TAHERA
DIAMOND CORPORATION

May 30th, 2007

Chief Administrative Officer
Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0B 1J0
Delivered by Fax: (867) 360-6369

Water Resources Officer
P.O. Box 278
Kugluktuk, NU
X0B 0E0

**RE: Notification of intent to discharge from the Processed Kimberlite Containment Area (PKCA) to Stream C3 – Part G, Item 5 of License NWB1JER0410**

Please accept this letter as Tahera Diamond Corporations letter of intent as required in Part G, Item 5 of Water License NWB1JER0410, to commence with the drawdown of the PKCA to Stream C3.

Please find attached sample results collected from the PKCA for acute toxicity as required in Part G, Item 7 (a) and (b). These samples were analyzed by HydroQual Laboratories and indicate 0% mortality to Rainbow Trout, *Oncorhyncus mykiss* and crustacean *Daphina magna*. Toxicity testing will continue to be conducted monthly as indicated by the water license. Water chemistry results from Station JER-WQ2 required in Part 5, Item 6(a) are attached. While discharging, samples will be collected weekly as required and submitted within the monthly SNP reports.

Should you have any additional questions do not hesitate to contact site Environmental staff at 780 644-9129.

Cheryl Wray
Environmental Supervisor

Harold Gates
Operations Manager

| Sample Number | Sample ID | Date Sampled | Parameter Code | Result | Unit |
|---|---|---|---|---|---|
| L504848-1 | WQ-02 | 5/9/2007 | Acidity (as CaCO3) | 3.4 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Alkalinity, Bicarbonate (as CaCO3) | 54.9 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Alkalinity, Carbonate (as CaCO3) | <1.0 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Alkalinity, Hydroxide (as CaCO3) | <1.0 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Alkalinity, Total (as CaCO3) | 54.9 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Aluminum (Al)-Dissolved | 0.0017 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Aluminum (Al)-Total | 0.0213 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Ammonia as N | 0.958 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Antimony (Sb)-Dissolved | 0.00052 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Antimony (Sb)-Total | 0.00048 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Arsenic (As)-Dissolved | 0.00055 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Arsenic (As)-Total | 0.00058 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Barium (Ba)-Dissolved | 0.066 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Barium (Ba)-Total | 0.0653 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Beryllium (Be)-Dissolved | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Beryllium (Be)-Total | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Bismuth (Bi)-Dissolved | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Bismuth (Bi)-Total | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | BOD | <5 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Boron (B)-Dissolved | 0.066 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Boron (B)-Total | 0.062 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Cadmium (Cd)-Dissolved | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Cadmium (Cd)-Total | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Calcium (Ca)-Dissolved | 20 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Calcium (Ca)-Total | 20.1 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Chloride (Cl) | 14.4 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Chromium (Cr)-Dissolved | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Chromium (Cr)-Total | <0.00050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Cobalt (Co)-Dissolved | 0.00012 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Cobalt (Co)-Total | 0.00018 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Conductivity | 288 | uS/cm |
| L504848-1 | WQ-02 | 5/9/2007 | Copper (Cu)-Dissolved | 0.00195 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Copper (Cu)-Total | 0.00224 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Hardness (as CaCO3) | 95 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Iron (Fe)-Dissolved | <0.030 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Iron (Fe)-Total | 0.05 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Lead (Pb)-Dissolved | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Lead (Pb)-Total | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Lithium (Li)-Dissolved | <0.0050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Lithium (Li)-Total | <0.0050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Magnesium (Mg)-Dissolved | 11 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Magnesium (Mg)-Total | 11.1 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Manganese (Mn)-Dissolved | 0.0644 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Manganese (Mn)-Total | 0.0669 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Mercury (Hg)-Dissolved | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Mercury (Hg)-Total | <0.000050 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Molybdenum (Mo)-Dissolved | 0.00365 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Molybdenum (Mo)-Total | 0.00336 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Nickel (Ni)-Dissolved | 0.00456 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Nickel (Ni)-Total | 0.00399 | mg/L |

