

December 19th, 2006

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

RE: Water License NWB1JER0410 Monthly SNP Report – November 2006

Following is the monthly report for November 2006 as required under Water Licence NWB1JER0410.

SNP Sampling

During the month of November 2006, 4 samples were collected as part of the SNP sampling program. A summary of the November 2006 sampling is provided in Table 1.

Acute Toxicity sampling was also conducted at JER-WQ2 as required under Part G 7, samples passed for both trout and daphnia. A copy of the laboratory report is included in Appendix A.

Table 1: SNP Water Sampling Summary

SNP Station	Sampling Date	Lab#	Comment
JER-SW1	11/13/2006	06-14365	No Field Measurements
JER-SW3	11/27/2006	L459864	
JER-SW4	11/27/2006	L459864-2	
JER-WQ2	11/06/2006	06-14152	

Results

A) Water Sampling and Analysis Results

1. Table 2 provides the results for samples related to the SNP sampling requirements for the month of November 2006.

B) Flow and Volume Measurements

1. 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.

C) Toxicology Results

Results of the Toxicology sampling required under Part G, 7 can be found in
Appendix A

Should you have any questions regarding the monthly report for November 2006 please
contact the undersigned at 780 644-9129 or environment@tahera.com.

Regards,


Mike Tanguay
Health, Safety and Environment Manager



Water Sampling and Analysis Results

Table 2: SNP water Quality Data November 2006

Stn.Code	JER-SW1		
Station Name	STP Effluent		
Sample Class	M		
Sample No.	06-14365		
Sample Comments			PKCA
Collect Date/Time		11/13/2006	Discharge
pH @ 25°C	pH	7.68	Criteria
Conductivity @ 25°C	us/cm	818	6.0-8.8
T-Dissolved Solids 180°C	mg/L	320	
Total Suspended Solids @105°C	mg/L	18	4000
Turbidity	NTU	17	25
T-Hardness as CaCO3	mg/L	31.9	
T-Alkalinity as CaCO3	mg/L	281	
Acidity as CaCO3	mg/L	-239	
Hydroxide (as CaCO3)	mg/L	<1	
Balance (+ions/-ions)	Ratio	0.62	
Carbonate	mg/L	<1	
Bicarbonate	mg/L	343	
Chloride	mg/L	35.1	1000
Fluoride	mg/L	0.05	
Sulphate	mg/L	57.2	
Carbon (Total Inorganic)	mg/L	70.3	
Carbon (Total Organic)	mg/L	40.3	
Ammonia - Nitrogen	mg/L	52.8	12
Nitrate - Nitrogen	mg/L	0.17	56
Nitrite - Nitrogen	mg/L	<0.05	5
Phosphate - Ortho - Phosphoru	mg/L	5.58	
Biochemical Oxygen Demand	mg/L	35	25
MF - Fecal Coliforms	CFU/100mL	300000	20
Dissolved Aluminum	mg/L	0.052	2
Dissolved Antimony	mg/L	0.00060	
Dissolved Arsenic	mg/L	0.0006	
Dissolved Barium	mg/L	0.00728	
Dissolved Beryllium	mg/L	<0.0001	
Dissolved Boron	mg/L	0.046	
Dissolved Cadmium	mg/L	0.00002	
Dissolved Calcium	mg/L	8.1	
Dissolved Chromium	mg/L	0.0032	
Dissolved Cobalt	mg/L	0.00019	
Dissolved Copper	mg/L	0.0408	
Dissolved Iron	mg/L	0.61	
Dissolved Lead	mg/L	0.00132	
Dissolved Lithium	mg/L	0.0344	
Dissolved Magnesium	mg/L	2.84	
Dissolved Manganese	mg/L	0.030	
Dissolved Mercury	mg/L	<0.00005	
Dissolved Molybdenum	mg/L	0.00029	

