



26 October 2008

Via E-Mail

Chief Administrative Officer
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0

Attention: Ms. Phyllis Beaulieu

Dear Ms. Beaulieu,

**Reference: Tahera Diamond Corporation Jericho Diamond Mine Monthly SNP
Report for September 2008**

Tahera Diamond Corporation (Tahera) is pleased to provide Nunavut Water Board (NWB) with the Jericho Diamond Mine (Jericho) monthly report for September 2008 as required under Water License 2AM-JER0410

SNP Sampling

During the month of September 2008 samples were collected as required for the SNP sampling program. A summary of the sampling is provided in Table 1.

Table 1: SNP Water Sampling Summary

SNP Station	Sampling Date	Lab #	Comment
Various	4-Sep-08	280577	Taiga
Various	18-Sep-08	280618	Taiga
Various	11-Sep-08	L681576	ALS
Various	18-Sep-08	L684725	ALS
Various	04-Sep-08	L678497	ALS
WQ2	9-Sep-08	08-1571-01-TRS	HydroQual
Lake C3	18-Sep-08	08-1628-01-TRS	HydroQual

All Samples were collected as per requirements under Water License 2AM-JER0410.

Note:

The diamond plant did not operate in September; however, there was discharge of supernatant water from the PKCA. PKCA Discharge was suspended due to freeze up Thursday September 18th, 2008.

Results

Water Sampling and Analysis Results

Table 2 provides the results for samples related to the SNP sampling requirements for the month of September 2008.

Toxicity Tests

Toxicity tests for September are attached to this report

Flow and Volume Measurements

Table 3 provides a breakdown of flow and volume measurements and solid material moved as required under Part K, Item 12 and 13 of the water license.

Should you have any questions regarding the monthly report for September 2008 please contact the undersigned.

Yours truly,



Andrew Coster
Environmental Tech
Tahera Diamond Corporation
Tel. (780) 644-9129
Fax (780) 644-9181
E-mail acoster@tahera.com

c. G. Missal, M. Johnson, B. Ott, L. Staples

RESULTS OF ANALYSIS

Sample ID	Detection Limit	JER-WQ1	JER-WQ3	(DUPLICATE)	JER-WQ7	JER-WQ8	JER-WQ9	JER-WQ12	JER-WQ13	JER-WQ14	JER-SW1	JER-SW4	FIELD BLANK	TRAVEL BLANK	JER-WQ2	JER-WQ2	JER-WQ2	JER-WQ4	JER-WQ5	JER-WQ6	JER-WQ10	JER-WQ11	JER-WQ21
Date Sampled		18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	18-SEP-08	04-SEP-08	11-SEP-08	11-SEP-08	11-SEP-08	11-SEP-08	11-SEP-08	11-SEP-08	11-SEP-08
Time Sampled		00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00	00:00
ALS Sample ID		L684725-1	L684725-3	L684725-4	L684725-5	L684725-6	L684725-7	L684725-8	L684725-9	L684725-10	L684725-11	L684725-12	L684725-13	L684725-14	L684725-2	L678497-2	L681576-1	L681576-2	L681576-3	L681576-4	L681576-5	L681576-6	L681576-7
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Physical Tests																							
Colour, True	5	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity	2	17.3	229	17.5	16.0	16.4	15.7	212	136	20.7	638	244	-	-	258	234	235	16.2	16.1	16.8	13.4	13.7	13.9
Hardness (as CaCO3)	0.5	6.58	65.9	6.18	5.98	6.17	5.87	65.8	39.5	7.81	40.1	75.9	-	-	75.6	67.2	67.8	5.43	5.47	5.68	4.61	4.96	4.99
pH	0.01	6.95	7.83	6.85	6.86	6.84	6.82	7.48	7.74	6.95	6.71	7.82	-	-	7.90	7.82	7.85	6.83	6.89	6.92	6.84	6.87	6.81
Total Suspended Solids	3	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	38.3	<3.0	-	-	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Total Dissolved Solids	10	12	128	21	23	20	21	155	106	24	374	148	-	-	143	156	146	17	16	17	13	14	18
Turbidity	0.1	0.50	0.20	0.67	0.56	0.55	0.55	0.42	1.05	0.95	24.3	25.0	-	-	1.14	1.02	0.74	0.71	0.70	0.63	0.80	0.57	0.70
Anions and Nutrients																							
Acidity (as CaCO3)	1	-	4.4	2.5	2.8	2.8	2.8	4.8	4.2	3.6	22.4	5.9	-	-	4.1	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Bicarbonate (as CaCO3)	1	-	33.5	5.7	5.8	5.7	4.9	14.1	15.3	7.8	42.1	42.5	-	-	42.9	38.1	39.7	4.7	4.6	5.0	4.2	4.7	4.1
Alkalinity, Carbonate (as CaCO3)	1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	1	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	1	4.3	33.5	5.7	5.8	5.7	4.9	14.1	15.3	7.8	42.1	42.5	-	-	42.9	38.1	39.7	4.7	4.6	5.0	4.2	4.7	4.1
Ammonia as N	0.005	-	<0.0050	0.0103	<0.0050	<0.0050	<0.0050	0.332	0.186	0.0135	11.5	0.133	-	-	0.0983	0.272	0.101	<0.0050	<0.0050	0.0060	0.0055	0.0060	<0.0050
Chloride (Cl)	0.5	<0.50	11.1	<0.50	<0.50	<0.50	<0.50	8.10	5.72	<0.50	39.0	11.8	-	-	11.7	11.7	11.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride (F)	0.02	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	0.005	0.209	8.90	0.209	0.128	0.0921	0.0913	14.3	7.15	0.0107	29.4	9.38	-	-	9.85	9.55	9.43	0.0964	0.0753	0.121	<0.0050	<0.0050	0.0062
Nitrite (as N)	0.001	0.0021	0.0012	0.0023	0.0010	0.0010	<0.0010	0.145	0.0694	<0.0010	0.051	0.0351	-	-	0.0250	0.0528	0.0461	<0.0010	<0.0010	0.0022	<0.0010	<0.0010	<0.0010
Ortho Phosphate as P	0.001	-	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	0.0018	6.10	<0.0010	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Dissolved Phosphate As P	0.002	-	0.0021	0.0027	<0.0020	<0.0020	<0.0020	0.0038	0.0029	0.0028	6.00	0.0029	-	-	0.0030	0.0039	0.0039	0.0030	<0.0020	0.0020	<0.0020	<0.0020	0.0021
Total Phosphate as P	0.002	-	0.0032	0.0037	0.0034	0.0038	0.0039	0.0039	0.0050	0.0059	6.92	0.0079	-	-	0.0064	0.0074	0.0059	0.0044	0.0043	0.0039	0.0044	0.0058	0.0042
Sulfate (SO4)	0.5	1.02	17.9	1.02	0.96	0.99	0.97	8.81	6.89	0.67	52.9	19.6	-	-	19.1	17.9	19.0	1.28	1.25	1.17	1.11	0.84	0.80
Organic / Inorganic Carbon																							
Total Inorganic Carbon	0.5	-	7.33	0.72	0.68	0.80	0.71	2.62	2.73	1.02	6.33	9.33	-	-	9.00	8.23	8.40	0.65	0.70	0.76	0.54	0.67	0.55
Total Organic Carbon	0.5	3.62	3.30	3.45	3.42	3.49	3.40	6.03	6.97	6.97	33.5	4.09	-	-	3.94		3.39	3.35	3.35	3.07	3.68	2.89	4.43
Total Metals																							
Aluminum (Al)-Total	0.001	0.022	0.0070	0.0214	0.0239	0.0194	0.0190	0.0370	0.0568	0.0728	0.0552	0.0207	-	-	0.0182	0.0443	0.0247	0.0440	0.0468	0.0280	0.0479	0.0270	0.0678
Antimony (Sb)-Total	0.0001	<0.00050	0.00021	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00313	0.00030	-	-	0.00030	0.00030	0.00032	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total	0.0001	0.00017	0.00017	0.00016	0.00017	0.00016	0.00016	0.00017	0.00018	0.00015	0.00089	0.00041	-	-	0.00035	0.00044	0.00039	0.00019	0.00023	0.00017	0.00020	0.00015	0.00013
Barium (Ba)-Total	0.00005	<0.020	0.0224	0.00192	0.00194	0.00188	0.00170	0.0179	0.0101	0.00184	0.00779	0.0437	-	-	0.0408	0.0393	0.0408	0.00177	0.00175	0.00181	0.00173	0.00118	0.00147
Beryllium (Be)-Total	0.0005	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total	0.0005	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron (B)-Total	0.01	<0.10	0.024	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.103	0.034	-	-	0.030	0.031	0.027	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	0.00005	<0.00020	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000247	<0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Total	0.05	1.33	13.0	1.26	1.19	1.24	1.17	13.8	8.33	2.03	10.2	18.1	-	-	16.3	15.1	15.5	1.20	1.22	1.24	1.04	1.18	1.11
Chromium (Cr)-Total	0.0005	<0.0020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00105	<0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	0.0001	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00022	0.00016	<0.00010	0.00083	0.00015	-	-	0.00013	0.00015	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total	0.0001	0.0013	0.00110	0.00110	0.00097	0.00094	0.00088	0.00281	0.00323	0.00194	0.166	0.00187	-	-	0.00194	0.00194	0.00169						