| | | | | | |
|---|---|---|---|---|---|
| L504848-1 | WQ-02 | 5/9/2007 | Nitrate (as N) | 12.1 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Nitrite (as N) | 0.0899 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Oil and Grease | <1.0 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Ortho Phosphate as P | 0.0068 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | pH | 7.58 | pH |
| L504848-1 | WQ-02 | 5/9/2007 | Potassium (K)-Dissolved | 10.4 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Potassium (K)-Total | 10.2 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Selenium (Se)-Dissolved | <0.0010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Selenium (Se)-Total | <0.0010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Silicon (Si)-Dissolved | 2.11 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Silicon (Si)-Total | 2.17 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Silver (Ag)-Dissolved | <0.000010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Silver (Ag)-Total | <0.000010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Sodium (Na)-Dissolved | 13.7 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Sodium (Na)-Total | 13.8 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Strontium (Sr)-Dissolved | 0.271 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Strontium (Sr)-Total | 0.26 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Sulfate (SO4) | 19.9 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Thallium (Tl)-Dissolved | <0.00010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Thallium (Tl)-Total | <0.00010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Tin (Sn)-Dissolved | 0.00151 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Tin (Sn)-Total | 0.00122 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Titanium (Ti)-Dissolved | <0.010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Titanium (Ti)-Total | <0.010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Dissolved Phosphate As P | 0.0097 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Dissolved Solids | 174 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Inorganic Carbon | 8.18 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Organic Carbon | 2.57 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Phosphate as P | 0.0169 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Total Suspended Solids | <3.0 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Turbidity | 1.49 | NTU |
| L504848-1 | WQ-02 | 5/9/2007 | Uranium (U)-Dissolved | 0.00108 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Uranium (U)-Total | 0.00109 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Vanadium (V)-Dissolved | <0.0010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Vanadium (V)-Total | <0.0010 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Zinc (Zn)-Dissolved | 0.0012 | mg/L |
| L504848-1 | WQ-02 | 5/9/2007 | Zinc (Zn)-Total | 0.0015 | mg/L |

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# Trout (single concentration) Test Report

## Result Summary

Client: TAH102
Reference: 07-0761-01-TRS

**Contents**



**Client:** Tahera Diamond Corporation; operation Yellowknife

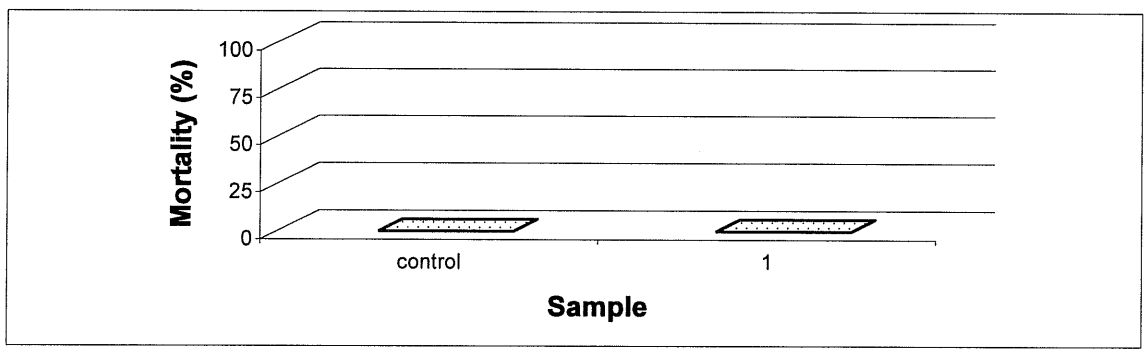
**Sample:** PKCTox-14 May 07

**Collection:** collected on 2007/05/14 at 0900 by B.O.
**Receipt:** received on 2007/05/16 at 1328 by J. Abcede
**Containers:** received 1 x 20L pail at 19 °C, in good condition with no seals and no initials
**Description:** type: water, collection method: grab

**Test:** started on 2007/05/17 ; ended on 2007/05/21

**Result:**

| Sample | Client Code | Mortality (%) | Comment |
|---|---|---|---|
| control | lab control | 0 | |
| 1 | PKCTox-14 May 07 | 0 | not toxic as tested |




Authorized by K.Steele, B.Sc., Quality Assurance Officer as per
The test data and results are verified correct.






