



Northwest Territories Resources, Wildlife and Economic Development

RECEIVED

APR 23 2003

MACKENZIE VALLEY
ENVIRONMENTAL IMPACT
REVIEW BOARD

April 17, 2003

Glenda Fratton
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
2nd Floor Scotia Center, 5102-50th Ave
Yellowknife, NT
X1A 2N7

Dear Ms Fratton

Government of the Northwest Territories
GRIZZLY BEAR CALCULATIONS

The Wildlife and Fisheries Division of the Government of the Northwest Territories (GNWT) has reviewed the response by De Beers to questions posed by the Mackenzie Valley Environmental Impact Review Board.

Our review indicates a major statistical error in the response provided by De Beers to the MVEIRB. On page 10 - Table 1, De Beers' attempts to calculate natural variation in mortality statistics for the Regional Study Area (RSA) based on survival statistics calculated for the Slave Geologic Province by McLoughlin *et al.* (2003). While the calculation of the mean annual mortality rates are acceptable, it is not appropriate to calculate the 95% Confidence Intervals (CI) in the same way. The analysis, as calculated, indicates a high confidence in survival rates (plus or minus 4.5% at the 95% confidence level) but extremely low confidence in mortality rates (plus or minus 31.8%). As these calculations are based on the same data, this result is not possible.

A preferred approximation would be to calculate the CI proportionally to the calculated mortality rate (i.e. plus or minus 4.5%). This would result in the expected natural mortality in the RSA to range from 3.64 grizzly bears to 3.77 grizzly bears (mean 3.52 grizzly bears) over the 26 years of the life of the mine. Alternatively, De Beers could simply apply the survival estimate and confidence intervals to the estimated number of bears in the RSA. Using this approach, any additive mortality in the RSA during the life of the mine would likely be in excess of natural variation (Q(7) Request 2) for that area.



Note that this error does not change the conclusions reached by DeBeer's in their response to Q(8) Request 2. It does, however, highlight the need for effective mitigation and management practices.

Sincerely

A handwritten signature in black ink that reads "Gavin More". The signature is written in a cursive style with a large initial 'G'.

Gavin More
Environmental Assessment Analyst

Cc Ray Case
Wildlife and Fisheries