition
6233	Seawater Intake	Aqueous sample, pH 8.1, salinity 36.9‰, total ammonia <2.0mg/L*. Sample received at 14°C in apparent good condition

\*Ammonia analysis is not covered by Ecotox Services Australasia's scope of accreditation

<b>Test Performed:</b>	72-hr sea urchin larval development test using <i>Heliocidaris tuberculata</i>
<b>Test Protocol:</b>	ESA SOP 105 (ESA 2010), based on APHA (1998), Simon and Laginestra (1996) and Doyle <i>et al.</i> (2003)
<b>Test Temperature:</b>	The test was performed at 20±1°C.
<b>Deviations from Protocol:</b>	Nil
<b>Comments on Solution Preparation:</b>	The sample 6234 'Outfall' was serially diluted with sample 6233 'Intake' (diluent control) to achieve the test concentrations. A FSW control and diluent control were tested concurrently with the sample.
<b>Source of Test Organisms:</b>	Field collected from South Maroubra, NSW.
<b>Test Initiated:</b>	22 August 2013 at 1400h

Sample 5234: <i>Outfall</i>	<i>Vacant</i>	<i>Vacant</i>
Concentration (%)	% Normal larvae (Mean ± SD)	
FSW Control	97.3 ± 2.5	
Diluent Control	98.3 ± 2.4	
6.3	96.3 ± 2.9	
12.5	7.5 ± 3.9 *	
25	0.0 ± 0.0	
50	0.0 ± 0.0	
100	0.0 ± 0.0	
<b>72-hr EC10 = 7.3 (6.7-7.8)%</b>		
<b>72-hr EC50 = 9.4 (9.0-9.8)%</b>		
<b>NOEC = 6.3%</b>		
<b>LOEC = 12.5%</b>		

\*Significantly lower percentage of normally developed larvae compared with the Diluent Control (Dunnett's Test, 1-tailed, P=0.05)

## Toxicity Test Report: TR0997/1

(Page 2 of 2)

QA/QC Parameter	Criterion	This Test	Criterion met?
Control mean % normal larvae	≥70.0%	97.3%	Yes
Reference Toxicant within cusum chart limits	5.6-28.2µg Cu/L	16.9µg Cu/L	Yes

Test Report Authorised by:



Dr Rick Krassoi, Director on 19 December 2013

Results are based on the samples in the condition as received by ESA.

### NATA Accredited Laboratory Number: 14709

This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. NATA is a signatory to the APLAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports. This document shall not be reproduced except in full.

### Citations:

APHA (1998) Method 8810 D. Echinoderm Embryo Development Test. In Standard Methods for the Examination of Water and Wastewater, 20th Ed. American Public Health Association, American Water Works Association and the Water Environment Federation, USA.

Doyle, C.J., Pablo, F., Lim, R.P. and Hyne, R.V. (2003) Assessment of metal toxicity in sediment pore water from Lake Macquarie, Australia. *Arch. Environ. Contam. Toxicology*, 44(3): 343-350.

ESA (2010) *ESA SOP 105 - Sea Urchin Larval Development Test*. Issue No. 9. Ecotox Services Australasia, Sydney NSW.

Simon, J. and Laginestra, E. (1997) Bioassay for testing sublethal toxicity in effluents, using gametes of sea urchin *Heliocidaris tuberculata*. National Pulp Mills Research Program Technical Report No. 20. CSIRO, Canberra, ACT.

## Toxicity Test Report: TR0997/2

(Page 1 of 2)

This document is issued in accordance with NATA's accreditation requirements

<b>Client:</b>	Adelaide Aqua 16 Chrysler Rd Lonsdale SA 5160	<b>ESA Job #:</b>	PR0997
<b>Attention:</b>	Vanesa Ayala	<b>Date Sampled:</b>	19 August 2013
<b>Client Ref:</b>	Not supplied	<b>Date Received:</b>	22 August 2013
		<b>Sampled By:</b>	Client
		<b>ESA Quote #:</b>	PL0997_q01

