reanalyses that may come out of these tests will be made known as soon as possible.

Electrochemical Fluorine Analysis

An electrometric method was used for determination of extractable fluorine. This analysis was based on specific ion electrode measurements in a procedure adapted from standard F^- electrode techniques. Extractable F^- was analyzed in the acid extracts for each sample remaining after the ICAPES analyses. These acid extracts had to be diluted 1:200 in order to minimize the Fe and Al interference in the fluoride analysis; consequently, the lower limit of quantitation is at about 30 ug/g extractable. Nevertheless, a sufficient number of samples reported high enough concentrations that areas of relatively high extractable F-concentrations were delineated.

EDXRF Multi-Element Analysis

All 344 sub-samples have been analyzed as total sediment for elemental composition on the KEVEX 0600 Ultratrace EDXRF system. This energy dispersive x-ray fluorescence spectrometry analysis simultaneously provides qualitative and semi-quantitative estimates of 30 elements, ranging in atomic number from aluminum through uranium. These results are useful in identifying major changes and trends in the samples and are helpful in interpreting results from the ICAPES analyses. Analytical results are included in the computer data base but are not included in this report.

DATA ANALYSIS

Statistical Analysis

Data from sediment and chemical analyses were compiled and merged with data collected in the field and during laboratory subsampling and processing using a combination of Statistical Analysis System (SAS) programs and Symphony worksheets and data bases. Each sample number has a location with respect to latitude and longitude, LORAN-C coordinates, and name of water body (tributary name or segment of river). Additional information assigned to each sample number includes depth below sediment/water interface, hydrographic parameters (water depth, salinity, and temperature), concentrations of 24 elements (major, minor and trace elements), organic content, and concentrations of sediment size components (sand, silt, and clay). This data is stored in data bases on the ECU's IBM 4381 mainframe computer with backup copies stored on PC hard disks and floppy disks. These data can be transferred to other formats via 7-bit ASCII format files.

Simple statistics (mean, standard deviation, maximum and minimum values, etc.) were calculated for all samples (computer data base) and for groups of samples within individual tributaries or river segments (computer data base). These analyses provide for stratigraphic, sedimentologic, and regional comparisons in sedimentological and elemental concentrations. Results of these statistical analyses are presented and discussed in subsequent sections. Correlation coefficients were calculated for all combinations of sedimentological and chemical variables to evaluate simple