

DE BEERS

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October 29, 2015

File: L020

Marc Casas and Jen Potten
Mackenzie Valley Land and Water Board
PO Box 2130
Yellowknife, Northwest Territories
X1A 2P6

Dear: Mr. Casas and Ms. Potten,

Re: MV2011L2-0004 Results of Annual Fat Head Minnow Early Life Stage Testing

De Beers Canada Inc. (De Beers)' Water License, MV2011L2-0004 requires the completion of an annual toxicity test at SNP 02-20, in accordance with Environment Canada Method EPS/1/RM/28.

The testing for Fathead Minnows commenced on September 30, 2015. The test water sample was a composite sample from four diffuser locations, to be tested at 100% concentration only. A single fish mortality in the 100% treatment solution was observed prior to Day 4. Mortality started to increase on Day 4 and continued through to Day 7. De Beers and its consultant Golder Associates Limited have reviewed the certified laboratory results from HydroQual and have determined that there were no unusual circumstances such as: the condition of the larval fish as received from the supplier; water quality measurements made during the test (i.e., no unusual dissolved oxygen or pH measurements); nor results from the reference toxicant test. No corresponding effects were seen in the 7-d Rainbow Trout embryo viability test, and effects on *Ceriodaphnia* reproduction in the individual diffuser station samples collected at the same time were also of lower magnitude response. Results of these tests will be summarized in the September Surveillance Network Program (SNP) report.

Typically the next step when such a result is received is to resample. However, conditions are not currently safe to traverse the lake due to insufficient ice thickness. The next planned sampling event will occur in January and it is planned to resample for Fathead minnow testing at that time.

De Beers – Mining, Canada

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Should you have any questions or concerns, please feel free to contact me by phone at (867) 766-7308 or by email at Alexandra.Hood@debeersgroup.com .

Sincerely,
DE BEERS CANADA INC.



Alexandra Hood
Environment and Permitting Superintendent

cc

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