<b>Lab ID No.:</b>	<b>Sample Name:</b>	<b>Sample Description:</b>
6234	Outfall	Aqueous sample, pH 8.0, salinity >70.0‰, total ammonia <2.0mg/L*. Sample received at 14°C in apparent good condition
6233	Seawater Intake	Aqueous sample, pH 8.1, salinity 36.9‰, total ammonia <2.0mg/L*. Sample received at 14°C in apparent good condition

\*Ammonia analysis is not covered by Ecotox Services Australasia's scope of accreditation

<b>Test Performed:</b>	48-hr larval development test using the mussel <i>Mytilus galloprovincialis</i>
<b>Test Protocol:</b>	ESA SOP 106 (ESA 2011), based on APHA (1998) and USEPA (1996)
<b>Test Temperature:</b>	The test was performed at 20±1°C
<b>Deviations from Protocol:</b>	The test was extended to 72 hours
<b>Comments on Solution Preparation:</b>	The sample 6234 'Outfall' was serially diluted with sample 6233 'Intake' (diluent control) to achieve the test concentrations. A FSW control and diluent control were tested concurrently with the sample.
<b>Source of Test Organisms:</b>	Farm-reared, Mercury Passage, TAS
<b>Test Initiated:</b>	26 August 2013 at 1545h

Sample 6234: Outfall		Vacant	Vacant
Concentration (%)	% Normal larvae (Mean ± SD)		
FSW Control	75.8 ± 4.4		
Diluent Control	86.3 ± 3.8		
6.3	77.3 ± 9.3		
12.5	18.0 ± 5.0 *		
25	0.0 ± 0.0		
50	0.0 ± 0.0		
100	0.0 ± 0.0		
<b>72-hr EC10 = 6.3%**</b>			
<b>72-hr EC50 = 9.6 (9.0-10.1)%</b>			
<b>NOEC = 6.3%</b>			
<b>LOEC = 12.5%</b>			

\*Significantly lower percentage of normally developed larvae compared with the Diluent Control (Dunnett's Test, 1-tailed, P=0.05)

\*\*95% confidence limits are not reliable

## Toxicity Test Report: TR0997/2

(Page 2 of 2)

QA/QC Parameter	Criterion	This Test	Criterion met?
FSW Control mean % normal	≥70%	75.8%	Yes
Reference Toxicant within cusum chart limits	7.3-17.2µg Cu/L	7.5µg Cu/L	Yes

Test Report Authorised by:



Dr Rick Krassoi, Director on 19 December 2013

Results are based on the samples in the condition as received by ESA.

### NATA Accredited Laboratory Number: 14709

This document is issued in accordance with NATA's accreditation requirements. Accredited for compliance with ISO/IEC 17025. NATA is a signatory to the APLAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports. This document shall not be reproduced except in full.

### Citations:

APHA (1998) *Standard Methods for the Examination of Water and Wastewater*. 20<sup>th</sup> Ed. American Public Health Association, American Water Works Association and the Water Environment Federation, Washington, DC, USA.

ESA (2011) *Bivalve Larval Development Test*. Issue No. 10. Ecotox Services Australasia, Sydney, NSW

USEPA (1996) *Bivalve acute toxicity test (embryo larval) OPPTS 850.1055. Ecological Effects Test Guidelines*. United States Environmental Protection Agency. Prevention, Pesticides and Toxic Substances. EPA/712/C-96/137.

# Chain-of-Custody Documentation

# Sample Receipt Notification

**Attention** : Vanesa Ayala

**Client** : Adelaide Aqua  
16 Chrysler Rd  
Lonsdale SA 5160

**Email** : [vanesa.ayala@acciona.com.au](mailto:vanesa.ayala@acciona.com.au)  
**Telephone** : 400827816  
**Facsimile** :

**Date** : 22/08/2013

**Re** : Receipt of Samples

**Pages** : 2

**ESA Project** : PT0997

For Review

Additional Documentation Required - Please Respond

---

## **Sample Delivery Details**

**Completed Chain of Custody accompanied samples:** YES

**Samples received in apparent good condition and correctly bottled:** YES

**Security seals on sample bottles and esky intact:** YES

**Date samples received** : 22/08/2013

**Time samples received** : 14:00

**No. of samples received** : 2

**Sample matrix** : aqueous

**Sample temperature** : 11-15°C

**Comments** : Includes 2x5L Seawater Intake (ESA ID# 6233) and 2 x 1L Outfall (ESA ID# 5234)

---

## **Contact Details**

Customer Services Officer : Tina Micevska

Telephone : 61 2 9420 9481

Facsimile : 61 2 9420 9484

Email : [tmicevska@ecotox.com.au](mailto:tmicevska@ecotox.com.au)

