

## MUD CREEK WPCP STANDARD OPERATING PROCEDURES

### II. COLLECTING REPRESENTATIVE SAMPLES

The analytical results of a sample are only as accurate as the quality of the sample taken. If your sample collection technique is poor, then no matter how accurate your lab procedures are, the results will be poor. By sampling according to set procedures, you reduce the chance of error and increase the accuracy of your sample results.

- **Flow Measurement Device and Method**  
Automatic sampler – MUD CREEK utilizes two (2) ISCO 4700 Refrigerated Samplers, one (1) each at the influent and effluent respectively. These devices collect samples by periodically pumping a sample into a sample bottle or sample bottles. The sampler is triggered to sample by the amount of liquid that passes by a flow-measuring device (flow-proportioned).
- **Sample Types**  
Grab – Each sample shows the characteristics of the water at the time of sampling only. This type of sampling is done for such procedures as batch discharge, constant waste stream characteristics, and when the parameter tested deteriorates rapidly.  
Composite – MUD CREEK utilizes a 24hr composite whereby the individual samples are taken and deposited in the same collection bottle. There are two (2) common methods for collecting this type sample; Time paced – samples are collected at set increments of time and Flow paced – samples are taken when a measured volume of water passes over the sensor of a flow meter. Flow paced is the preferred method as it gives the most representative sample.

### III. EQUIPMENT CLEANING

- Sampler cleaning – The case can be cleaned with soap and water and rinsed down thoroughly. The sampler head and housing can be cleaned in the same manner if connector terminals are covered.
- Tube cleaning – The sampler tubing is cleaned at least once every two (2) weeks using the following procedure:
  1. Pump hot tap water through the tubing and run the sampler for at least two (2) minutes.
  2. Rinse the tubing with a 20% hydrochloric acid solution for two (2) minutes. Safety precautions must be used when handling this chemical solution; where safety gloves and glass.
  3. Rinse tubing again by pumping hot water through for two (2) minutes.
  4. Finally, rinse the tubing by pumping distilled water through for at least one (1) minute. Afterwards, stop the pump and allow water to sit in the line for another minute. Then continue pumping distilled water through the tubing for final rinse.

Note: Based on wear and tear, old tubing will be replaced with new tubing as needed.