HydroQual Laboratories Ltd., #4, 6125 12th Street SE, Calgary, Alberta, Canada T2H 2K1
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## Test Conditions

Client: TAH102
Reference: 07-0761-01-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:** Spring Valley Trout Farms (Batch 20070411TR)
**Acclimation:** 36 days
**Stock mortality:** 1.4% (seven days preceeding testing)

**Sample initial chemistry:** pH: 7.7; EC: 223 (µS/cm); DO: 7.5 (mg/L); temperature: 21 °C
hardness (mg CaC03/L): 57; colour: colourless; odour: organic/ chemical
**Sample holding time:** 3 days (must be ≤ 5 days)
**Sample storage:** 4 ± 2°C in darkness

**Test vessel:** The test was conducted in 22 L plastic pails with polyethylene liners
**Test volume:** 18.5 Litres (depth of solution in each test vessel ≥15cm)
**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:** 0.31g/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 disposable glass pipettes
**Lighting:** Overhead full spectrum fluorescent lights; 100-500 lux at surface
**Photoperiod:** 16h light:8h dark
**Test temperature:** 15 ± 1°C

**Endpoint:** Mortality, % mortality at 96-h
**Test validity:** The control had 100% survival (must ≥ 90%)

**Reference toxicant:** 96-h test with Phenol ($C_6H_5OH$) initiated May 3, 2007; current results (96-h LC50 and 95% confidence limits) = 1.00 (0.94-1.06) log (mg/L Phenol)

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





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## Test Data

Client: TAH102
Reference: 07-0761-01-TRS

**Test Log:**

| Date | Day | Time | Technician | Comment/Observation |
|---|---|---|---|---|
| 2007/05/17 | 0 | 1145 | J. Lantz/S. Ford | test fish loaded at 1145 h |
| 2007/05/18 | 1 | 1040 | J. Lantz/S. Ford | all test fish appear normal |
| 2007/05/19 | 2 | 1100 | S. Krishnappa/L. Henson | all test fish appear normal |
| 2007/05/20 | 3 | 1230 | B. Denny/C.A. Martens | all test fish appear normal |
| 2007/05/21 | 4 | 1130 | J. Lantz/S. Ford | all test fish appear normal |

**Chemistry:**

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

pH (units)

| Day | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 8.2 | 8.0 | | | | | | |
| 1 | 8.3 | 8.4 | | | | | | |
| 2 | 8.3 | 8.1 | | | | | | |
| 3 | 8.4 | 8.0 | | | | | | |
| 4 | 7.9 | 7.6 | | | | | | |

Conductivity (µS/cm)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 343 | 190 | | | | | | |
| 1 | 340 | 206 | | | | | | |
| 2 | 405 | 238 | | | | | | |
| 3 | 379 | 220 | | | | | | |
| 4 | 405 | 239 | | | | | | |

Dissolved Oxygen (mg/L)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 8.8 | 8.7 | | | | | | |
| 1 | 9.4 | 9.4 | | | | | | |
| 2 | 9.0 | 9.1 | | | | | | |
| 3 | 8.6 | 8.5 | | | | | | |
| 4 | 9.2 | 9.3 | | | | | | |

Temperature (°C)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 15 | 15 | | | | | | |
| 1 | 15 | 15 | | | | | | |
| 2 | 15 | 15 | | | | | | |
| 3 | 15 | 15 | | | | | | |
| 4 | 15 | 15 | | | | | | |





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## Test Data

Client: TAH102
Reference: 07-0761-01-TRS

**Number Alive:**

| Sample | control | 1 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Day | | | | | | | | |
| 0 | 10 | 10 | | | | | | |
| 1 | 10 | 10 | | | | | | |
| 2 | 10 | 10 | | | | | | |
| 3 | 10 | 10 | | | | | | |
| 4 | 10 | 10 | | | | | | |
| | | | | Mortality (%) | | | | |
| 4 | 0 | 0 | | | | | | |

**Biology Summary Tables:**

| Control Fish | Length (cm) | Wet Weight(g) |
|---|---|---|
| 1 | 3.6 | 0.5 |
| 2 | 3.8 | 0.5 |
| 3 | 4.2 | 0.7 |
| 4 | 3.9 | 0.6 |
| 5 | 3.8 | 0.5 |
| 6 | 4.2 | 0.7 |
| 7 | 3.6 | 0.5 |
| 8 | 3.5 | 0.4 |
| 9 | 4.2 | 0.7 |
| 10 | 4.1 | 0.6 |
| average | 3.9 | 0.6 |
| sd | 0.3 | 0.1 |
| cv(%) | 7.0 | 18.6 |