Please contact customer services officer for all queries or issues regarding samples

**Note that the chain-of-custody provides definitive information on the tests to be performed**

---

## **Ecotox Services Australia**

ABN 45 094 714 904

Unit 27, 2 Chaplin Drive

Lane Cove NSW 2066 Australia

Phone : 61 2 9420 9481

Fax : 61 2 9420 9484

Email : [info@ecotox.com.au](mailto:info@ecotox.com.au)

# Chain-of-Custody / Service Request Form



Datasheet ID: 601.1  
Last Revised: 22 January 2013

Customer: Adelaide Aqua Pty, Ltd.  
 Contact Name: Vanessa Alaya  
 Phone: 0400827816 Email: \_\_\_\_\_  
 Sampled by: Chetan Patel

Ship To: Ecotox Services  
 Attention: Tina Micevska

(please provide an email address for sample receipt notification)

Sample Date <small>(day/month/year)</small>	Sample Time	Sample Name <small>(exactly as written on the sample vessel)</small>	Sample Method <small>(eg. Grab, composite etc.)</small>	Number and Volume of Containers <small>(eg 2 x 1L)</small>	Tests Requested <small>(See reverse for guidance)</small>					Comments / Instructions  <b>Note that testing will be delayed if an incomplete chain of custody is received</b> <ul style="list-style-type: none"> <li>• Additional treatment of samples (i.e. spiking)</li> <li>• Sub-contracted services (i.e. chemical analyses)</li> <li>• Dilutions required (if different than 100% down to 6.25%)</li> <li>• Sample holding time restriction (if applicable)</li> <li>• Sample used for litigation (if applicable)</li> </ul> <i>Note: An MSDS must be attached if Available</i> <b>ESA Project Number: PR0997</b>
6234 19/8/13	12:20	outfall	Grab	2 x 1L						
6233 19/8/13	12:20	sea water intake	Grab	2 x 5L						

1) Released By: <u>Chetan Patel</u> Date: <u>19/8</u>	2) Received By: <u>Tina</u> Date: <u>22/8/13</u>	3) Released By: _____ Date: _____	4) Received By: _____ Date: _____
Of: _____ Time: <u>12:45</u>	Of: <u>ESA</u> Time: <u>1400</u>	Of: _____ Time: _____	Of: _____ Time: _____

**Note that the chain-of-custody documentation will provide definitive information on the tests to be performed.**

# **Statistical Printouts for the Sea Urchin Larval Development Test**

**Sea Urchin Larval Development Test-Proportion Normal**

Start Date:	22/08/2013 14:00	Test ID:	PR0997/03	Sample ID:	Outfall
End Date:	25/08/2013 14:00	Lab ID:	6234	Sample Type:	AQ-Aqueous
Sample Date:		Protocol:	ESA 105	Test Species:	HT-Heliocidaris tuberculata
Comments:					

Conc-%	1	2	3	4
FSW Control	0.9400	1.0000	0.9700	0.9800
Diluent Control	1.0000	0.9800	1.0000	0.9500
6.3	0.9400	0.9400	0.9700	1.0000
12.5	0.1200	0.0900	0.0300	0.0600
25	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

