

Denison Environmental Services

V25BSP

Project: March 5&6, 2012, Faro Mine Complex

Rainbow Trout Bioassay

96-h LC50 %v/v: >100%**Maxxam Analytics**

4606 Canada Way
Burnaby, BC
Canada V5G 1K5
tel: 604 734-7276
fax: 604 731-2386
web: <http://maxxam.ca>

Sample # : CW9208-01 / B219398 / 4337

Report # : 2-11-200-294-12-001

Sample Taken:	Mar. 6, 2012 2:10 PM	Sample pH:	7.2
Sample Collected By:	NG/BB/CF/KR/PK/RM/TP	Sample Dissolved Oxygen:	11.3 mg/L
Sample Received:	Mar. 7, 2012	Sample Temperature:	15.9 °C
Start Date/Time:	Mar. 8, 2012 4:30 PM	Sample Conductance:	1003 µmho/cm

Conc. (%v/v)	Cond. (µmho/cm)	Temp.		pH		D.O.		Percent Mortality				Number of Mortalities
		Initial (°C)	Final (°C)	Initial	Final	Initial (mg/L)	Final (mg/L)	24 hr	48 hr	72 hr	96 hr	
0	49	14.5	14.8	7.5	7.5	10.4	9.6	0	0	0	0	0
100	1005	15.6	14.7	7.6	8.0	10.3	9.8	0	0	0	0	0

Comments:

All fish appeared and behaved normally during the test. The cumulative fish culture mortality in previous 7 days was 0.11%. The acceptability criteria for fish culture mortality is <2%.

Test Conditions:

Organisms per Replicate:	10	Preaeration Time:	120 min.
Test Volume:	18 L	Rate of aeration:	6.5 ml/min/L
Loading Density:	0.36 g/L		

Test Organism: Rainbow Trout (*Oncorhynchus mykiss*)

Weight (Mean + SD):	0.64 ± 0.25 g	Length (Mean + SD):	4.2 ± 0.4 cm
Weight (Range):	0.36– 1.24 g	Length (Range):	3.6– 5.1 cm

Reference Toxicant: Zinc

Test was conducted on: 23/02/2012

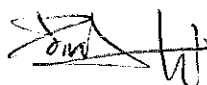
Test gave a 96-h LC50 of 0.19 (0.14, 0.25) mg/L

The historical mean LC50 and warning limits were 0.15 (0.05, 0.42) mg/L.

Dilution Water: Vancouver Tapwater hardened and dechlorinatedEDTA Hardness: 18 mg CaCO₃/L Other parameters available on request

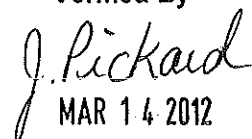
Test Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluent to Rainbow Trout, EPS 1/RM/13, Second Edition, December 2000 and May 2007 Amendments. Results contained in this report refer only to the testing of samples as submitted.

Analyst



2012 Mar 14

Verified By


MAR 14 2012

Denison Environmental Services

V2

Project: March 5&6, 2012, Faro Mine Complex

Rainbow Trout Bioassay

96-h LC50 %v/v: >100%**Maxxam Analytics**

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Sample #: CW9209-01 / B219398 / 4337

Report #: 2-11-200-294-12-002

Sample Taken:	Mar. 6, 2012 10:00 AM	Sample pH:	7.9
Sample Collected By:	NG/BB/CF/KR/PK/RM/TP	Sample Dissolved Oxygen:	11.6 mg/L
Sample Received:	Mar. 7, 2012	Sample Temperature:	14.8 °C
Start Date/Time:	Mar. 8, 2012 4:30 PM	Sample Conductance:	1910 µmho/cm

Conc. (%v/v)	Cond. (µmho/cm)	Temp.		pH		D.O.		Percent Mortality				Number of Mortalities
		Initial (°C)	Final (°C)	Initial	Final	Initial (mg/L)	Final (mg/L)	24 hr	48 hr	72 hr	96 hr	
0	49	14.5	14.8	7.5	7.6	10.4	9.6	0	0	0	0	0
100	1917	14.8	14.6	7.9	8.4	10.9	9.7	0	0	0	0	0

Comments:

All fish appeared and behaved normally during the test. The cumulative fish culture mortality in previous 7 days was 0.11%. The acceptability criteria for fish culture mortality is <2%.

Test Conditions:

Organisms per Replicate:	10	Preaeration Time:	120 min.
Test Volume:	18 L	Rate of aeration:	6.5 ml/min/L
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Test Organism: Rainbow Trout (*Oncorhynchus mykiss*)

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Weight (Range):	0.36– 1.24 g	Length (Range):	3.6– 5.1 cm

Reference Toxicant: Zinc

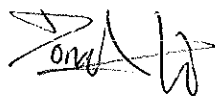
Test was conducted on: 23/02/2012
Test gave a 96-h LC50 of 0.19 (0.14, 0.25) mg/L
The historical mean LC50 and warning limits were 0.15 (0.05, 0.42) mg/L.

Dilution Water: Vancouver Tapwater hardened and dechlorinated

EDTA Hardness: 18 mg CaCO₃/L Other parameters available on request

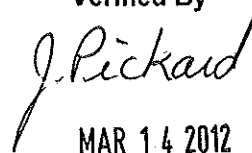
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