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

| Sample | Group Wet Weight (g) |
|---|---|
| control | 5.7 |
| 1 | 5.5 |





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## Comments/Statistics

Client: TAH102
Reference: 07-0761-01-TRS

**Test Result Comments:**
None

**Data Analysis:**
None

**Protocol Deviations:**
None





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# Warning Chart
# Trout

**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: | *Oncorhyncus mykiss* |
| culture source: | Spring Valley Trout Farms |
| temperature (°C): | 15 ± 1 |
| dissolved oxygen: | saturated |
| stock mortality (last 7d): | 0.3% |
| batch number: | 20070411TR |

**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 |

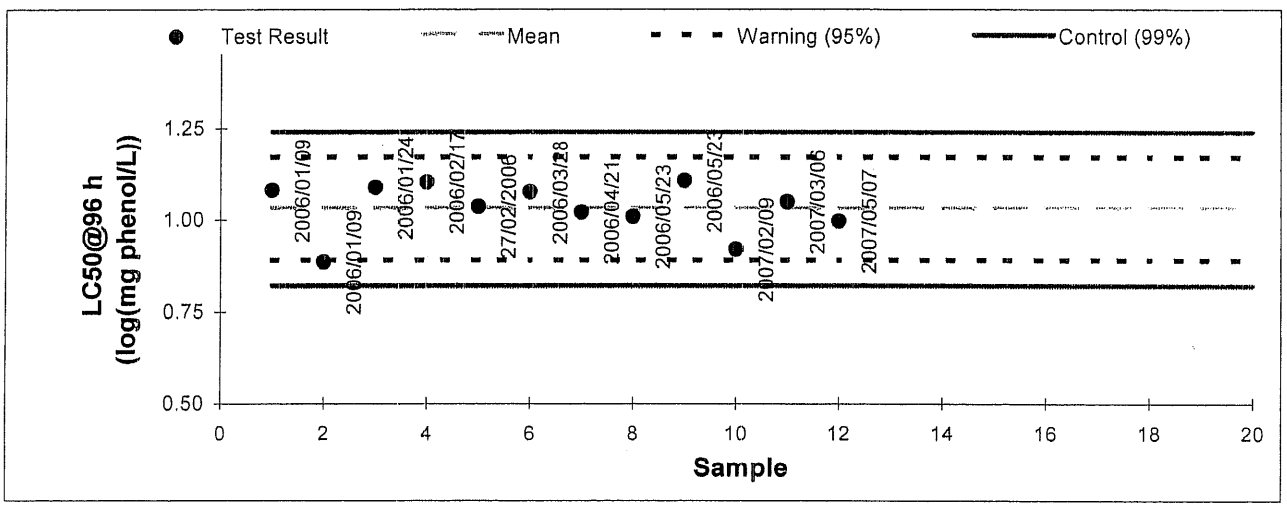
**Current Test**

| | | | | | |
|---|---|---|---|---|---|
| toxicant | phenol ($C_6H_5OH$) | | | | |
| started on | 2007/05/03 | ended on | 2007/05/07 | | |
| Result (LC50 @ 96h) | 1.00 | log (mg phenol/L); geometric mean | | | |
| Confidence Limits (95%) | lower | 0.94 | upper | 1.06 | |

**Historical Values**

| | | | | | |
|---|---|---|---|---|---|
| mean | 1.03 | sd | 0.07 | cv(%): | 7 |
| | lower | upper | | | |
| warning limits (±2 sd) | 0.89 | 1.17 | (95% confidence limits) | | |
| control limits (±3 sd) | 0.82 | 1.24 | (99% confidence limits) | | |

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




**Qualty Assurance Unit:**

Authorized by G. Diaz, B.Sc., Quality Assurance Officer 2007/05/09

The test data and results are verified correct.





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HydroQual Laboratories Ltd.