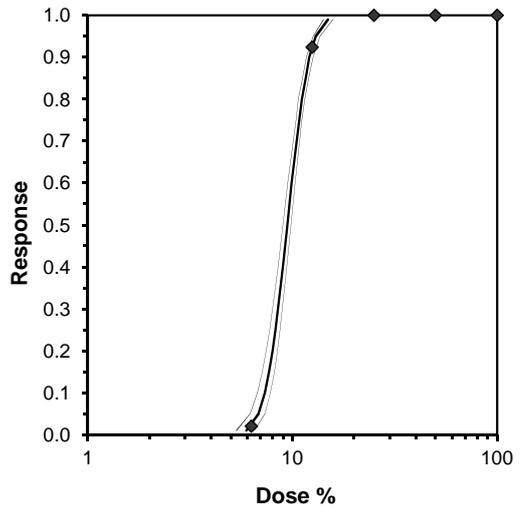
Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
			Mean	Min	Max	CV%	N					
FSW Control	0.9725	0.9898	1.4174	1.3233	1.5208	5.774	4					
Diluent Control	0.9825	1.0000	1.4539	1.3453	1.5208	5.805	4	*			7	400
6.3	0.9625	0.9796	1.3910	1.3233	1.5208	6.697	4	1.044	2.180	0.1313	15	400
*12.5	0.0750	0.0763	0.2700	0.1741	0.3537	28.629	4	19.653	2.180	0.1313	370	400
25	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400
50	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400
100	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.953206	0.859	0.14243	-1.1713
Bartlett's Test indicates equal variances (p = 0.96)	0.091158	9.21034		
The control means are not significantly different (p = 0.56)	0.62101	2.446912		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	6.3	12.5	8.87412	15.87302	0.046749	0.047394	1.77493	0.007258	1.4E-08	2, 9
Treatments vs Diluent Control										

Parameter	Value	SE	95% Fiducial Limits		Maximum Likelihood-Probit						
			Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter		
Slope	11.68352	0.851318	10.01494	13.35211	0.0175	0.000934	7.814728	1	0.974501	0.085591	3
Intercept	-6.3856	0.891634	-8.1332	-4.638							
TSCR	0.017501	0.006556	0.004651	0.030351							

Point	Probits	%	95% Fiducial Limits	
EC01	2.674	5.961935	5.316351	6.506804
EC05	3.355	6.818938	6.209324	7.328668
EC10	3.718	7.325073	6.743131	7.810757
EC15	3.964	7.687618	7.127725	8.155246
EC20	4.158	7.988512	7.447977	8.440968
EC25	4.326	8.256021	7.733251	8.695085
EC40	4.747	8.9705	8.495836	9.376108
EC50	5.000	9.429763	8.984493	9.817623
EC60	5.253	9.912539	9.494461	10.28729
EC75	5.674	10.77037	10.38348	11.14348
EC80	5.842	11.13104	10.74809	11.51432
EC85	6.036	11.56671	11.17997	11.97212
EC90	6.282	12.13919	11.73305	12.59025
EC95	6.645	13.04022	12.5739	13.59754
EC99	7.326	14.9147	14.24328	15.79096

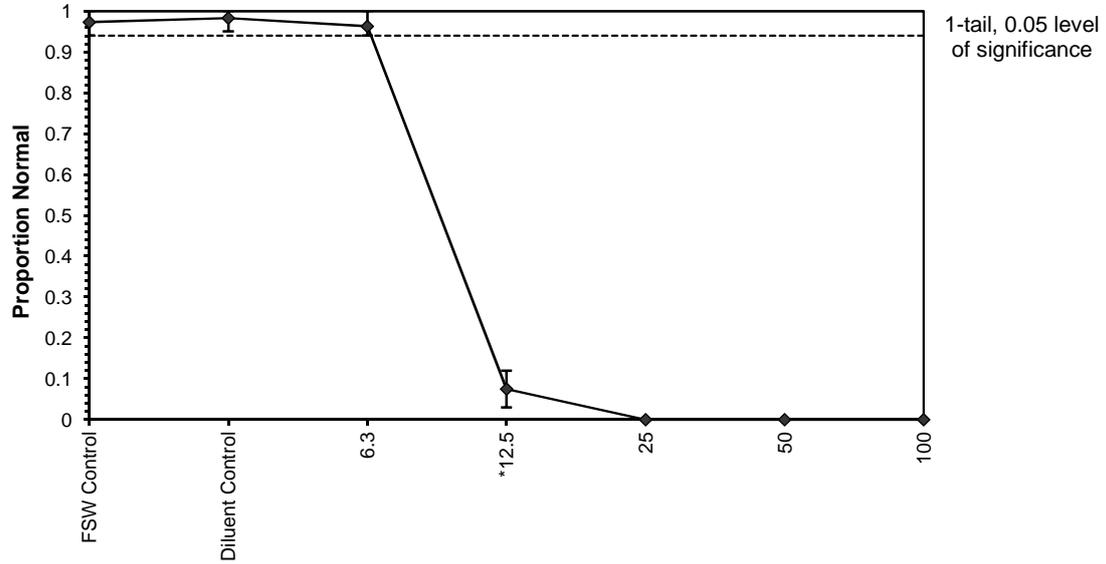


Significant heterogeneity detected (p < 0.01)