Table 3: Flow and Volume Measurements-Part K Item 12 and 13

Date	Flow Meter Reading (L)	Carat Lake Freshwater Use Daily Volume (m3)b	Carat Lake Freshwater Use (Construction Requirements)-Daily Calculated	Treated Sewage Effluent to PKCA (Long Lake)-Daily Discharge (L)	Treated Sewage to Sludge Pit (USG)	Pit Pond Water to Long Lake- Daily	East Sump Pond to PKCA (Long Lake)	Other Waters to PKCA (Long Lake)	Water Discharged from PKCA (L)	PKCA Water Recycled	Process Plant Freshwater	Process Plant Water Discharged to PKCA	Coarse Rejects (tonnes)	Fine Rejects to PKCA (tonnes)	Ore Processed (tonnes)	Quantity of Waste Rock (tonnes)	Quantity of Esker (tonnes)	Quantity of Till (tonnes)
1-Sep-08	0	17.9	0.0	0	0.0	0.0	0.0	Monthly	176,517,226	Monthly	0.0	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly
2-Sep-08	13880	7.6	0.0	4150	0.0	0.0	0.0		184,386,688		0.0							
3-Sep-08	14295	0	0.0	6040	0.0	0.0	0.0		191,318,428		0.0							
4-Sep-08	14899	0	0.0	5440	0.0	0.0	0.0		197,848,589		0.0							
5-Sep-08	15443	12.1	0.0	4090	0.0	0.0	0.0		203,317,555		0.0							
6-Sep-08	15852	0	0.0	3630	0.0	0.0	0.0		208,942,453		0.0							
7-Sep-08	16215	0	0.0	4280	0.0	0.0	0.0		215,445,938		0.0							
8-Sep-08	16643	0	0.0	3500	0.0	0.0	0.0		221,357,521		0.0							
9-Sep-08	16993	16.1	0.0	2980	0.0	0.0	0.0		227,282,338		0.0							
10-Sep-08	17291	0	0.0	4660	0.0	0.0	0.0		233,037,247		0.0							
11-Sep-08	17757	0	0.0	4190	0.0	0.0	0.0		237,987,180		0.0							
12-Sep-08	18176	0	0.0	4630	0.0	0.0	0.0		243,383,901		0.0							
13-Sep-08	18639	0	0.0	5170	0.0	0.0	0.0		249,016,791		0.0							
14-Sep-08	19156	0.0	0.0	4040	0.0	0.0	0.0		254,416,738		0.0							
15-Sep-08	19560	13.7	0.0	5700	0.0	0.0	0.0		259,809,719		0.0							
16-Sep-08	20130	0.0	0.0	5430	0.0	0.0	0.0		265,478,449		0.0							
17-Sep-08	20673	5.5	0.0	6960	0.0	0.0	0.0		270,867,778		0.0							
18-Sep-08	21369	19.2	0.0	2370	1500.0	0.0	49047.0		276,480,438		0.0							
19-Sep-08	21606	0.0	0.0	60	0.0	0.0	80053.0		-		0.0							
20-Sep-08	21612	0.0	0.0	2740	0.0	0.0	83990.0		-		0.0							
21-Sep-08	21886	0.0	0.0	3280	0.0	0.0	79570.0		-		0.0							
22-Sep-08	22214	16.3	0.0	5270	0.0	0.0	65645.0		-		0.0							
23-Sep-08	22741	0.0	0.0	6350	0.0	0.0	0.0		-		0.0							
24-Sep-08	23376	0.0	0.0	3000	0.0	0.0	0.0		-		0.0							
25-Sep-08	23676	13.3	0.0	3220	0.0	0.0	0.0		-		0.0							
26-Sep-08	23998	13.8	0.0	5340	0.0	0.0	0.0		-		0.0							
27-Sep-08	24532	0.0	0.0	5430	0.0	0.0	0.0		-		0.0							
28-Sep-08	25075	7.5	0.0	3510	0.0	0.0	0.0		-		0.0							
29-Sep-08	25426	0.0	0.0	4240	0.0	0.0	0.0		-		0.0							
30-Sep-08	25850	0.0	0.0	4960	0.0	0.0	0.0		-		0.0							
Totals in Cubic meters		143.0	0.0	124.66	1.5	0.0	358.3	567.81	276,480.44		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: "Other Waters to PKCA" was collected from flooding in containment areas

Result Summary

Client: TAH102
Reference: 08-1571-01-TRS

Client: Tahera Diamond Corporation; operation Jericho

Sample: W. Cell

Collection: collected on 2008/09/11 at 0800 by Andrew

Receipt: received on 2008/09/12 at 1400 by N. Turner

Containers: received 1 x 20L pail at 11 °C, in good condition with no seals and no initials

Description: type: water, collection method: grab

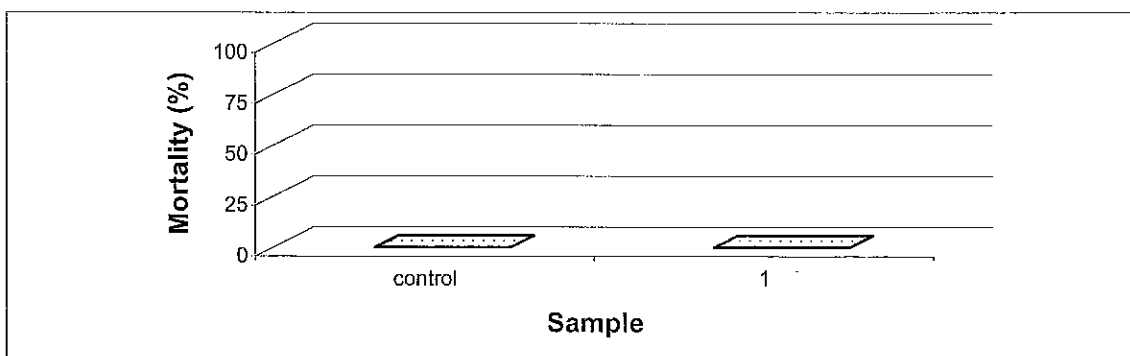
Test: started on 2008/09/15 ; ended on 2008/09/19

Result:

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Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	W. Cell	0	not toxic as tested




 Authorized by S. Krishnappa, B.Sc., Coordinator
 The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 08-1571-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 2000. Environment Canada, EPS 1/RM/13. Second Edition.