Dissolved Nickel	mg/L	0.00751	
Dissolved Phosphorus	mg/L	6.82	
Dissolved Potassium	mg/L	23	
Dissolved Selenium	mg/L	0.0006	
Dissolved Silicon	mg/L	6.27	
Dissolved Silver	mg/L	<0.00005	
Dissolved Sodium	mg/L	82.3	
Dissolved Strontium	mg/L	0.0183	
Dissolved Thallium	mg/L	<0.00005	
Dissolved Tin	mg/L	0.0002	
Dissolved Titanium	mg/L	<0.0005	
Dissolved Uranium	mg/L	<0.00005	
Dissolved Vanadium	mg/L	0.0024	
Dissolved Zinc	mg/L	0.068	
Total Aluminum	mg/L	0.0847	3
Total Antimony	mg/L	0.00103	
Total Arsenic	mg/L	<0.0002	0.1
Total Barium	mg/L	0.00858	
Total Beryllium	mg/L	<0.0001	
Total Boron	mg/L	0.053	
Total Cadmium	mg/L	0.00005	0.0024
Total Calcium	mg/L	8.3	
Total Chromium	mg/L	0.0040	0.17
Total Cobalt	mg/L	0.00028	
Total Copper	mg/L	0.0946	0.04
Total Iron	mg/L	0.83	
Total Lead	mg/L	0.00093	0.02
Total Lithium	mg/L	0.041	
Total Magnesium	mg/L	2.8	
Total Manganese	mg/L	0.03	
Total Mercury	mg/L	<0.00005	
Total Molybdenum	mg/L	0.00120	1.5
Total Nickel	mg/L	0.0108	0.1
Total Phosphorus	mg/L	7.24	0.4
Total Potassium	mg/L	21.3	
Total Selenium	mg/L	<0.0010	
Total Silicon	mg/L	6.38	
Total Silver	mg/L	<0.0001	
Total Sodium	mg/L	80.9	
Total Strontium	mg/L	0.0210	
Total Thallium	mg/L	<0.00005	
Total Tin	mg/L	0.0012	
Total Titanium	mg/L	<0.0005	
Total Uranium	mg/L	0.00016	1
Total Vanadium	mg/L	0.0031	
Total Zinc	mg/L	0.052	0.5

Stn.Code

JER-SW3

Station Name

Process Plant

Sample Class

Supernatant

M

Sample No.

L459864-1

Sample Comments			PKCA
Collect Date/Time		11/27/2006 7:00	Discharge
Water Temperature	Deg C	21.7	Criteria
Field pH	pH	9.06	
Field Conductivity	us/cm	271	
Field Dissolved Oxygen	mg/L	11.45	
Oxidation Reduction Potential	mV	510.00	
pH @ 25°C	pH	8.89	6.0-8.8
Conductivity @ 25°C	us/cm	267	
T-Dissolved Solids180°C	mg/L	187	4000
Total Suspended Solids @105°C	mg/L	7.2	25
Turbidity	NTU	4.78	
T-Hardness as CaCO3	mg/L	51.8	
T-Alkalinity as CaCO3	mg/L	33.1	
Acidity as CaCO3	mg/L	<1.0	
Hydroxide (as CaCO3)	mg/L	<1.0	
Carbonate	mg/L	14.5	
Bicarbonate	mg/L	18.5	
Chloride	mg/L	3.98	1000
Sulphate	mg/L	3.76	
Carbon (Total Inorganic)	mg/L	2.77	
Carbon (Total Organic)	mg/L	1.83	
Ammonia - Nitrogen	mg/L	5.12	12
Nitrate - Nitrogen	mg/L	22.7	56
Nitrite - Nitrogen	mg/L	0.63	5
Phosphate - Ortho - Phosphoru	mg/L	<0.0010	
Dissolved Ortho Phosphate	mg/L	0.003	
Total Phosphate As P	mg/L	0.0068	
Dissolved Aluminum	mg/L	0.0036	2
Dissolved Antimony	mg/L	0.00089	
Dissolved Arsenic	mg/L	0.00038	
Dissolved Barium	mg/L	0.281	
Dissolved Beryllium	mg/L	<0.00050	
Dissolved Boron	mg/L	0.017	
Dissolved Cadmium	mg/L	<0.000050	
Dissolved Calcium	mg/L	13.7	
Dissolved Chromium	mg/L	<0.00050	
Dissolved Cobalt	mg/L	<0.00010	
Dissolved Copper	mg/L	0.00084	
Dissolved Iron	mg/L	<0.030	
Dissolved Lead	mg/L	<0.000050	
Dissolved Lithium	mg/L	<0.0050	