**Sea Urchin Larval Development Test-Proportion Normal**

Start Date: 22/08/2013 14:00 Test ID: PR0997/03 Sample ID: Outfall  
End Date: 25/08/2013 14:00 Lab ID: 6234 Sample Type: AQ-Aqueous  
Sample Date: Protocol: ESA 105 Test Species: HT-Heliocidaris tuberculata  
Comments:

**Dose-Response Plot**



**Sea Urchin Larval Development Test-Proportion Normal**

Start Date: 22/08/2013 14:00    Test ID: PR0997/03    Sample ID: Outfall  
 End Date: 25/08/2013 14:00    Lab ID: 6234    Sample Type: AQ-Aqueous  
 Sample Date:    Protocol: ESA 105    Test Species: HT-Heliocidaris tuberculata  
 Comments:

**Auxiliary Data Summary**

Conc-%	Parameter	Mean	Min	Max	SD	CV%	N
FSW Control	% Normal	97.25	94.00	100.00	2.50	1.63	4
Diluent Control		98.25	95.00	100.00	2.36	1.56	4
6.3		96.25	94.00	100.00	2.87	1.76	4
12.5		7.50	3.00	12.00	3.87	26.24	4
25		0.00	0.00	0.00	0.00		4
50		0.00	0.00	0.00	0.00		4
100		0.00	0.00	0.00	0.00		4
FSW Control	pH	8.30	8.30	8.30	0.00	0.00	1
Diluent Control		8.10	8.10	8.10	0.00	0.00	1
6.3		8.10	8.10	8.10	0.00	0.00	1
12.5		8.10	8.10	8.10	0.00	0.00	1
25		8.10	8.10	8.10	0.00	0.00	1
50		8.10	8.10	8.10	0.00	0.00	1
100		8.00	8.00	8.00	0.00	0.00	1
FSW Control	Salinity ppt	34.80	34.80	34.80	0.00	0.00	1
Diluent Control		36.90	36.90	36.90	0.00	0.00	1
6.3		39.30	39.30	39.30	0.00	0.00	1
12.5		41.60	41.60	41.60	0.00	0.00	1
25		45.60	45.60	45.60	0.00	0.00	1
50		54.30	54.30	54.30	0.00	0.00	1
100		>70.0	>70.0	>70.0	0.00		0
FSW Control	DO %	99.30	99.30	99.30	0.00	0.00	1
Diluent Control		101.60	101.60	101.60	0.00	0.00	1
6.3		104.10	104.10	104.10	0.00	0.00	1
12.5		101.20	101.20	101.20	0.00	0.00	1
25		102.10	102.10	102.10	0.00	0.00	1
50		101.50	101.50	101.50	0.00	0.00	1
100		101.20	101.20	101.20	0.00	0.00	1

# **Statistical Printouts for the Mussel Toxicity Tests**

**Bivalve Larval Development Test-Proportion Normal**

Start Date:	26/08/2013 15:45	Test ID:	PR0997/02	Sample ID:	OUTFALL
End Date:	29/08/2013 15:45	Lab ID:	6234	Sample Type:	AQ-Aqueous
Sample Date:		Protocol:	ESA 106	Test Species:	MG-Mytilus galloprovincialis
Comments:					

Conc-%	1	2	3	4
FSW Control	0.8200	0.7400	0.7200	0.7500
Diluent Control	0.8500	0.8200	0.8700	0.9100
6.3	0.8700	0.8300	0.6700	0.7200
12.5	0.1600	0.2300	0.2100	0.1200
25	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0000
100	0.0000	0.0000	0.0000	0.0000