# *Daphnia* (single concentration) Test Report

## Result Summary

Client: TAH102
Reference: 07-0761-01-DAS

**Contents**



**Client:** Tahera Diamond Corporation; operation Yellowknife

**Sample:** PKCTox-14 May 07

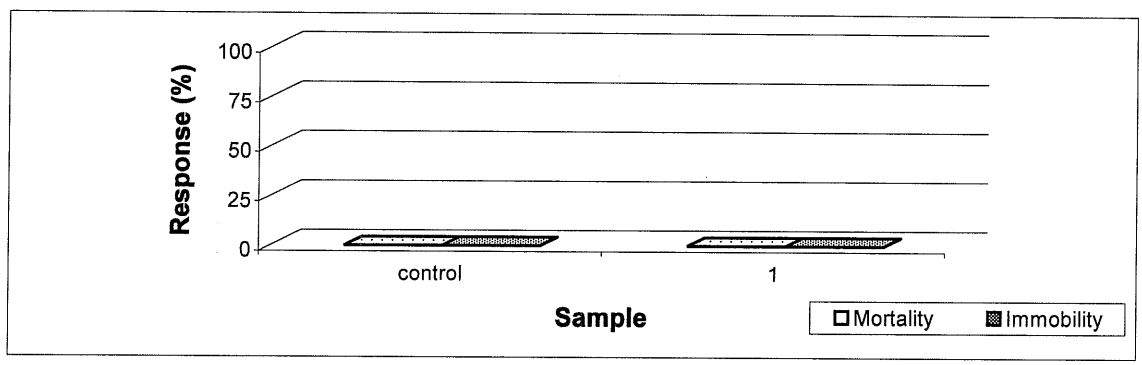
**Collection:** collected on 2007/05/14 at 0900 by B.O.
**Receipt:** received on 2007/05/16 at 1328 by J. Abcede
**Containers:** received 1 x 20L pail at 19 °C, in good condition with no seals and no initials
**Description:** type: water, collection method: grab

**Test:** started on 2007/05/17 ; ended on 2007/05/19

**Result:**

| Sample | Client Code | Average Mortality (%) | Average Immobility (%) | Comment |
|---|---|---|---|---|
| control | lab control | 0 | 0 | |
| 1 | PKCTox-14 May 07 | 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 as per
The test data and results are verified correct.



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## Test Conditions

Client: TAH102
Reference: 07-0761-01-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:** 11 days to first brood
23 neonates per average brood

**Sample initial chemistry:** pH: 7.7; EC: 223 (µS/cm); DO: 7.5 (mg/L); temperature: 21 °C
hardness (mg CaC03/L): 57; colour: colourless; odour: organic/ chemical
**Sample holding time:** 3 days (must be ≤ 5 days)
**Sample storage:** 4 ± 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 ± 12.5 mL/min.$L^{-1}$)
The hardness of the sample was not adjusted (mg $CaCO_3$/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 193 mg $CaCO_3$/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 ± 2°C

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





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## Test Conditions

Client: TAH102
Reference: 07-0761-01-DAS

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

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

**Reference toxicant:** 48-h test with NaCl initiated May 15, 2007; current results
(48-h LC50 and 95% confidence limits) = 0.83 (0.81-0.85) log (g/L NaCl)

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





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## Test Data

Client: TAH102
Reference: 07-0761-01-DAS

**Test Log:**

| Date | Day | Time | Technician | Comment/Observation |
|---|---|---|---|---|
| 2007/05/17 | 0 | 1235 | S. Krishnappa | test *Daphnia* appear normal |
| 2007/05/18 | 1 | 1010 | M. Luong | test *Daphnia* appear normal |
| 2007/05/19 | 2 | 1210 | C.A. Martens | test *Daphnia* appear normal |

**Chemistry:**

| Sample | control | | | 1 | | |
|---|---|---|---|---|---|---|
| replicate | a | b | c | a | b | c |
| **Day** | **pH (units)** | | | | | |
| 0 | 8.3 | 8.3 | 8.3 | 7.8 | 7.8 | 7.8 |
| 2 | 8.1 | 8.2 | 8.2 | 7.6 | 7.5 | 7.5 |
| | **Conductivity (µS/cm)** | | | | | |
| 0 | 398 | 398 | 398 | 229 | 229 | 229 |
| 2 | 475 | 453 | 459 | 278 | 275 | 270 |
| | **Dissolved Oxygen (mg/L)** | | | | | |
| 0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 |
| 2 | 8.5 | 8.5 | 8.5 | 8.5 | 8.3 | 8.4 |
| | **Temperature (°C)** | | | | | |
| 0 | 20 | 20 | 20 | 20 | 20 | 20 |
| 2 | 20 | 21 | 21 | 21 | 21 | 21 |