Dissolved Magnesium	mg/L	4.3	
Dissolved Manganese	mg/L	0.000102	
Dissolved Mercury	mg/L	<0.000050	
Dissolved Molybdenum	mg/L	0.00271	
Dissolved Nickel	mg/L	0.00329	
Dissolved Potassium	mg/L	13.9	
Dissolved Selenium	mg/L	<0.0010	
Dissolved Silicon	mg/L	2.99	
Dissolved Silver	mg/L	<0.000010	
Dissolved Sodium	mg/L	14	
Dissolved Strontium	mg/L	0.465	
Dissolved Thallium	mg/L	<0.00010	
Dissolved Tin	mg/L	<0.00010	
Dissolved Titanium	mg/L	<0.010	
Dissolved Uranium	mg/L	<0.000010	
Dissolved Vanadium	mg/L	<0.0010	
Dissolved Zinc	mg/L	0.0022	
Total Aluminum	mg/L	0.0468	3
Total Antimony	mg/L	0.00079	
Total Arsenic	mg/L	0.00041	0.1
Total Barium	mg/L	0.281	
Total Beryllium	mg/L	<0.00050	
Total Boron	mg/L	0.017	
Total Cadmium	mg/L	<0.000050	0.0024
Total Calcium	mg/L	13.8	
Total Chromium	mg/L	0.00101	0.17
Total Cobalt	mg/L	0.0003	
Total Copper	mg/L	0.00101	0.04
Total Iron	mg/L	0.145	
Total Lead	mg/L	<0.000050	0.02
Total Lithium	mg/L	<0.0050	
Total Magnesium	mg/L	4.8	
Total Manganese	mg/L	0.00251	
Total Mercury	mg/L	<0.000050	
Total Molybdenum	mg/L	0.0026	1.5
Total Nickel	mg/L	0.00762	0.1
Total Potassium	mg/L	13.9	
Total Selenium	mg/L	<0.0010	
Total Silicon	mg/L	3.26	
Total Silver	mg/L	<0.000010	
Total Sodium	mg/L	14	
Total Strontium	mg/L	0.464	
Total Thallium	mg/L	<0.00010	
Total Tin	mg/L	<0.00010	
Total Titanium	mg/L	<0.010	
Total Uranium	mg/L	0.000024	1
Total Vanadium	mg/L	<0.0010	
Total Zinc	mg/L	<0.0010	0.5

Stn.Code

JER-SW4

Station Name

PKCA Pond

Sample Class

Water
M

Sample No.

L459864-2

Sample Comments			PKCA Discharge Criteria
Collect Date/Time		11/27/2006 8:44	
Water Temperature	Deg C	0.32	
Field pH	pH	6.95	
Field Conductivity	us/cm	279	
Field Dissolved Oxygen	mg/L	15.91	
Oxidation Reduction Potential	mV	522.70	
pH @ 25°C	pH	7.78	6.0-8.8
Conductivity @ 25°C	us/cm	268	
T-Dissolved Solids180°C	mg/L	156	4000
Total Suspended Solids @105°C	mg/L	<3	25
Turbidity	NTU	1.15	
T-Hardness as CaCO3	mg/L	89.8	
T-Alkalinity as CaCO3	mg/L	58.1	
Acidity as CaCO3	mg/L	2	
Hydroxide (as CaCO3)	mg/L	<1.0	
Carbonate	mg/L	<1.0	
Bicarbonate	mg/L	58.1	
Chloride	mg/L	11.9	1000
Sulphate	mg/L	15.9	
Carbon (Total Inorganic)	mg/L	11.5	
Carbon (Total Organic)	mg/L	4.27	
Ammonia - Nitrogen	mg/L	0.109	12
Nitrate - Nitrogen	mg/L	10.8	56
Nitrite - Nitrogen	mg/L	0.0311	5
Phosphate - Ortho - Phosphoru	mg/L	<0.0010	
Dissolved Ortho Phosphate	mg/L	0.0031	
Total Phosphate As P	mg/L	0.0141	
Dissolved Aluminum	mg/L	0.0052	2
Dissolved Antimony	mg/L	0.00051	
Dissolved Arsenic	mg/L	0.00053	
Dissolved Barium	mg/L	0.0639	
Dissolved Beryllium	mg/L	<0.00050	
Dissolved Boron	mg/L	0.034	
Dissolved Cadmium	mg/L	<0.000050	
Dissolved Calcium	mg/L	18	
Dissolved Chromium	mg/L	<0.00050	
Dissolved Cobalt	mg/L	<0.00010	
Dissolved Copper	mg/L	0.00826	
Dissolved Iron	mg/L	<0.030	
Dissolved Lead	mg/L	0.000069	
Dissolved Lithium	mg/L	<0.0050	
Dissolved Magnesium	mg/L	10.9	