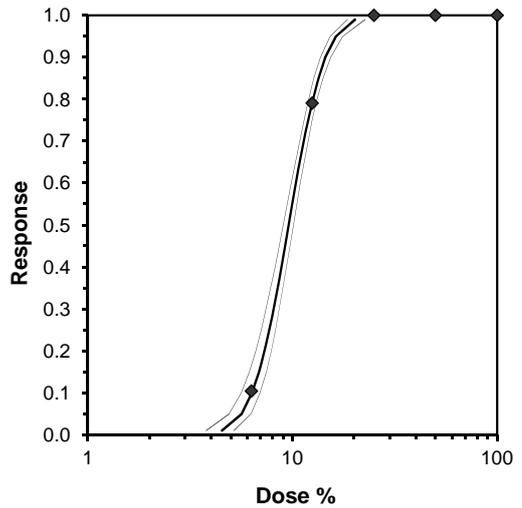
Conc-%	Mean	N-Mean	Transform: Arcsin Square Root					t-Stat	1-Tailed Critical	MSD	Number Resp	Total Number
			Mean	Min	Max	CV%	N					
FSW Control	0.7575	0.8783	1.0572	1.0132	1.1326	4.942	4					
Diluent Control	0.8625	1.0000	1.1934	1.1326	1.2661	4.706	4	*			55	400
6.3	0.7725	0.8957	1.0799	0.9589	1.2019	10.468	4	1.951	2.180	0.1268	91	400
*12.5	0.1800	0.2087	0.4354	0.3537	0.5002	15.170	4	13.035	2.180	0.1268	328	400
25	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400
50	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400
100	0.0000	0.0000	0.0500	0.0500	0.0500	0.000	4				400	400

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.05)	0.96389	0.859	-0.01037	-1.04026
Bartlett's Test indicates equal variances (p = 0.48)	1.478611	9.21034		
The control means are significantly different (p = 0.01)	3.55261	2.446912		

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSDp	MSB	MSE	F-Prob	df
Dunnett's Test	6.3	12.5	8.87412	15.87302	0.097578	0.112906	0.668698	0.006765	7.5E-07	2, 9
Treatments vs Diluent Control										

Parameter	Value	SE	95% Fiducial Limits		Maximum Likelihood-Probit						
			Control	Chi-Sq	Critical	P-value	Mu	Sigma	Iter		
Slope	7.161621	0.561817	6.060459	8.262783	0.1375	0.606402	7.814728	0.89	0.981233	0.139633	4
Intercept	-2.02722	0.587202	-3.17814	-0.87631							
TSCR	0.139857	0.017083	0.106374	0.173339							

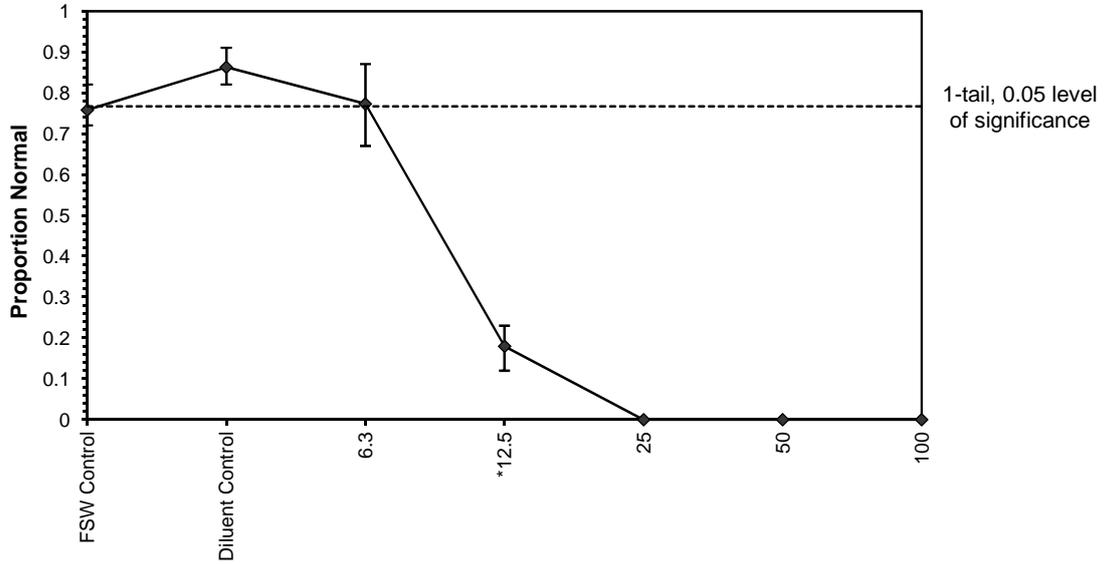
Point	Probits	%	95% Fiducial Limits	
EC01	2.674	4.533129	3.791675	5.177758
EC05	3.355	5.643614	4.902071	6.273647
EC10	3.718	6.342877	5.618417	6.953453
EC15	3.964	6.862983	6.157876	7.455801
EC20	4.158	7.306597	6.621493	7.882994
EC25	4.326	7.709963	7.045124	8.271092
EC40	4.747	8.827907	8.223536	9.350864
EC50	5.000	9.577087	9.009789	10.08464
EC60	5.253	10.38985	9.850816	10.89851
EC75	5.674	11.89637	11.35151	12.48087
EC80	5.842	12.55312	11.97744	13.205
EC85	6.036	13.36454	12.72885	14.12652
EC90	6.282	14.46041	13.71223	15.41086
EC95	6.645	16.2521	15.26479	17.58567
EC99	7.326	20.2334	18.57059	22.6439