Test type: Trout 96-h Static Acute Test (HQ 4.4.4.1)

Species: *Oncorhynchus mykiss*

Organism source: Sun Valley Trout Farms (Batch 20080806TR)

Acclimation: 40 days (must be ≥ 2 weeks)

Stock mortality: 0.29% (seven days preceeding testing)

Sample initial chemistry: pH: 7.7; EC: 247 ($\mu\text{S}/\text{cm}$); DO: 8.4 (mg/L); temperature: 11 °C
hardness (mg CaCO_3/L): 70; colour: Colourless; odour: Odourless

Sample holding time: 4 days (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The test was conducted in 22 L plastic pails with polyethylene liners

Test volume: 18 Litres (depth of solution in each test vessel $\geq 15\text{cm}$)

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.5 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.326 g/Litre (must be ≤ 0.5 g/Litre)

Control water: Dechlorinated City of Calgary water acclimated to test conditions

Test concentrations: Undiluted sample plus a negative control

Test replicates: One replicate per treatment; 10 fish per replicate

Feeding: Fish are not fed 24 hours before test initiation and no feeding during test

Measurements: pH, conductivity, dissolved oxygen and temperature measured daily

Aeration: All treatments aerated at 6.5 ± 1 mL/min/L by oil-free compressed air
passed through airline tubes connected to disposable air stones

Lighting: Overhead full spectrum fluorescent lights; 100-500 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $15 \pm 1^\circ\text{C}$

Endpoint: Mortality, % mortality at 96-h

Test validity: The control had 100% survival (must $\geq 90\%$)

Reference toxicant: 96-h test with Phenol ($\text{C}_6\text{H}_5\text{OH}$) initiated August 25, 2008; current results
(96-h LC50 and 95% confidence limits) = 0.78 (0.70-0.86) log (mg/L Phenol)

Note: Outlined sections are protocol deviations explained on the comment page; v/v, volume per volume

Test Data

Client: TAH102 Reference: 08-1571-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2008/09/15	0	1100	N. Turner/D. Lalonde	test fish loaded at 1100 h
2008/09/16	1	0830	N. Turner/E. Vinish	all test fish appear normal
2008/09/17	2	0900	N. Turner/E. Vinish	all test fish appear normal
2008/09/18	3	0830	N. Turner/E. Vinish	all test fish appear normal
2008/09/19	4	1015	N. Turner/D. Lalonde	all test fish appear normal

Chemistry:

Sample	control	1						
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Day

pH (units)

0	8.3	8.2						
1	8.2	8.0						
2	8.0	7.8						
3	7.5	7.5						
4	7.8	7.8						

Conductivity (µS/cm)

0	388	267						
1	381	262						
2	295	202						
3	298	204						
4	296	205						

Dissolved Oxygen (mg/L)

0	8.5	8.5						
1	9.4	9.5						
2	8.3	8.3						
3	8.5	8.6						
4	8.7	8.7						

Temperature (°C)

0	16	16						
1	15	15						
2	15	15						
3	15	15						
4	15	14						

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Data

Client: TAH102
Reference: 08-1571-01-TRS

Number Alive:

Sample	control	1						
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Day

0	10	10						
1	10	10						
2	10	10						
3	10	10						
4	10	10						

Mortality (%)

4	0	0						
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Biology Summary Tables:

Control Fish	Length (cm)	Wet Weight(g)
1	3.7	0.5
2	4.1	0.5
3	3.9	0.5
4	4.3	0.8
5	4.5	0.8
6	4.4	0.8
7	4.0	0.5
8	3.6	0.4
9	4.2	0.7
10	3.7	0.4

Sample	Group Wet Weight (g)
control	5.9
1	5.2

average	4.0	0.6
sd	0.3	0.2
cv(%)	7.8	28.8

Notes: nd, not done; na, not applicable;
 sd, standard deviation; cv(%), coefficient
 of variation

Comments/Statistics

Client: TAH102 Reference: 08-1571-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Test Method: Trout 96h Static Acute Test. (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.4.1

Reference: Biological Test Method: Reference Method for Determining Acute Lethality of
 Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13.
 including May 1996 and December 2000 amendments.

Test Organism:

test species: *Oncorhynchus mykiss*
 culture source: Sun Valley
 temperature (°C): 15 ± 1
 dissolved oxygen: saturated
 stock mortality (last 7d): 0.24%
 batch number: 20080806TR

Test Design:

vol. of test vessel (L): 22
 test volume depth: >15 cm
 replicates per treatment: 1
 fingerlings per replicate: 10
 loading (g fish/L): <0.5
 temperature (°C): 15 ± 1
 photoperiod: 16h light: 8h dark
 light level (water surface): 100-500 lux
 control/dilution water: dechlorinated tap water

Current Test

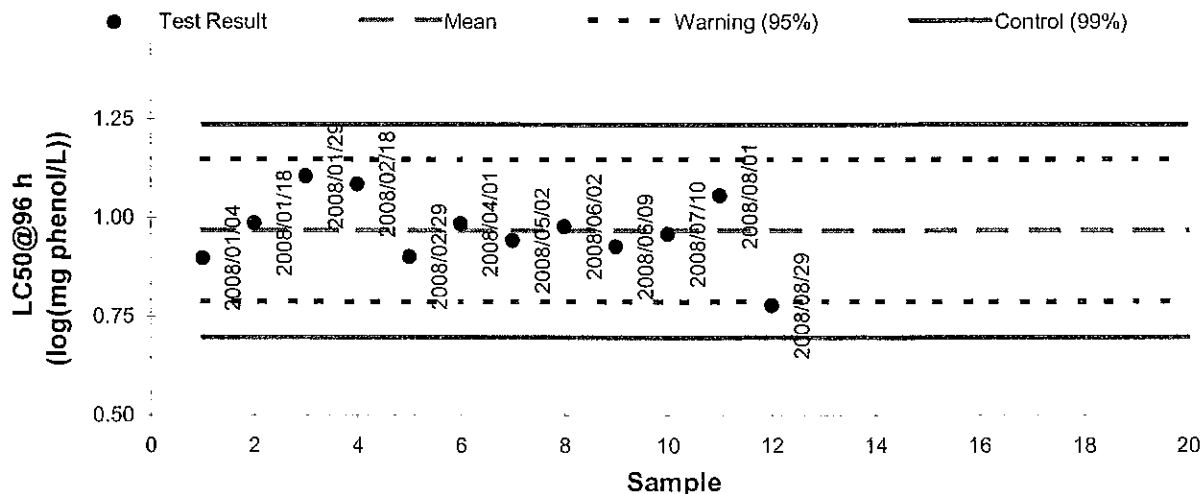
toxicant phenol (C₆H₅OH)
 started on 2008/08/25 ended on 2008/08/29
 Result (LC50 @ 96h) 0.78 log (mg phenol/L); geometric mean
 Confidence Limits (95%) lower 0.70 upper 0.86

Historical Values

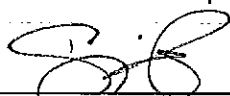
	mean	sd	cv(%)
	0.97	0.09	9
	lower	upper	
warning limits (±2 sd)	0.79	1.15	(95% confidence limits)
control limits (±3 sd)	0.70	1.24	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance

The result of the reference toxicant test initiated on 2008/08/25 was outside the warning limit. This is expected to happen
 5% of the time. An investigation occurred and all testing and culturing procedures were followed appropriately.



Quality Assurance Unit:



Authorized by S. Krishnappa, B.Sc., Quality Assurance Coordinator
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested on the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results in part or in whole.