Dissolved Manganese	mg/L	0.000245	
Dissolved Mercury	mg/L	<0.000050	
Dissolved Molybdenum	mg/L	0.00359	
Dissolved Nickel	mg/L	0.00239	
Dissolved Potassium	mg/L	8.42	
Dissolved Selenium	mg/L	<0.0010	
Dissolved Silicon	mg/L	1.32	
Dissolved Silver	mg/L	<0.000010	
Dissolved Sodium	mg/L	11.5	
Dissolved Strontium	mg/L	0.237	
Dissolved Thallium	mg/L	<0.00010	
Dissolved Tin	mg/L	<0.00010	
Dissolved Titanium	mg/L	<0.010	
Dissolved Uranium	mg/L	0.00124	
Dissolved Vanadium	mg/L	<0.0010	
Dissolved Zinc	mg/L	0.0205	
Total Aluminum	mg/L	0.0192	3
Total Antimony	mg/L	0.00052	
Total Arsenic	mg/L	0.00055	0.1
Total Barium	mg/L	0.0644	
Total Beryllium	mg/L	<0.00050	
Total Boron	mg/L	0.033	
Total Cadmium	mg/L	0.000056	0.0024
Total Calcium	mg/L	17.9	
Total Chromium	mg/L	<0.00050	0.17
Total Cobalt	mg/L	0.00014	
Total Copper	mg/L	0.00715	0.04
Total Iron	mg/L	0.034	
Total Lead	mg/L	0.000247	0.02
Total Lithium	mg/L	<0.0050	
Total Magnesium	mg/L	11	
Total Manganese	mg/L	0.00368	
Total Mercury	mg/L	<0.000050	
Total Molybdenum	mg/L	0.0035	1.5
Total Nickel	mg/L	0.00249	0.1
Total Potassium	mg/L	8.39	
Total Selenium	mg/L	<0.0010	
Total Silicon	mg/L	1.39	
Total Silver	mg/L	<0.000010	
Total Sodium	mg/L	11.4	
Total Strontium	mg/L	0.239	
Total Thallium	mg/L	<0.00010	
Total Tin	mg/L	<0.00010	
Total Titanium	mg/L	<0.010	
Total Uranium	mg/L	0.00127	1
Total Vanadium	mg/L	<0.0010	
Total Zinc	mg/L	0.0177	0.5

Stn.Code

JER-WQ2

Station Name

PKCA Discharge

Sample Class

M

Sample No.

06-14152

Sample Comments		PKCA Discharge Criteria	
Collect Date/Time		11/6/2006	
Water Temperature	Deg C	2.59	
Field pH	pH	6.85	
Field Conductivity	us/cm	229	
Field Dissolved Oxygen	mg/L	11.46	
Oxidation Reduction Potential	mV	504.10	
pH @ 25°C	pH	7.50	6.0-8.8
Conductivity @ 25°C	us/cm	228	
T-Dissolved Solids180°C	mg/L	160	4000
Total Suspended Solids @105°C	mg/L	<2	25
Turbidity	NTU	2	
T-Hardness as CaCO3	mg/L	78.3	
T-Alkalinity as CaCO3	mg/L	50	
Acidity as CaCO3	mg/L	4	
Hydroxide (as CaCO3)	mg/L	<1	
Balance (+ions/-ions)	Ratio	0.96	
Carbonate	mg/L	<1	
Bicarbonate	mg/L	62	
Chloride	mg/L	9.8	1000
Fluoride	mg/L	0.15	
Sulphate	mg/L	10.6	
Carbon (Total Inorganic)	mg/L	12	
Carbon (Total Organic)	mg/L	3.6	
Ammonia - Nitrogen	mg/L	0.24	12
Nitrate - Nitrogen	mg/L	8.47	56
Nitrite - Nitrogen	mg/L	<0.05	5
Phosphate - Ortho - Phosphoru	mg/L	<0.20	
Dissolved Aluminum	mg/L	<0.002	2
Dissolved Antimony	mg/L	0.00037	
Dissolved Arsenic	mg/L	0.0006	
Dissolved Barium	mg/L	0.0439	
Dissolved Beryllium	mg/L	<0.0001	
Dissolved Boron	mg/L	0.023	
Dissolved Cadmium	mg/L	<0.00002	
Dissolved Calcium	mg/L	15.8	
Dissolved Chromium	mg/L	0.0006	
Dissolved Cobalt	mg/L	0.00007	
Dissolved Copper	mg/L	0.0020	
Dissolved Iron	mg/L	<0.10	
Dissolved Lead	mg/L	<0.00005	
Dissolved Lithium	mg/L	0.0016	
Dissolved Magnesium	mg/L	9.4	
Dissolved Manganese	mg/L	<0.010	

