Sample, Replicate and Blank Collection Techniques

All samples shall be collected as 24-hour time-weighted composite samples or grab samples at a nominal volume of 2 liters. Two 2-liter samples shall be collected simultaneously; however a single 4-liter sample cannot be split into a sample and its replicate. In addition all required sampling events shall provide for the collection of field replicate and rinsate blank samples.

Sample and Replicate Collection Techniques for Continuous Discharges

Sample collection technique during dry weather conditions

Dry weather conditions are defined as when no rainfall (defined as less than 0.1 inches) has occurred within the previous 72 hours. Samples collected from continuous discharges during dry weather will be taken as 24-hour time-weighted composites samples at a frequency of not greater than one aliquot every hour for a nominal sample volume of 2 liters for both the sample and the field replicate.

Sample collection technique during wet weather conditions

Wet weather conditions are defined as following the onset of a precipitation event of 0.1 inches or greater **and** an increase in wastewater flow, provided that no rainfall (defined as less than 0.1 inches) has occurred within the previous 72 hours. Samples collected from continuous discharges during wet weather flows will be taken as 24-hour time-weighted composite samples at a frequency not greater than one aliquot every hour for a nominal sample volume of 2 liters for both the sample and the field replicate. Sampling should start no sooner than 2 hrs prior to the start of the rising hydrograph or no later than 30 minutes after the start of the rising hydrograph for the discharge

Sample and Replicate Collection Techniques for Non-Continuous Discharges

Non-continuous dischargers refer to either batch discharges which occur intermittently and are not precipitation-induced or to storm water discharges which occur during and/or after precipitation events but do not provide for continuous long-term discharge.

Sample collection technique for Batch Discharges

A two liter grab sample will be collected into a laboratory supplied bottle, sealed and stored at between 0-4 degrees C for shipment. A replicate sample will be collected and treated in the same manner as the sample.

Sample collection technique for Storm Water Discharge

A two liter grab sample will be collected into a laboratory supplied bottle within 30 minutes of the start of the discharge, sealed and stored at between 0-4 degrees C for shipment. A replicate sample will be collected and treated in the same manner as the sample.

Field Replicates and Rinsate Blanks Collection

Field Replicates

Field replicate samples are defined as "Independent samples that are collected as close as possible to the same point in space and time. They are two separate samples taken from the same source, stored in separate containers, and analyzed independently." They are required as a backup for the analytical laboratory and will be analyzed in the event of:

> Damage to the primary sample during shipment and handling (e.g., sample bottle broken).
>
> and/or
>
> If lab blanks associated with the analysis of the primary sample show clear evidence of contamination.

Therefore, replicate samples should be shipped to the laboratory and held for possible analysis. EPA method 1668A provides for the storage of aqueous samples for up to one (1) year.

Rinsate Blanks

Rinsate blanks are defined as "a blank consisting of analyte-free media which has been used to rinse the sampling equipment. It is collected after completion of equipment decontamination and prior to sampling." Water and sample bottles used in the collection of rinsate blanks shall be supplied by the laboratory which will be performing the analysis. The laboratories shall certify that the bottles and water are PCB free.

Trip blanks are not required, but may be collected at the samplers' discretion.

Rinsate Blanks will be collected and analyzed with the following frequency:

a. A rinsate blank per sampling event per piece of sampling equipment shall be collected.
b. One (1) rinsate blank per sampling event shall be analyzed. Concentrations from this rinsate blank contamination will be compared to the rinsate blank acceptability criteria. If rinsate blank exceeds acceptability criteria, then other samples shall be analyzed to confirm the level of contamination. Alternatively, resampling shall be conducted.

Rinsate Blank Collection Methods.

1. Rinsate Blank collection for 24-hour time-weighted composite samples:
   a. Two liters of laboratory supplied water is passed through all sample collection equipment that contacts the sample into a lab supplied 2 liter PCB free glass jar. Upon completion of rinsate blank collection, the bottle will be sealed and stored at between 0-4 degrees C for shipment. If contamination by the air surrounding the sampler or sample location is an issue, then an air blank sample may be collected by having a 2 liter bottle of lab water open to the air in a separate sampler or in an equivalent sampling environment for an equivalent amount of time that the composite sample is collected. Upon completion of the composite sample collection, seal the air blank and store at between 0-4 degrees C for shipment.
2. Rinsate Blank Collection for Grab Samples
   a. Two liters of laboratory supplied water is poured into a lab supplied 2 liter PCB free glass jar in the vicinity of the sampling location, sealed and stored between 0-4 degrees C for shipment.