**Susitna-Watana Hydroelectric Project**

**2013 Baseline & Mercury Assessment Water Quality Study**

**Sediment Data Dictionary**

Sediment samples were collected at the mouths of four tributaries along the Susitna River in September 2013. This document describes the standard abbreviations used in the MS Excel database used to assemble tables and graphs and to report values. Further, it describes the nomenclature for labeling sample bottles and identifying sample locations. The sediment data, formatted per AEA project data guidelines (April 2013), is described in the following sections. Each section corresponds to the column heading in the Excel database.

# PROJECT\_ID

Describes the project identification for sediment samples given by the SGS Analytical Laboratories, Anchorage, Alaska.

# LAB\_WORK\_ORDER

Describes the lab work order number assigned to a batch of samples by SGS Analytical Laboratories, Anchorage, Alaska.

# SAMPLE\_ID

Describes the sample ID given to each sediment sample by the field crew at the time of collection. This sample ID was recorded on the field form, sample bottle, and COC. The sample ID includes a combination of letters and numbers to identify the sample location within the project area, water column and location along the river. The first two letters of the sample ID identify the type of study, WQ = Water Quality. The next two letters of the sample ID identify sample type, SD = Sediment. The next letter in the sample ID identifies the type of WQ study, B = Baseline. These letters are then followed by the name of the creek at which the samples were collected; Goose Creek, Jay Creek, Kosina Creek or Oshetna Creek. The sample number follows the creek name. Three samples were collected at each location. Duplicates were collected for two samples and are indicated by a “0” at the end of the sample ID.

# SAMPLE\_TYPE

This field indicates the sample type, sediment or sediment-EB for equipment blank.

# SITE\_NAME

Describes the name of the site where the samples were collected.

# SAMPLE\_NO

This field describes sample number given to each sample on the field datasheet, sample ID, and COC.

# GPS\_Coord\_Latitude

This field gives the global positioning system (GPS) latitude (WGS 84) for the sample location.

# GPS\_Coord\_Longitude

This field gives the global positioning system (GPS) longitude (WGS 84) for the sample location.

# DUPE\_Y\_N\_EB

This field indicates whether the sample collected was a duplicate (Y=Yes, N=No) or an equipment blank (EB).

# PARENT\_SAMPLE

This field indicates the parent sample ID for each field duplicate.

# MATRIX

This field describes the sample matrix; WATER for the equipment blank sample and SEDIMENT for the sediment samples.

# SAMPLE\_COLLECT\_DATE

This field indicates the date which the sample was collected.

# SAMPLE\_TIME

This field indicates the time each sample was collected.

# COLLECT\_DATE\_TIME

This field has both the sample collection date and the time of sample collection.

# SAMPLING\_DEVICE

This field describes the sampling device which was used to collect the sample. SS is short for stainless steel.

# WEATHER\_SITE\_OBS

This field includes the weather and site observations from the field datasheets that the field crew transcribed during sampling.

# LAB\_SAMPLE\_ID

This field describes the unique lab sample ID number assigned to each sample by SGS Analytical Laboratories, Anchorage, Alaska.

# ANALYTE

This field indicates the sediment or water quality constituent that was analyzed and reported for each sample. The analytes for sediment samples include: Aluminum, Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Mercury, Nickel, Selenium, Total Organic Carbon, and Zinc. All sediment samples were analyzed for total metals.

# DISSOLVED

This field indicates whether the sample was filtered prior to analysis. All analysis conducted for sediment samples were not filtered given the nature of the sample and represent “total” results. This is indicated by a “\*” in column S.

# RESULT

This field reports the results associated with the analysis of each constituent listed in column R for each sample. Results give a “U” flag by the lab were reported as “ND” for non-detect.

# LAB\_RESULTFLAG

This field reports the qualifier given to the result listed in column T by SGS Analytical Laboratories. Qualifiers given to data by the lab include: “=” which means the result is not qualified and is equal to that reported by the lab in column T, “U” which indicates the analyte was analyzed for but not detected above the method detection limit, and “J” which indicates that the result is an estimation.

# RESULTFLAG\_POST\_QAQC\_VAL

This field reports the data qualifier given to the results listed in column T by Tetra Tech following extensive data quality assurance and quality control as well as data validation. In cases, the qualifier in this column will differ from that given by the lab in column U. Data qualifiers given to the results in column T by Tetra Tech include: “=” which means the result is not qualified and is equal to that reported by the lab in column T, “U” which indicates that analyte was analyzed for but not detected above the method detection limit, “J” which indicates that the result is an estimation, “J+” which indicates that the result is an estimation and biased high, and “J-“ which indicates that the result is an estimation and biased low.

# RESULTFLAG\_COMMENTS

This field contains comments describing why Tetra Tech assigned data qualifiers in column V to the sample results.

# UNITS

This field indicates the units of measures for each analyte.

# DL

This field reports the method detection limit for each sample and analyte. This field is reported by SGS Laboratories and can vary between samples given procedures followed in the lab.

# REPDL

This field reports the reporting limit for each sample and analyte as determined by SGS Analytical Laboratories.

# DUPE\_RPD

This field reports the relative percent difference between field duplicate sample results and the parent sample results.

## AB. QC\_COMMENTS

This field includes any notes and/or comments from the data entry personnel when transcribing the laboratory data from pdf to excel.

## AC. QC\_1\_Review

This field indicates the date and field personnel who reviewed the field forms on the day the sample was collected.

## AD. QC\_2\_Review

This field indicates the date and personnel who performed the data entry and data entry QC.

## AE. QC\_3\_Review

This field indicates the date and personnel who performed the senior review and QC on the data after data entry but before final submittal to AEA.