Dissolved Mercury	mg/L	<0.00005	
Dissolved Molybdenum	mg/L	0.00258	
Dissolved Nickel	mg/L	0.00177	
Dissolved Phosphorus	mg/L	<0.01	
Dissolved Potassium	mg/L	5.8	
Dissolved Selenium	mg/L	<0.0006	
Dissolved Silicon	mg/L	1.01	
Dissolved Silver	mg/L	<0.00005	
Dissolved Sodium	mg/L	7.6	
Dissolved Strontium	mg/L	0.218	
Dissolved Thallium	mg/L	<0.00005	
Dissolved Tin	mg/L	<0.0001	
Dissolved Titanium	mg/L	<0.0005	
Dissolved Uranium	mg/L	0.00113	
Dissolved Vanadium	mg/L	0.0008	
Dissolved Zinc	mg/L	<0.001	
Total Aluminum	mg/L	0.0065	3
Total Antimony	mg/L	0.00033	
Total Arsenic	mg/L	0.0006	0.1
Total Barium	mg/L	0.0440	
Total Beryllium	mg/L	<0.0001	
Total Boron	mg/L	0.025	
Total Cadmium	mg/L	0.00002	0.0024
Total Calcium	mg/L	15.5	
Total Chromium	mg/L	<0.0005	0.17
Total Cobalt	mg/L	0.00008	
Total Copper	mg/L	0.0021	0.04
Total Iron	mg/L	<0.10	
Total Lead	mg/L	0.00012	0.02
Total Lithium	mg/L	<0.005	
Total Magnesium	mg/L	9.30	
Total Manganese	mg/L	<0.01	
Total Mercury	mg/L	<0.00005	
Total Molybdenum	mg/L	0.00265	1.5
Total Nickel	mg/L	0.0019	0.1
Total Phosphorus	mg/L	<0.02	0.4
Total Potassium	mg/L	5.7	
Total Selenium	mg/L	<0.0010	
Total Silicon	mg/L	1.04	
Total Silver	mg/L	<0.0001	
Total Sodium	mg/L	7.6	
Total Strontium	mg/L	0.210	
Total Thallium	mg/L	<0.00005	
Total Tin	mg/L	0.0003	
Total Titanium	mg/L	<0.0005	
Total Uranium	mg/L	0.00118	1
Total Vanadium	mg/L	<0.0005	
Total Zinc	mg/L	0.004	0.5



Flow and Volume Measurements

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

DATE	Carat Lake Freshwater Use (m3) (Camp and Emulsion Plant) - Daily	Treated Sewage Effluent to PKC (Long Lake) (m3) - Daily Metered	Sewage Sludge Removed (m3)	Pit Pond Water to East Sump (m3) - Daily	Road Wastefing from PKC (m3) Daily	East Sump pond to PKC (Long Lake) (m3) - Daily	Other users to PKC (Long Lake) (m3)	Water Discharged from PKC (m3)	PKC Water Recycled (m3)	Process Plant Fresh Water (m3)	Process Plant Water Discharged to PKC (m3)	Coarse Rejects (tonnes)	Fine Rejects to PKC (tonnes)	Ore Processed (tonnes)	Quantity of Waste Rock (tonnes)	Quantity of Esker (tonnes)	Quantity of Bul (tonnes)
1-Nov	17.6	28.5						5983.0		412.9							
2-Nov	11.8	26.5						2650.2		724.7							
3-Nov	15.1	8.2						2650.2		882.8							
4-Nov	11.0	22.2						2650.2		1,021.3							
5-Nov	18.1	24.2						2650.2		1,060.1							
6-Nov	16.3	25.7						2650.2		827.4							
7-Nov	16.6	13.9								1,237.4							
8-Nov	14.9	27.3								1,042.2							
9-Nov	18.9	16.9								889.4							
10-Nov	12.3	8.0								933.3							
11-Nov	12.3	5.0								866.2							
12-Nov	13.1	6.6								1,196.1							
13-Nov	25.5	1.4								1,178.0							
14-Nov	14.5	2.3								824.1							
15-Nov	6.2	1.2								1,148.3							
16-Nov	20.1	0.5								1,220.5							
17-Nov	14.9	0.8								1,189.8							
18-Nov	13.4	0.6								1,176.8							
19-Nov	9.6	16.7								1,196.1							
20-Nov	14.2	4.2								1,166.6							
21-Nov	14.7	9.3								1,164.2							
22-Nov	23.4	16.3								1,283.6							
23-Nov	13.6	21.8								1,225.9							
24-Nov	52.4	22.7								1,065.3							
25-Nov	55.6	22.1								1,228.3							
26-Nov	39.4	22.2								1,161.4							
27-Nov	46.5	22.2								1,161.4							
28-Nov	49.8	30.3								1,166.0							
29-Nov	16.3	28.3								1,181.5							
30-Nov	38.1	23.0								941.4							
Total	646.5	456.4	61.0	0.0	0.0	0.0	0.0	19,214.0	0.0	31,863.9	31,863.9	43,696	14,729	66,425	396,464.0	30,043.0	173,143.0