**Biology:**

| Sample | control | | | 1 | | |
|---|---|---|---|---|---|---|
| replicate | a | b | c | a | b | c |
| **Day** | **Number Alive and Behavior (behavior is in brackets)** | | | | | |
| 1 | 10 | 10 | 11 | 10 | 10 | 10 |
| 2 | 10 | 10 | 11 | 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 |





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## Comments/Statistics

Client: TAH102
Reference: 07-0761-01-DAS

**Test Result Comments:**
None

**Data Analysis:**
None

**Protocol Deviations:**
The test vessel control replicate c was loaded with 11 daphnids at test initiation.





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# 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 ammendments.

**Test Organism:**

| | |
|---|---|
| test species: | *Daphnia magna* |
| culture source: | in-house |
| original culture source: | Environment Canada |
| days to first brood: | 11 |
| mean brood size: | 23 |
| ephippia in stock culture: | no |
| age of test organisms: | <24 hours old |
| culture mortality (%): | 0% |

**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 |

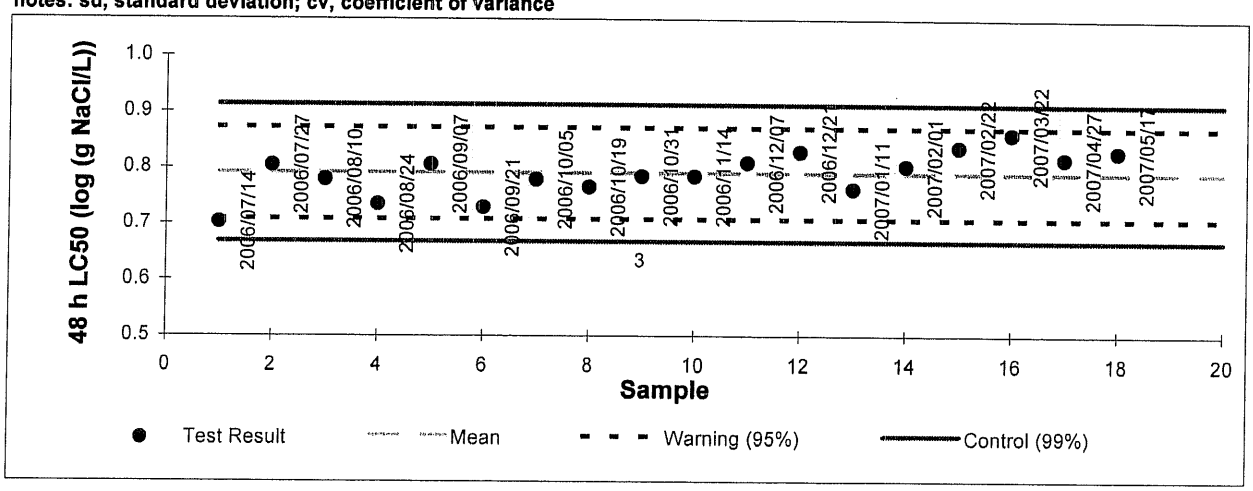
**Current Test**

| | | | | | |
|---|---|---|---|---|---|
| toxicant | Sodium Chloride (NaCl) | | | | |
| started on | 2007/05/15 | ended on | 2007/05/17 | | |
| Result (LC50 @ 48h) | 0.83 | log (g NaCl/L); geometric mean | | | |
| Confidence Limits (95%) | lower | 0.81 | upper | 0.85 | |

**Historical Values**

| | | | | | |
|---|---|---|---|---|---|
| mean | 0.79 | sd | 0.04 | cv(%): | 5 |
| | lower | upper | | | |
| warning limits (±2 sd) | 0.71 | 0.87 | (95% confidence limits) | | |
| control limits (±3 sd) | 0.67 | 0.91 | (99% confidence limits) | | |

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




**Quality Assurance Unit:**

Authorized by G. Diaz, B.Sc., Quality Assurance Officer
The test data and results are verified correct.





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