Result Summary

Client: TAH102
 Reference: 08-1571-01-DAS

Client: Tahera Diamond Corporation; operation Jericho

Sample: W. Cell

Collection: collected on 2008/09/11 at 0800 by Andrew

Receipt: received on 2008/09/12 at 1400 by N. Turner

Containers: received 1 x 20L pail at 11 °C, in good condition
with no seals and no initials

Description: type: water, collection method: grab

Test: started on 2008/09/12 ; ended on 2008/09/14

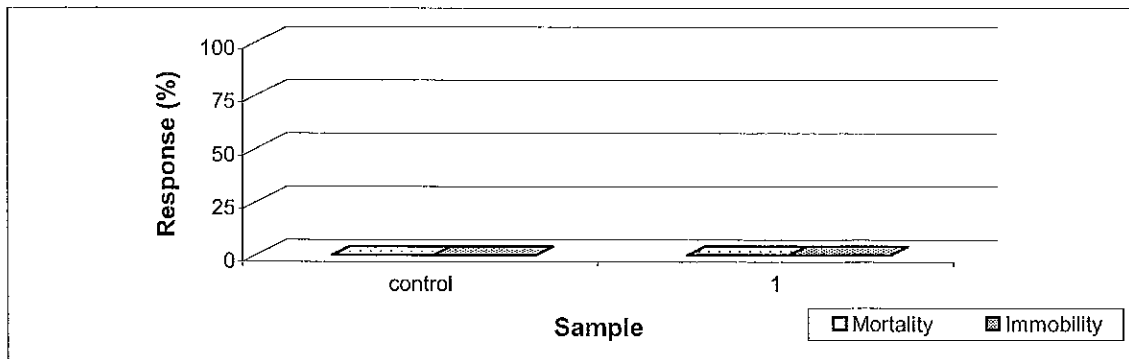
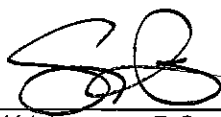
Contents

Result Summary.....	1
Test Conditions.....	2
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QA/QC.....	6

Result:

Sample	Client Code	Average Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	W. Cell	0	0	not toxic as tested

Notes: sd, sample standard deviation; cv, coefficient of variation; nd, not done; na, not applicable;

Authorized by S. Krishnappa, B.Sc., Quality Coordinator
The test data and results are verified correct.

Test Conditions

Client: TAH102 Reference: 08-1571-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 2000. Environ. Can., EPS 1/RM/14. Second Edition.

Test type: *Daphnia* 48-h Static Acute Test (HQ 4.4.3.1)

Species: *Daphnia magna*

Age: < 24 hours old

Organism source: in-house culture

Stock mortality: 0%

Culture brood data: 9 days to first brood
17 neonates per average brood

Sample initial chemistry: pH: 7.7; EC: 247 ($\mu\text{S}/\text{cm}$); DO: 8.4 (mg/L); temperature: 11 °C
hardness ($\text{mg CaCO}_3/\text{L}$): 70; colour: Colourless; odour: Odourless

Sample holding time: 1 day (must be ≤ 5 days)

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: 385 mL plastic vessels

Test volume: 150 mL

Sample pre-treatment: The sample was not filtered or pH adjusted prior to or during testing
The sample was pre-aerated for 0 minutes (rate of $37.5 \pm 12.5 \text{ mL}/\text{min.L}^{-1}$)
The hardness of the sample was not adjusted ($\text{mg CaCO}_3/\text{L}$) prior to or during testing

Loading density: One daphnid/15 mL (must ≤ 1 organism/15 mL)

Control water: Dechlorinated City of Calgary water acclimated to test conditions
The hardness of the control/dilution water was 130 $\text{mg CaCO}_3/\text{L}$

Test concentrations: Undiluted sample plus a negative control

Test replicates: Three replicates per treatment, 10 daphnids per replicate

Feeding: None

Aeration: None

Measurements: pH, conductivity, dissolved oxygen and temperature at test initiation and termination

Lighting: Overhead full spectrum fluorescent lights; 400-800 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $20 \pm 2^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Test Conditions

Client: TAH102 Reference: 08-1571-01-DAS

Endpoint: Mortality, % mortality at 48-h
Immobility, % immobility at 48-h

Test validity: The control had 100% survival (must $\geq 90\%$)
Control had 0% abnormal behaviour (must $< 10\%$), e.g. immobility

Reference toxicant: 48-h test with NaCl initiated September 8, 2008; current results
(48-h LC50 and 95% confidence limits) = 0.76 (0.72-0.79) log (g/L NaCl)

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 08-1571-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2008/09/12	0	1430	E. Vinish/N. Turner	test <i>Daphnia</i> appear normal
2008/09/13	1	1130	T. Kloschinsky	test <i>Daphnia</i> appear normal
2008/09/14	2	1330	T. Kloschinsky	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	8.1	8.2	8.2	7.7	7.7	7.7
2	8.3	8.4	8.4	8.3	8.1	8.0

	Conductivity ($\mu\text{S}/\text{cm}$)					
0	373	379	381	261	256	252
2	382	382	382	263	263	259

	Dissolved Oxygen (mg/L)					
0	8.6	8.8	8.8	10.0	10.3	10.0
2	7.6	7.7	7.7	7.7	7.7	7.8

	Temperature ($^{\circ}\text{C}$)					
0	19	19	19	19	19	19
2	20	20	20	20	20	20

Biology:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	Number Alive and Behavior (behavior is in brackets)					
1	10	10	10	10	10	10
2	10	10	10	10	10	10

Notes: F, floating; I, immobile; B, stuck on bubble; D, caught in debris

	Mortality (%)					
2	0	0	0	0	0	0

	Immobility (%)					
2	0	0	0	0	0	0

Comments/Statistics

Client: TAH102 Reference: 08-1571-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Quality Assurance Information

Test Method: *Daphnia* Static Acute Test (LC50, five or more treatments plus a control)
 HydroQual Test Method Manual, section: 4.4.3.1

Reference: Biological Test Method: Reference Method for Determining the Acute Lethality of Effluents to *Daphnia magna*, 1990. Environment Canada, EPS 1/RM/14. including May 1996 and December 2000 amendments.

Test Organism:

test species: *Daphnia magna*
 culture source: in-house
 original culture source: Environment Canada
 days to first brood: 9
 mean brood size: 17
 ephippia in stock culture: no
 age of test organisms: <24 hours old
 culture mortality (%): 7%

Test Design:

vol. of test vessel (mL): 500
 toxicant: sodium chloride
 test volume (mL): 150
 replicates per treatment: 1
 neonates per replicate: 10
 volume per neonate (mL): 15
 samples pre-aerated: no
 hardness adjustment: no
 temperature (°C): 20
 photoperiod: 16h light:8h dark
 light level (water surface): 400-800 lux
 control/dilution water: dechlorinated tap water

Current Test

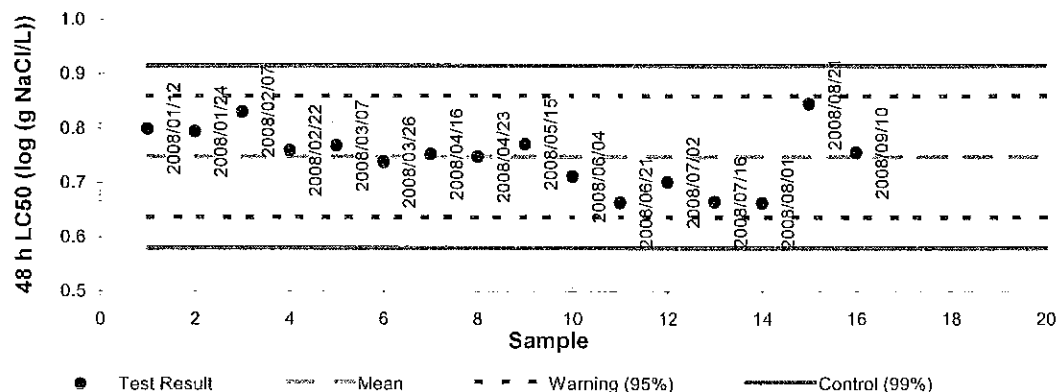
toxicant Sodium Chloride (NaCl)
 started on 2008/09/08 ended on 2008/09/10
 Result (LC50 @ 48h) 0.76 log (g NaCl/L); geometric mean
 Confidence Limits (95%) lower 0.72 upper 0.79

Historical Values

	mean	sd	cv(%)
	0.75	0.06	7
warning limits (± 2 sd)	0.64	0.86	(95% confidence limits)
control limits (± 3 sd)	0.58	0.92	(99% confidence limits)

notes: sd, standard deviation; cv, coefficient of variance

Comments: None.