Appendix A

Result Summary

Client: Tahera Diamond Corporation; operation Yellowknife

Sample: JER-WQ2

Collection: collected on 2006/11/08 at not given by CW

Receipt: received on 2006/11/11 at 730 by B. Denny

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

Description: type: effluent water, collection method: grab

Test: started on 2006/11/13 ; ended on 2006/11/17

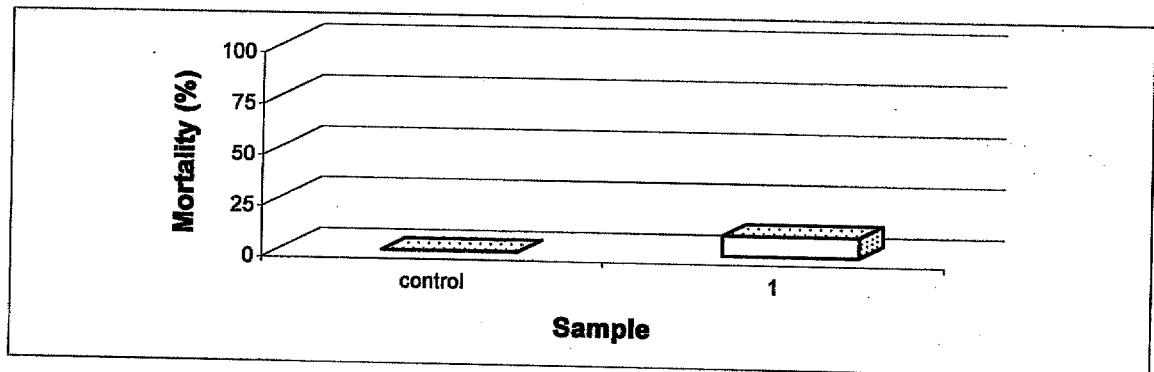
Result:

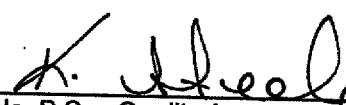
Client: TAH102
 Reference: 06-2265-01-TRS

Contents

Result Summary.....1
 Test Conditions.....2
 Test Data.....3
 Comments/Statistics..5
 QA/QC.....6

Sample	Client Code	Mortality (%)	Comment
control	lab control	0	
1	JER-WQ2	10	not toxic as tested




 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 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: 06-2265-01-TRS

Method: Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, 1990. Environment Canada, EPS 1/RM/13. (amended 1996 and 2000)

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

Species: *Oncorhynchus mykiss*

Organism source: Ackenberry Trout Farms (Batch 20061020TR)

Acclimation: 25 days

Stock mortality: 1.3% (seven days preceeding testing)

Sample initial chemistry: pH: 8.1; EC: 237 ($\mu\text{S}/\text{cm}$); DO: 8.8 (mg/L); temperature: 17 °C
hardness (mg CaCO_3/L): 126; colour: colourless; odour: odourless

Sample holding time: 5 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: 20 Litres

Sample pre-treatment: All test solutions and controls were pre-aerated for 30 minutes
Dissolved oxygen in full strength sample was 8.7 mg/L after pre-aeration
The sample was not filtered or pH adjusted prior to or during testing

Loading density: 0.335 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)

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 October 31, 2006; current results
(96-h LC50 and 95% confidence limits) = 11.4 (10.3-12.7) mg/L Phenol

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

Test Data

 Client: TAH102
 Reference: 06-2265-01-TRS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2006/11/13	0	1800	S.Krishnappa	test fish loaded at 1800 h
2006/11/14	1	1500	S.Krishnappa	all test fish appear normal
2006/11/15	2	1345	S.Krishnappa	all test fish appear normal
2006/11/16	3	1220	S.Krishnappa	all test fish appear normal
2006/11/17	4	1600	S.Ford	all test fish appear normal

Chemistry:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

pH (units)

0	7.8	7.7						
1	7.9	7.8						
2	7.8	7.9						
3	7.9	7.9						
4	7.9	7.8						

 Conductivity ($\mu\text{S}/\text{cm}$)

0	351	206						
1	378	208						
2	383	231						
3	384	231						
4	382	210						

Dissolved Oxygen (mg/L)

0	8.9	8.7						
1	8.4	8.4						
2	8.2	8.2						
3	8.4	8.4						
4	8.3	8.3						

 Temperature ($^{\circ}\text{C}$)

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

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.

Trout (single concentration) Test Report

Test Data

Client: TAH102
Reference: 06-2265-01-TRS

Number Alive:

Sample	control	1						
--------	---------	---	--	--	--	--	--	--

Day

0	10	10						
1	10	10						
2	10	10						
3	10	10						
4	10	9						

Mortality (%)

4	0	10						
---	---	----	--	--	--	--	--	--

Biology Summary Tables:

Control Fish	Length (cm)	Weight (g)
1	4.6	0.8
2	4.3	0.9
3	4.3	0.7
4	4.5	0.7
5	4.1	0.5
6	3.9	0.5
7	4.6	0.6
8	4.6	0.5
9	4.3	0.7
10	4.5	0.8

Sample	Group Weight (g)
control	6.7
1	6.9

average	4.4	0.7
sd	0.2	0.1
cv(%)	5.4	21.2

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

Comments/Statistics

Client: TAH102 Reference: 06-2265-01-TRS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

Quality Assurance Information

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: Ackenberry Trout Farms
 temperature (°C): 15 ± 1
 dissolved oxygen: saturated
 stock mortality (last 7d): <0.01%
 batch number: 20061020TR

