

CETIS Test Evaluation Report

Report Date: 09 Nov-23 16:35 (1 of 3)
Test Code/ID: CDUD1475 / 12-4316-1896

Facility: Paramount Petroleum	Test Name: Echinoid Embryo-Larval Development Test
Sample Site: Outfall #1 - Grab	Organism: Dendraster excentricus (sand dollar)
Sample Code: CDUD1475	Protocol: EPA/600/R-95/136 (1995)
Sample Date: 23 Aug-23 00:30	Start Date: 23 Aug-23 15:04
Sample Age: 15h (1 °C)	End Date: 26 Aug-23 16:39
Project: Alon Asphalt Company	Duration: 74h Organism Age: <1h
Permittee: Alon Asphalt	Laboratory: EcoAnalysts
Address:	Address: 4770 NE View Dr. Port Gamble Port Gamble, WA 98364
Contact:	Contact: Brian Hester, Laboratory Director
Phone:	Phone: (360)297-6040
Email:	Email: bhester@ecoanalysts.com

Chronic Toxicity Evaluation						
Analysis ID	Endpoint	Criteria	Conc-%	IWC	Decision	Method
08-5516-2682	Development	NOEL/LOEL	0/>0	3.4	May Fail IWC	Unequal Variance t Two-Sample Test
13-8299-2936	Development	NOEL/LOEL	100/>100	3.4	Passes IWC	Dunnett Multiple Comparison Test
10-1335-1871	Survival	NOEL/LOEL	100/>100	3.4	Passes IWC	Steel Many-One Rank Sum Test
13-6167-5911	Survival	NOEL/LOEL	0/>0	3.4	May Fail IWC	Unequal Variance t Two-Sample Test

Test Review Comments
This toxicity test is acceptable according to test review criteria. There were no significant deficiencies in sample handling, test performance, test organism response, or statistical analysis.

The sample tested was nontoxic to this test organism.

Test Reviewer			Signature	Date
Reviewer: Chris Dudenhoeffer, WET Coordinator				
Phone: 360-407-6445				
Email: cdud461@ecy.wa.gov				

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Development Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9513	0.9240	0.9787	0.9319	0.9719	0.0086	0.0172	1.81%	0.00%
0	SC	4	0.9780	0.9753	0.9806	0.9764	0.9803	0.0008	0.0017	0.17%	-2.80%
3.4		4	0.9643	0.9195	1.0090	0.9265	0.9889	0.0141	0.0282	2.92%	-1.37%
11		4	0.9505	0.9236	0.9775	0.9358	0.9704	0.0085	0.0169	1.78%	0.08%
25		4	0.9636	0.9397	0.9875	0.9522	0.9838	0.0075	0.0150	1.56%	-1.29%
50		4	0.9656	0.9458	0.9853	0.9510	0.9799	0.0062	0.0124	1.28%	-1.49%
100		4	0.9666	0.9594	0.9738	0.9614	0.9724	0.0023	0.0045	0.47%	-1.60%

Survival Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9850	0.9512	1.0190	0.9550	1.0000	0.0106	0.0212	2.15%	0.00%
0	SC	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-1.52%
3.4		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	1.02%
11		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-1.52%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-1.52%
50		4	0.9988	0.9948	1.0030	0.9950	1.0000	0.0013	0.0025	0.25%	-1.40%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-1.52%

Development Detail

MD5: 8841B6B951865FDC3F7336D5FFD29B65

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9319	0.9442	0.9573	0.9719
0	SC	0.9803	0.9772	0.9780	0.9764
3.4		0.9596	0.9823	0.9265	0.9889
11		0.9358	0.9704	0.9372	0.9587
25		0.9522	0.9522	0.9838	0.9664
50		0.9510	0.9703	0.9610	0.9799
100		0.9724	0.9614	0.9657	0.9670

Survival Detail

MD5: B019AEE7C12D810532116975016F29C8

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9550	0.9850	1.0000	1.0000
0	SC	1.0000	1.0000	1.0000	1.0000
3.4		1.0000	1.0000	1.0000	0.9000
11		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9950
100		1.0000	1.0000	1.0000	1.0000

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Development Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	178/191	186/197	202/211	242/249
0	SC	199/203	214/219	222/227	207/212
3.4		214/223	222/226	189/204	178/180
11		204/218	197/203	209/223	209/218
25		199/209	199/209	243/247	230/238
50		194/204	196/202	222/231	195/199
100		211/217	199/207	197/204	205/212

Survival Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	191/200	197/200	200/200	200/200
0	SC	200/200	200/200	200/200	200/200
3.4		200/200	200/200	200/200	180/200
11		200/200	200/200	200/200	200/200
25		200/200	200/200	200/200	200/200
50		200/200	200/200	200/200	199/200
100		200/200	200/200	200/200	200/200