Quality Assurance Unit:

Authorized by S. Krishnappa, B.Sc., Quality Assurance Coordinator
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested on the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results in part or in whole.

HydroQual Laboratories Ltd., #4, 6125 12th Street SE, Calgary, Alberta, Canada T2H 2K1
 tel (403) 253-7121 fax (403) 252-9363 www.hydroqual.ca

DA Ref. Tox.v 3.0

Result Summary

Client: TAH102
 Reference: 08-1628--CDD

Client: Tahera Diamond Corporation; operation Jericho

Sample: Lake C-3

Collection: collected on 2008/09/18 at not given by not given

Receipt: received on 2008/09/19 at 0945 by L. Henson

Containers: received 1 x 20L pail at 19 °C, in good condition with no seals and no initials

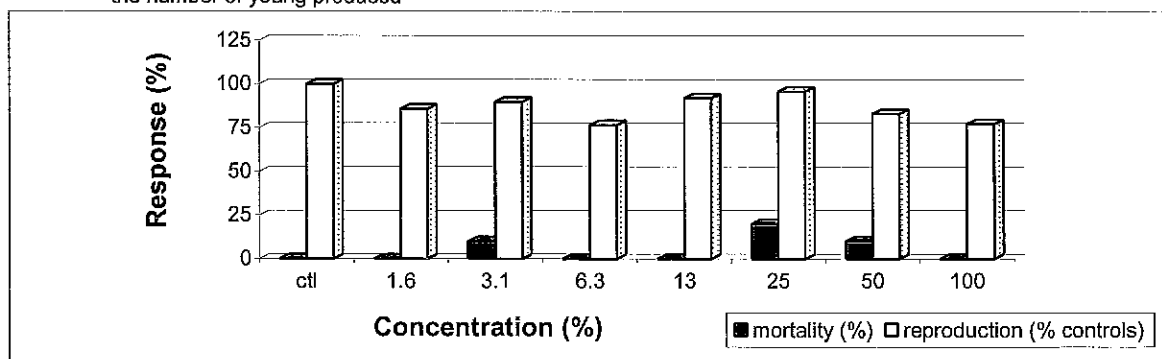
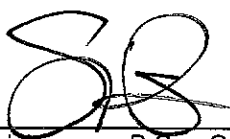
Description: type: water, collection method: not given

Test: started on 2008/09/20 ; ended on 2008/09/26

Result:

	Endpoint (6-day)	Value	Confidence Limits (95%) lower upper	Units	Method Calculated
Acute: (survival)	LC25	>100		%	could not be calculated
	LC50	>100		%	could not be calculated
Chronic: (fecundity)	IC25	>100		%	could not be calculated
	IC50	>100		%	could not be calculated

Notes: LCx & ICx, concentrations lethal or inhibitory to 'x' percent of the test population; fecundity, reproduction as the number of young produced

Authorized by S. Krishnappa, B.Sc., Quality Coordinator
 The test data and results are verified correct.

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Conditions

Client: TAH102 Reference: 08-1628--CDD

Method: Biological Test method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*, 2007. Environment Canada, EPS 1/RM/21.

Test type: *Ceriodaphnia* 6-day Survival and Reproduction Static Renewal Test (HQ 4.4.3.2)

Species: *Ceriodaphnia dubia*

Age: <24 hours old; all from same brood source within 12 hours of the same age.

Organism source: in-house cultures; cultures from a single brood organism to provide test organisms.

Culture health: Culture mortality was 8% (must be $\leq 20\%$).

7-d prior to test initiation: No ephippia were noted in the cultures at any time.

Average young produced per adult in the first three broods was 18 (must be ≥ 15)

Number of young produced by each brood organism in the last complete brood before use was 10 (must be ≥ 8).

Organism observations: No unusual behavior, appearance or treatment of test organisms was noted prior to or during the test. All first-generation mortality was recorded on the day it was observed.

Sample initial chemistry: pH: 7.9; EC: 25 ($\mu\text{S}/\text{cm}$); DO: 9.1 (mg/L); temperature: 15 °C
hardness (mg CaCO_3/L): 0; colour: colourless; odour: odourless

Sample holding time: 2 days (must be ≤ 3 days); The test was conducted with three subsamples, samples a, b, and c were for days 0 to 2, 3 to 5, and 6 to 8.

Sample storage: $4 \pm 2^\circ\text{C}$ in darkness

Test vessel: The tests were conducted in 30 mL plastic vessels (2 cm depth).

Test volume: 15 mL of solution (2 cm depth); replenished daily.

Control/dilution water: The control and dilution water was a mixture of moderately hard reconstituted water and Bow River Water (50:50). Chemicals added to dilution water:
0.96 g NaHCO_3 , 0.60 g CaSO_4 , 0.60 g MgSO_4 , 0.04 g KCl per 20L.

Test concentrations: 7 effluent concentrations (1.6, 3.1, 6.3, 13, 25, 50, 100% (v/v)
plus a negative control)

Test replicates: One neonate <24 hours old was loaded per test vessel;
10 replicates/concentration

Feeding: The test organisms were fed daily a mixture of fermented trout chow, yeast, alfalfa powder, and the green alga *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum* and *Raphidocelis subcapitata*).

Food expiration date: 2008/09/28

Measurements: pH, conductivity, dissolved oxygen and temperature were measured daily.

Sample pre-treatment: The sample was not aerated, filtered or pH adjusted prior or during testing.
The dissolved oxygen concentration (mg/L) was: 8.2
The sample pH was: 8.1

Lighting: Overhead full spectrum fluorescent lights; 100-600 lux at surface

Photoperiod: 16h light:8h dark

Test temperature: $25 \pm 1^\circ\text{C}$

Note: Outlined sections are protocol deviations explained on the comment page

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Conditions

Client: TAH102 Reference: 08-1628--CDD

Endpoints: Survival, 6-d LC50 (with 95% confidence limits)
Reproduction, 6-d IC25 (with 95% confidence limits)
Test endpoints were bracketed by at least 1 test concentration
(except for <0.1% or >100 %)
No outliers were observed within the data set.

Test completion: 60% of the control organisms had ≥ 3 broods on day 6 (must be $\geq 60\%$ within 8 days) Any neonates produced after third brood were not included in the mean young per adult calculation.

Test validity: The control had 100% survival (must $\geq 80\%$)
Number of young produced by each surviving control adult within the first three broods was 16 (must be ≥ 15).

Reference toxicant: 6-d test with NaCl initiated on September 9, 2008;
(must be within 14 days of test initiation)
current results: (6-d LC50 and 95% confidence limits) =
3.33 (3.23-3.43) log (mg/L NaCl)
current results: (6-d IC50 and 95% confidence limits) =
2.79 (2.66-2.90) log (mg/L NaCl)
The reference toxicant test was performed under the same conditions as those used during this test.