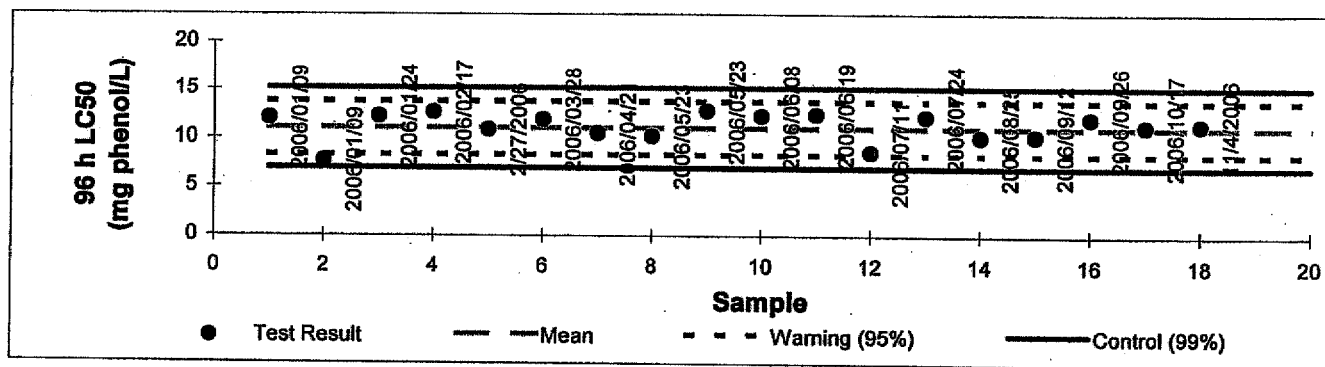
Test Design:

vol. of test vessel (L): 20
 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

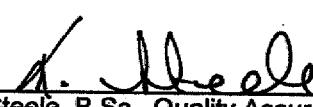
Warning Chart: mortality LC50 at 96 hours

toxicant: Phenol (C₆H₅OH)

Current Test: started on 2006/10/31 ended on 2006/11/04
 result (96 h LC50): 11.4 (10.3-12.7) mg phenol/L (95% confidence limits are in brackets)
Historical: mean: 11.0 std.dev: 1.4 cv(%): 12
 warning limits: 8.3 13.8 (lower and upper 95% confidence limit, two standard deviations)
 control limits: 6.9 15.1 (lower and upper 99% confidence limit, three standard deviations)



Quality Assurance Unit:


 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 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: 06-2265-01-DAS

Client: Tahera Diamond Corporation; operation
 Yellowknife

Sample: JER-WQ2

Collection: collected on 2006/11/08 at not given by CW

Receipt: received on 2006/11/11 at 730 by B. Denny

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

Description: type: effluent water, collection method: grab

Test: started on 2006/11/13 ; ended on 2006/11/15

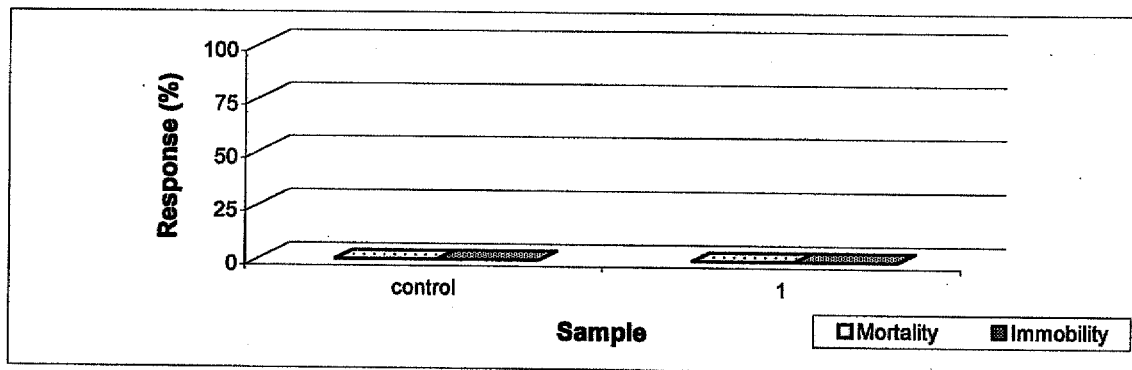
Contents

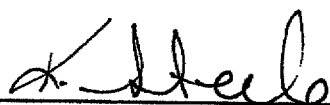
Result Summary.....	1
Test Conditions.....	2
Test Data.....	4
Comments/Statistics..	5
QA/QC.....	6

Result:

Sample	Client Code	Average Mortality (%)	Average Immobility (%)	Comment
control	lab control	0	0	
1	JER-WQ2	0	0	not toxic as tested

