Description of the Data Files for the
Mactung Project 2008 Hydrometeorological Survey Report

The data directory section of the Mactung Project 2008 Hydrometeorological Survey Report CD contains all the field data with respect to meteorology and hydrology that was collected by Hay & Company Consultants, a division of EBA Engineering Consultants Ltd. (Hayco) over the period from July 14, 2005 to August 27, 2008 in engineering units. The data is contained in two directories: meteorological data and hydrological data. All the files are in a space delineated format with the file extension "txt". A flag of -9999 is used to indicate records with no data.

1.0   METEOROLOGICAL DATA

There are four meteorological station files included with this CD. They contain the data recorded by the meteorological station Hay & Company installed at the Mactung Property, as well as data recorded at Macmillan Pass and downloaded from the Environment Canada website.

1.1   HOURLY METEOROLOGICAL DATA

The data file named "**Mactung_meteorological_station_data_2005-2008.txt**" contains space delineated meteorological data recorded at the Mactung Camp for each hour over the period of July 14, 2005 to August 27, 2008. The data was collected at 15-minute intervals and was low pass filtered and sub-sampled at hourly intervals such that only the hourly data is contained in this file. The file format is such that each data record represents one sample time period.

The 10 data columns identified from left to right are year, month, day, hour, minute, wind vector [u] [m/s], wind vector [v] [m/s], air temperature [C^{o}], relative humidity [%] and incident solar radiation [W/m^2]. The wind vectors are resolved on a Cartesian grid, u being flow to the east, v being flow to the north.

The data file named **"Macmillan_meteorological_station_data_2004-2008.txt"** contains space delineated hourly meteorological data recorded at Macmillan Pass for each hour over the period of December 1, 2004 to August 30, 2008. The data was downloaded from the Environment Canada website and was put into a format such that each row represents one sample time period.

The 10 data columns identified from left to right are year, month, day, hour, minute, wind vector [u] [m/s], wind vector [v] [m/s], air temperature [C^{o}], relative humidity [%], and barometric pressure [hPa]. The wind vectors are resolved on a Cartesian grid, u being flow to the east, v being flow to the north.

1.2   DAILY METEOROLOGICAL DATA

The data file named **"Daily_prec_MSC_MacMillanPass_1998-2007.txt"** is the daily precipitation saved at midnight each day.

The 8 data columns identified from left to right are year, month, day, hour, minute, Total rainfall [mm/day], Total snowfall [cm/day] and total precipitation [mm water equivalent].

The data file named **"Mactung_Daily_Meteorological_data_2005 to 2008.txt"** is the daily mean, maximum and minimum data saved at midnight each day.

The 13 data columns identified from left to right are year, month, day, hour, minute, maximum wind speed [m/s], 3 columns for maximum, mean and minimum relative humidity [%], 3 columns for maximum, mean and minimum air temperature [ºC] and maximum incident solar radiation [W/m^2].

2.0   HYDROLOGICAL DATA

This directory contains the stream flow data collected at 15 minute intervals for the three stations (Hess River South Tributary and Tributary A) that were monitored over the study period as well as Tributary C discharges calculated from Tributary A discharge measurements.

The Tributary A discharge data is contained in the file **"Tributary_A_hydrograph_2006-2008_data.txt"**.

The Hess River South Tributary discharge data is contained in the file **"Hess_R_S_Tributary_2008_hydrograph_data.txt"**.

Each space delineated data file contains 9 data columns identified from left to right as year, month, day, hour, minute, water temperature [°C], stage [m], creek discharge [m³/s] and manual creek discharge measurements [m³/s].

The Tributary C discharge data is contained in the file **"Tributary_C_hydrograph_2006-2008_data.txt"**. and contains 7 data columns identified from left to right as year, month, day, hour, minute, creek discharge [m³/s] and manual creek discharge measurements [m³/s].