Note: Outlined sections are protocol deviations explained on the comment page

Test Data

Client: TAH102
Reference: 08-1628--CDD

Test Log:

Date	Day	Time	Technicians	Temperature (°C)	
				Control	Sample
2008/09/20	0	1310	E. Blais	25	25
2008/09/21	1	1015	E. Blais	25	25
2008/09/22	2	1240	T. Kloschinsky	25	25
2008/09/23	3	1200	L. Henson	25	25
2008/09/24	4	1150	E. Blais	25	25
2008/09/25	5	1115	L. Henson	25	25
2008/09/26	6	1210	L. Henson	na	na

Chemistry Summary Tables:

New Solutions

Conc. %	ctl	1.6	3.1	6.3	13	25	50	100
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Old Solutions

ctl	1.6	3.1	6.3	13	25	50	100
-----	-----	-----	-----	----	----	----	-----

Average Values

pH	7.9	8.0	8.0	8.0	7.9	8.0	8.0	8.1	7.9	8.0	8.1	8.1	8.1	8.1	8.1	8.2
cond.	318	313	306	297	286	251	186	39	330	340	336	317	305	269	199	45
DO	7.5	7.6	7.5	7.4	7.4	7.4	7.4	7.6	7.2	7.2	7.4	7.4	7.2	7.3	7.2	7.1
temp.	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25

Coefficients of Variation (%)

pH	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1
cond.	9	4	3	2	4	3	5	10	7	4	7	4	4	5	6	11
DO	10	8	7	7	8	7	7	7	7	6	8	11	8	7	7	7
temp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Test Data

Client: TAH102
Reference: 08-1628--CDD

Biology (number of young produced):

Day	1	2	3	4	5	6	7	8
-----	---	---	---	---	---	---	---	---

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Replicate

Control

1	0	0	0	0	7	3		
2	0	0	0	4	6	7		
3	0	0	0	6	6	8		
4	0	0	0	5	7	6		
5	0	0	0	4	7	9		
6	0	0	0	5	4	8		
7	0	0	0	0	7	7		
8	0	0	0	6	8	4		
9	0	0	0	4	0	7		
10	0	0	0	5	6	6		

13%

0	0	0	8	5	6		
0	0	3	6	4	-		
0	0	0	5	3	7		
0	0	4	0	0	9		
0	0	0	5	5	7		
0	0	0	0	4	8		
0	0	0	4	5	7		
0	0	0	5	6	4		
0	0	0	4	6	5		
0	0	0	3	5	6		

1.6%

1	0	0	0	4	6	5		
2	0	0	3	4	5	-		
3	0	0	4	0	4	7		
4	0	0	4	5	0	9		
5	0	0	0	3	4	0		
6	0	0	3	0	6	8		
7	0	0	4	4	5	-		
8	0	0	0	4	4	7		
9	0	0	0	4	3	4		
10	0	0	0	5	5	6		

25%

0	0	0	0	6	7		
0	0	0	0	4	0		
0	0	0	4	7	9		
0	0	x	x	x	x		
0	0	0	0	0	x		
0	0	0	5	5	7		
0	0	0	4	6	8		
0	0	0	5	4	9		
0	0	0	6	6	7		
0	0	0	6	5	4		

3.1%

1	0	0	0	4	5	6		
2	0	0	0	5	7	0		
3	0	0	0	6	5	7		
4	0	0	3	5	7	-		
5	0	0	0	4	0	5		
6	0	0	0	0	5	7		
7	0	0	0	6	7	6		
8	0	0	0	5	6	5		
9	0	0	0	x	x	x		
10	0	0	0	5	4	6		

50%

0	0	0	6	7	4		
0	0	0	5	6	0		
0	0	0	0	5	5		
0	0	0	4	4	6		
0	0	0	5	6	5		
0	0	0	0	3	6		
0	0	0	6	6	4		
0	0	x	x	x	x		
0	0	0	5	4	5		
0	0	0	4	5	5		

Notes: #, young produced; 0, no young; X, dead; bold #, number of young the test organism had the day it died;
 —, young produced after third brood

Test Data

 Client: TAH102
 Reference: 08-1628--CDD

Biology (number of young produced):

Day	1	2	3	4	5	6	7	8
-----	---	---	---	---	---	---	---	---

Replicate

6.3%

1	0	0	0	3	6	5		
2	0	0	0	5	7	4		
3	0	0	0	4	4	5		
4	0	0	0	4	5	0		
5	0	0	0	4	3	6		
6	0	0	0	0	6	7		
7	0	0	0	3	5	0		
8	0	0	0	5	6	4		
9	0	0	0	4	0	6		
10	0	0	0	4	4	5		

100%

0	0	0	3	3	6		
0	0	0	5	5	5		
0	0	0	0	4	7		
0	0	0	4	0	6		
0	0	0	4	4	0		
0	0	0	6	6	5		
0	0	0	0	3	5		
0	0	0	3	5	6		
0	0	0	4	4	7		
0	0	0	3	5	7		

Notes: #, young produced; 0, no young; X, dead; bold #, number of young the test organism had the day it died;
 —, young produced after third brood

Biology Summary Tables:

Conc. %	ctl	1.6	3.1	6.3	13	25	50	100
---------	-----	-----	-----	-----	----	----	----	-----

ctl	1.6	3.1	6.3	13	25	50	100
-----	-----	-----	-----	----	----	----	-----

Day

Number of Organism Alive

0	10	10	10	10	10	10	10	10
1	10	10	10	10	10	10	10	10
2	10	10	10	10	10	9	9	10
3	10	10	9	10	10	9	9	10
4	10	10	9	10	10	9	9	10
5	10	10	9	10	10	8	9	10
6	10	10	9	10	10	8	9	10
7								
8								

Day

Daily Young Production

0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	18	3	0	7	0	0	0
4	39	33	40	36	40	30	35	32
5	58	42	46	46	43	43	46	39
6	65	46	42	42	59	51	40	54
7								
8								

Percent Mortality (%)

mean	0	0	10	0	0	20	10	0
------	---	---	----	---	---	----	----	---

Total	162	139	131	124	149	124	121	125
-------	-----	-----	-----	-----	-----	-----	-----	-----

Replicate

Total Young Produced by Each Adult

1	10	15	15	14	19	13	17	12
2	17	12	12	16	13	4	11	15
3	20	15	18	13	15	20	10	11
4	18	18	15	9	13	0	14	10
5	20	7	9	13	17	0	16	8
6	17	17	12	13	12	17	9	17
7	14	13	19	8	16	18	16	8
8	18	15	16	15	15	18	0	14
9	11	11	0	10	15	19	14	15
10	17	16	15	13	14	15	14	15

Young Per Adult (within first three broods)

mean	16	14	15	12	15	16	13	13
sd	3.46	3.25	5.47	2.59	2.08	7.96	5.02	3.17
cv(%)	21.3	23.4	37.6	20.9	14	51.4	37.3	25.4

Young Production as a Percent of Controls

100	86	90	77	92	96	83	77
-----	----	----	----	----	----	----	----

Our liability is limited to the cost of the test requested. The test results only relate to the sample as received. No liability in whole or in part is assumed for the collection, handling or transport of the sample, application or interpretation of the test data or results.