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




 Authorized by K. Steele, B.Sc., Quality Assurance Officer
 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: 06-2265-01-DAS

Method: Biological Test method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna*, 1990. Environ. Can., EPS 1/RM/14. (amended 1996 and 2000)

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: 14%

Culture brood data: 12 days to first brood
20 neonates per average brood

Sample initial chemistry: pH: 8.1; EC: 237 ($\mu\text{S}/\text{cm}$); DO: 8.8 (mg/L); temperature: 17 °C
hardness ($\text{mg CaCO}_3/\text{L}$): 126; colour: colourless; odour: odourless

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

Sample storage: 4 $\pm$ 2°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 mL/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 102 $\text{mg CaCO}_3/\text{L}$

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°C

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

Test Conditions

Client: TAH102 Reference: 06-2265-01-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 November 14, 2006; current results
(48-h LC50 and 95% confidence limits) = 6.1 (5.7-6.6) g/L NaCl

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

Test Data

 Client: TAH102
 Reference: 06-2265-01-DAS

Test Log:

Date	Day	Time	Technician	Comment/Observation
2006/11/13	0	1220	S.Krishnappa	test <i>Daphnia</i> appear normal
2006/11/14	1	1550	S.Krishnappa	test <i>Daphnia</i> appear normal
2006/11/15	2	1140	S.Ford	test <i>Daphnia</i> appear normal

Chemistry:

Sample	control			1		
replicate	a	b	c	a	b	c

Day	pH (units)					
0	7.9	7.9	7.9	7.9	7.9	7.9
2	7.9	7.9	7.9	7.8	7.8	7.7

	Conductivity ($\mu\text{S}/\text{cm}$)					
0	379	379	379	251	251	251
2	427	399	410	256	245	243

	Dissolved Oxygen (mg/L)					
0	8.3	8.3	8.3	7.9	7.9	7.9
2	7.7	8.4	8.3	8.3	8.1	8.2

	Temperature ($^{\circ}\text{C}$)					
0	19	19	19	22	22	22
2	22	22	22	22	22	22

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

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.



HydroQual
Laboratories Ltd.

***Daphnia* (single concentration)**
Test Report

Comments/Statistics

Client: TAH102 Reference: 06-2265-01-DAS

Test Result Comments:

None

Data Analysis:

None

Protocol Deviations:

None

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.

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: 12
mean brood size: 20
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 preaerated: 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

Warning Chart: mortality LC50 at 48 hours
toxicant: Sodium Chloride (NaCl)

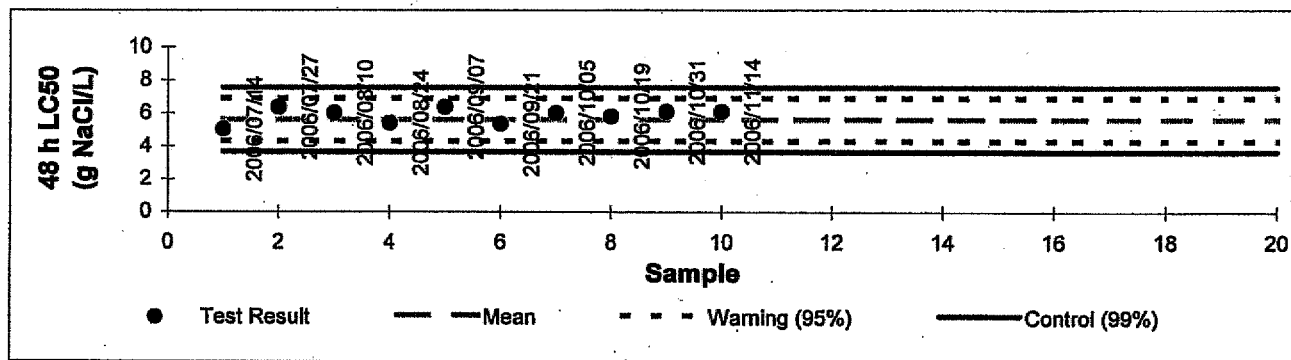
Current Test: started on 2006/11/14 ended on 2006/11/16

result (48 h LC50): 6.1 (5.7-6.6) g NaCl/L (95% confidence limits are in brackets)

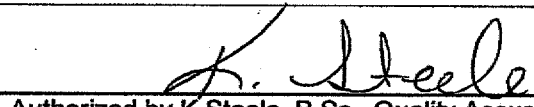
Historical: mean: 5.6 std. dev: 0.6 cv (%): 12

warning limits: 4.3 6.9 (lower and upper 95% confidence limit, two standard deviations)

control limits: 3.7 7.6 (lower and upper 99% confidence limit, three standard deviations)



Quality Assurance Unit:


Authorized by K. Steele, B.Sc., Quality Assurance Officer
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 2.4