



Table of Submission for Technical Meeting – June 20, 2011. Shear Diamonds (Nunavut) Corp. – Submissions for Technical Meeting for the Renewal of the Jericho Type “A” Water Licence 2AM-JER0410.

Please refer to Item #65 - Aquatics Effects Monitoring Plan – Environment Canada - Reference 3.6.2.1

EC seeks clarification as to whether Shear will undertake and report on statistical analyses both with all data in and with outliers removed. To that end, EC also seeks excluded from the data set clarification on how outliers will be determined and excluded from the data set.

Outliers will be identified as part of the overall data QA/QC process. This process will include the assessment of all data prior to statistical processing to identify any potential bad data. For example data that may have been coded incorrectly or subject to improper laboratory techniques or equipment malfunctions.

If the data is found to be erroneous, then it will be corrected, if possible, or documented and removed from the dataset. If it is not possible to determine if the outlier is bad data, depending on the number and nature of the outliers encountered, outlier significance will be determined or consideration of use of robust statistical techniques. The main aim of the outlier identification process is to identify, correct, or remove erroneous data. Data that is not proven erroneous will not be removed from the data sets.

Identifying of potential outliers will initially be performed using graphical representations. Proposed techniques will include application of normal probability plots, scatterplots, standard deviation plots (significance at 2.5 STD from Mean), histograms and box plots. These tests will be performed for each dataset, and where warranted for each component or variable. The distribution of data will be assessed and presence, number, or trend of potential outliers noted.

Depending on the findings of the initial outlier assessments, either single or multiple outliers identification statistical tests will be performed. For multiple outliers measures will also be taken to ensure masking or swamping are avoided with supplemental graphical assessments. Statistical identification of possible outliers will be performed using a Z-Scores test or for small sample sets a modified Z-Scores test (Iglewicz and Hoaglin) with outliers identified as those with an absolute value greater than 3.5.

Following identification of outliers (graphically and statistically), measures will be taken to identify, fix or remove identified erroneous data. All remaining outliers will be subjected to formal testing. If only a single outlier is noted a Grubb's Test will be used. If multiple outliers are identified and the exact number is known a Tietjen-Moore Test will be applied. If multiple outliers are identified and the exact number is not known a Generalized Extreme Studentized Deviate Test will be run.

In addition to these techniques to correct and identify potential outliers, appropriate test will also be conducted prior to formal statistical analysis. The chosen method of identification, assessment of significance, and diagnostics of effect will vary depending on the type of analysis being performed and the properties of the dataset.