Test Data

Client: TAH102
Reference: 08-1628--CDD

Chemistry:

New Solutions

Conc. %	ctl	1.6	3.1	6.3	13	25	50	100
---------	-----	-----	-----	-----	----	----	----	-----

Old Solutions

ctl	1.6	3.1	6.3	13	25	50	100
-----	-----	-----	-----	----	----	----	-----

Day

pH (units)

0	7.8	7.9	7.9	7.9	7.9	7.9	8.0	8.1
1	8.0	8.0	8.0	8.0	7.9	8.0	8.0	8.3
2	8.1	8.1	8.1	8.0	8.0	8.0	8.0	8.1
3	7.8	7.9	7.9	7.9	7.9	7.9	8.0	8.1
4	8.0	8.0	8.0	8.0	7.9	7.9	7.9	8.1
5	7.9	8.0	8.0	8.0	8.0	8.0	7.9	7.9
6								
7								
8								

pH (units)

7.9	8.0	8.0	8.0	8.0	8.0	8.1	8.2	
8.1	8.1	8.2	8.1	8.2	8.2	8.1	8.3	
7.9	8.1	8.1	8.1	8.0	8.2	8.1	8.3	
7.8	7.9	8.0	8.0	8.0	8.0	8.0	8.1	
8.0	8.1	8.1	8.1	8.1	8.1	8.1	8.3	
7.8	7.9	8.0	8.1	8.0	8.0	8.0	8.1	

Conductivity (µS/cm)

0	303	308	305	298	282	250	184	37
1	300	311	311	300	297	256	189	34
2	297	299	297	287	272	243	178	38
3	304	305	295	291	275	239	175	46
4	370	331	310	298	293	258	191	39
5	334	323	317	306	297	260	198	41
6								
7								
8								

Conductivity (µS/cm)

306	326	318	309	292	261	192	49	
320	339	322	306	299	263	191	38	
312	327	316	306	292	252	188	45	
333	341	333	319	310	267	193	43	
357	353	357	328	319	284	214	44	
354	354	370	335	320	284	215	53	

Dissolved Oxygen (mg/L)

0	8.3	8.1	8.0	8.0	8.0	8.0	8.0	8.2
1	7.9	7.9	7.9	7.8	7.7	7.7	7.7	7.9
2	6.5	6.8	6.9	6.8	6.7	6.8	6.8	7.3
3	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.7
4	6.8	6.9	6.8	6.7	6.7	6.7	6.7	6.7
5	8.0	8.0	7.9	7.7	7.7	7.7	7.8	8.0
6								
7								
8								

Dissolved Oxygen (mg/L)

7.7	7.5	7.6	7.2	7.2	7.2	7.1	6.9	
6.6	6.7	6.8	6.8	6.7	6.7	6.7	6.8	
7.0	7.1	8.1	8.8	8.2	8.1	8.0	8.0	
6.7	6.7	6.7	6.6	6.6	6.7	6.6	6.6	
7.2	7.5	7.3	7.3	7.3	7.5	7.4	7.3	
7.8	7.8	7.8	7.5	7.4	7.3	7.2	6.8	

Temperature (°C)

0	25	25	25	25	25	25	25	25
1	25	25	25	25	25	25	25	25
2	25	25	25	25	25	25	25	25
3	25	25	25	25	25	25	25	25
4	25	25	25	25	25	25	25	25
5	25	25	25	25	25	25	25	25
6								
7								
8								

Temperature (°C)

25	25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25	25
25	25	25	25	25	25	25	25	25

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Comments/Statistics

Client: TAH102 Reference: 08-1628--CDD

Test Result Comments:
None

Data Analysis:
Endpoints for mortality could not be calculated. No effect occurred.

Endpoints for reproduction could not be calculated. No effect occurred.

Protocol Deviations:
None

Quality Assurance Information

Culture history for adults used in the test for reference 08-1628:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	C6	C7	D9	D10	E8	A9	B7	B8			
7	number of young											
	number of adults											
6		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young											
	number of adults											
5		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young											
	number of adults											
4		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young	9	6	8	8	7	12	10	9			
	number of adults	1	1	1	1	1	2	2	2			
3		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young	6	0	4	9	6	8	9	10			
	number of adults	1	1	1	1	1	2	2	2			
2		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young	4	4	8	6	6	16	10	6			
	number of adults	1	1	1	1	1	2	2	1			
DAY USED		C6	C7	D9	D10	E8	A9	B7	B8			
2008/09/20	number of young	9	8	9	10	10	8	14	8			
	number of adults	1	1	1	1	1	1	1	1			
totals		C6	C7	D9	D10	E8	A9	B7	B8			
	number of young	19	18	20	23	19	18	15	16			

Number of young produced per organism in the last brood before use

10

Mean number of surviving young per adult over the first three broods

18

Culture mortality over the last seven days

8

Test Method: *Ceriodaphnia* Survival and Reproduction Test (6 treatments plus a control)

HydroQual Test Method Manual, section: 4.4.3.2

Reference: Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia*, 2007. Environment Canada, EPS 1/RM/21

Test Organism:

test species: *Ceriodaphnia dubia*
culture source: in-house
original culture source: Environment Canada
ephippia in stock culture: none
food type: YAT:Algae
frequency of feeding: daily
age of test organisms: <24 hours
culture mortality 7 days prior: 12
culture fecundity 7 days prior
within the first three broods: 22
young produced in previous brood: 10
culture condition prior to test initiation: normal
culture water: 50:50 water

Test Design:

test type: static renewal
toxicant: sodium chloride (NaCl)
test vessel: 30 mL plastic cup
test volume (mL): 15
replicates per treatment: 10
organisms per replicate: 1
feeding: daily
temperature (°C): 24-26
photoperiod: 16 hours light: 8 hours dark
light level (surface): 100-600 lux
hardness adjustment: no

*Note: there are 2 subcultures within this culture source, separated by one week in age. The test is set with organisms from one subculture. The number of young a culture has is monitored daily. If young are not used that day, they are discarded, therefore organisms in tests are <24h.

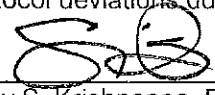
Control/Dilution Water:

source: equal volumes of Bow River water and moderately hard reconstituted water (50:50 water)
pH (units): 8.5
conductance (uS/cm): 384
dissolved oxygen (mg/L): 8.5
NH₄⁺ (mg/L): <0.1
hardness (mg CaCO₃/L): 130
alkalinity (mg CaCO₃/L): 90
total residual chlorine (mg/L): <0.01

Note: moderately hard reconstituted water prepared as per EPS 1/RM/21

Comments: There were no protocol deviations during the conduct of this test.

Quality Assurance Unit:


Authorized by S. Krishnappa, B.Sc., Quality Assurance Coordinator
The test data and results are verified correct.

Mortality

Current Test

toxicant Sodium chloride (NaCl)

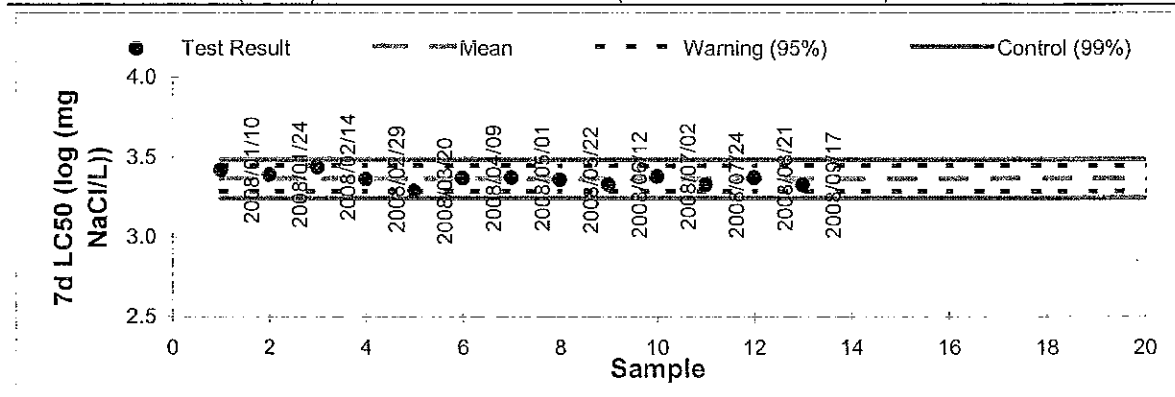
started on 2008/09/09 ended on 2008/09/15