**Bivalve Larval Development Test-Proportion Normal**

Start Date: 26/08/2013 15:45 Test ID: PR0997/02 Sample ID: OUTFALL  
End Date: 29/08/2013 15:45 Lab ID: 6234 Sample Type: AQ-Aqueous  
Sample Date: Protocol: ESA 106 Test Species: MG-Mytilus galloprovincialis  
Comments:

**Dose-Response Plot**



**Bivalve Larval Development Test-Proportion Normal**

Start Date:	26/08/2013 15:45	Test ID:	PR0997/02	Sample ID:	OUTFALL
End Date:	29/08/2013 15:45	Lab ID:	6234	Sample Type:	AQ-Aqueous
Sample Date:		Protocol:	ESA 106	Test Species:	MG-Mytilus galloprovincialis
Comments:					

**Auxiliary Data Summary**

Conc-%	Parameter	Mean	Min	Max	SD	CV%	N
FSW Control	% Normal	75.75	72.00	82.00	4.35	2.75	4
Diluent Control		86.25	82.00	91.00	3.77	2.25	4
6.3		77.25	67.00	87.00	9.32	3.95	4
12.5		18.00	12.00	23.00	4.97	12.38	4
25		0.00	0.00	0.00	0.00		4
50		0.00	0.00	0.00	0.00		4
100		0.00	0.00	0.00	0.00		4
FSW Control	pH	8.20	8.20	8.20	0.00	0.00	1
Diluent Control		8.10	8.10	8.10	0.00	0.00	1
6.3		8.20	8.20	8.20	0.00	0.00	1
12.5		8.20	8.20	8.20	0.00	0.00	1
25		8.20	8.20	8.20	0.00	0.00	1
50		8.20	8.20	8.20	0.00	0.00	1
100		8.20	8.20	8.20	0.00	0.00	1
FSW Control	Salinity ppt	34.20	34.20	34.20	0.00	0.00	1
Diluent Control		36.90	36.90	36.90	0.00	0.00	1
6.3		37.90	37.90	37.90	0.00	0.00	1
12.5		41.30	41.30	41.30	0.00	0.00	1
25		45.30	45.30	45.30	0.00	0.00	1
50		54.10	54.10	54.10	0.00	0.00	1
100		69.60	69.60	69.60	0.00	0.00	1
FSW Control	DO %	99.00	99.00	99.00	0.00	0.00	1
Diluent Control		98.50	98.50	98.50	0.00	0.00	1
6.3		98.80	98.80	98.80	0.00	0.00	1
12.5		103.30	103.30	103.30	0.00	0.00	1
25		103.40	103.40	103.40	0.00	0.00	1
50		104.10	104.10	104.10	0.00	0.00	1
100		98.60	98.60	98.60	0.00	0.00	1