Result (6d LC50): 3.33 log (mg NaCl/L); geometric mean

Confidence Limits (95%) lower 3.23 upper 3.43

Historical Values

mean	3.37	sd	0.04	cv(%):	1
	lower	upper			
warning limits (± 2 sd)	3.29	3.45	(95% confidence limits)		
control limits (± 3 sd)	3.25	3.49	(99% confidence limits)		



Reproduction

Current Test

toxicant Sodium chloride (NaCl)

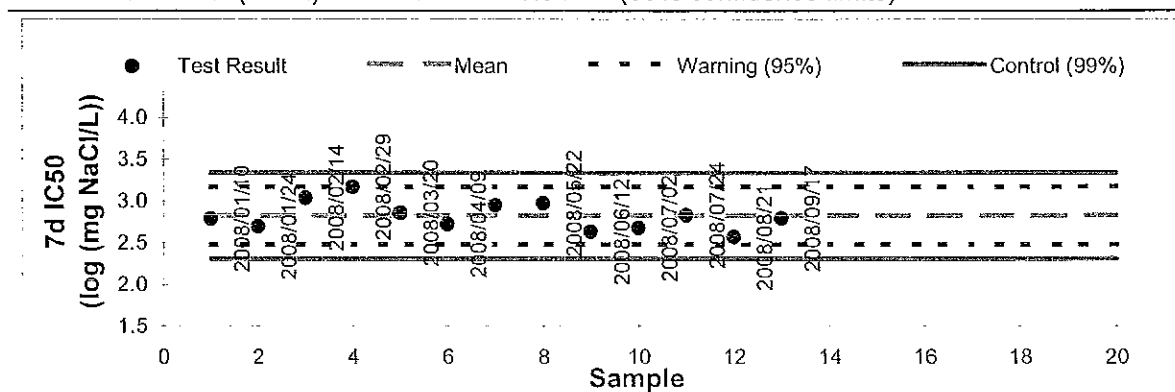
started on 2008/09/09 ended on 2008/09/15

Result (6d IC50): 2.79 log (mg NaCl/L); geometric mean

Confidence Limits (95%) lower 2.66 upper 2.90

Historical Values

mean	2.83	sd	0.17	cv(%):	6
	lower	upper			
warning limits (± 2 sd)	2.48	3.17	(95% confidence limits)		
control limits (± 3 sd)	2.31	3.34	(99% confidence limits)		



Notes: sd, standard deviation; cv, coefficient of variance; NA, could not be calculated

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Quality Assurance Information

Culture history for adults used in the test for reference QA192:

Number of young produced per brood adult:

Day Prior to Use	row/replicate	A7	A8	A9	B6	C7	D6	D7	E7	E10		
7	number of young											
	number of adults											
6		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young											
	number of adults											
5		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young											
	number of adults											
4		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young	9	7	8	8	9	9	8	12	5		
	number of adults	1	1	1	1	1	1	1	1	1		
3		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young	5	10	4	10	5	6	4	9	9		
	number of adults	1	1	1	1	1	1	1	1	1		
2		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young	4	8	9	8	4	10	11	4	4		
	number of adults	1	1	1	1	1	1	1	1	1		
DAY USED		A7	A8	A9	B6	C7	D6	D7	E7	E10		
2008/09/09	number of young	8	10	12	8	10	10	9	11	8		
	number of adults	1	1	1	1	1	1	1	1	1		
totals		A7	A8	A9	B6	C7	D6	D7	E7	E10		
	number of young	18	25	21	26	18	25	23	25	18		

Number of young produced per organism in the last brood before use 10

Mean number of surviving young per adult over the first three broods 22

Culture mortality over the last seven days 12



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280577

- FINAL REPORT -

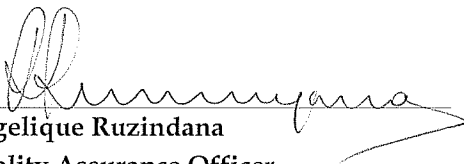
Prepared For: Tahera Diamond Corp

Address: Box 2341
Yellowknife, NT
X1A 2P7

Attn: Environment Department

Facsimile: (780) 644-9181

Final report has been reviewed and approved by:


Angelique Ruzindana
Quality Assurance Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association of Environmental Analytical Laboratories (CAEAL) as a testing laboratory for specific tests registered with CAEAL.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Wednesday, September 17, 2008

Print Date: Wednesday, September 17, 2008

Page 1 of 4



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280577

- CERTIFICATE OF ANALYSIS -

Client Sample ID: STP-OUT

Taiga Sample ID: 001

Client Project:
Sample Type: Water
Received Date: 05-Sep-08
Sampling Date: 04-Sep-08
Sampling Time: 14:00
Location: STP
Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	11	2	mg/L	05-Sep-08	SM5210:B	
<u>Microbiology</u>						
Coliforms, Fecal	10	10	CFU/100mL	05-Sep-08	SM9222:D	



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Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280577

- CERTIFICATE OF ANALYSIS -

Client Sample ID: Jer-WQ2

Taiga Sample ID: 002

Client Project:
Sample Type: Water
Received Date: 05-Sep-08
Sampling Date: 04-Sep-08
Sampling Time: 9:00
Location: STP
Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	< 2	2	mg/L	05-Sep-08	SM5210:B	
<u>Microbiology</u>						
Coliforms, Fecal			CFU/100mL		SM9222:D	105



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Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280577

- CERTIFICATE OF ANALYSIS -

Client Sample ID: Jer-WQ2

Taiga Sample ID: 002

- DATA QUALIFIERS -

Data Qualifier Descriptions:

105 *Samples received past hold time; analysis not possible.*

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280618

- FINAL REPORT -

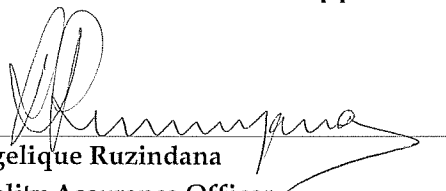
Prepared For: Tahera Diamond Corp

Address: Box 2341
Yellowknife, NT
X1A 2P7

Attn: Environment Department

Facsimile: (780) 644-9181

Final report has been reviewed and approved by:


Angelique Ruzindana
Quality Assurance Officer

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 - USEPA
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- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Friday, September 26, 2008

Print Date: Friday, September 26, 2008



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3
Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280618

- CERTIFICATE OF ANALYSIS -

Client Sample ID: Jer-SW1

Taiga Sample ID: 001

Client Project:

Sample Type: Sewage

Received Date: 18-Sep-08

Sampling Date: 18-Sep-08

Sampling Time: 8:00

Location: Sewage Treatment Plant

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	31	2	mg/L	18-Sep-08	SM5210:B	
<u>Microbiology</u>						
Coliforms, Fecal	5300	100	CFU/100mL	18-Sep-08	SM9222:D	

ReportDate: Friday, September 26, 2008

Print Date: Friday, September 26, 2008

Page 2 of 4



Taiga Environmental Laboratory
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Tel: (867)-669-2788 Fax: (867)-669-2718

Taiga Batch No.:
280618

- CERTIFICATE OF ANALYSIS -

Client Sample ID: Jer-WQ1

Taiga Sample ID: 002

Client Project:

Sample Type: Potable water

Received Date: 18-Sep-08

Sampling Date: 18-Sep-08

Sampling Time: 8:00

Location: Potable Water

Report Status: Final

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Inorganics - Nutrients</u>						
Biochemical Oxygen Demand	< 2	2	mg/L	18-Sep-08	SM5210:B	
<u>Microbiology</u>						
Coliforms, Fecal	< 1	1	CFU/100mL	18-Sep-08	SM9222:D	

ReportDate: Friday, September 26, 2008

Print Date: Friday, September 26, 2008

Page 3 of 4



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Taiga Batch No.:
280618

- CERTIFICATE OF ANALYSIS -

Client Sample ID: Jer-WQ1

Taiga Sample ID: 002

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EPA - United States Environmental Protection Agency