ENDYNE, INC.

Laboratory Services

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PROCEDURE FOR SURFACE WATER SAMPLING, PRESERVATION AND TRANSPORT

These are general guidelines for the collection of surface water samples. Project specific Sampling Plans take precedence over these guidelines as long as sample preservation requirements are maintained. Any deviations from the sample preservation requirements must be documented on the Chain-of-Custody submitted to the Laboratory.

Select a location suitable for obtaining a representative sample. In flowing brooks and streams, the sampling point should be located in the path of flowing water. Avoid stagnant eddies and pools. Always approach sample locations from downstream, so not to stir up sediment in or along streambed.
Samples of lakes and ponds should be taken at a sufficient distance from the shore to avoid sediment disturbances. Samples should be collected below the water surface to exclude floating particles and debris.

Sample Collection: Don disposable gloves. With the bottle or vial still capped, immerse beneath the surface of the water. Ideally, do not allow any non-gloved surfaces of hands or arms to contact the water. Open the vial or bottle and allow filling with water. Lift the container out of the water and dispose of contents on bank or in stream, down stream of sampling point. Repeat.

- Rinse the sample bottle with the water to be collected.
- Empty the container downstream of the collection point or on the ground. Do Not agitate the sediment while rinsing.
- Withdraw the sample and decant a volume so that the water level is not above the neck of the bottle or threads of the cap.
- Add Chemical preservations if necessary, Cap and place sample immediately in ice bath if refrigeration is required.

Sample Collection for bottles which require "No Air Bubbles", including Alkalinity, Volatile Organics, etc.

- Rinse the bottle twice
- Immerse and fill the bottle or vial a third time, while submerged, swirl to insure that no trapped air bubbles are located inside bottle.
- While bottle is still submerged, put the cap on the bottle.
- Withdraw the sample and inspect for Air bubbles. Repeat procedure until no air bubbles are observed.

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PROCEDURE FOR SURFACE WATER SAMPLING, PRESERVATION AND TRANSPORT Continued

Alternative sampling procedure if submersing the sample bottle is impractical due to sampling conditions or chemical preservatives already in the sample bottle.

- Use an alternative sampling device such as a bailer or an extra sample container to collect water.
- Decant contents of sampling device into the sample container to be submitted to the Laboratory.

Sample Identification: Ensure the sample is clearly identifiable when delivered to the laboratory. Label with project name, location identification, name of sampler, date, and time of collection. At the minimum, ensure the sample bottle is uniquely traceable to the correct sample on the chain-of-custody.

Chain-of-Custody and Sample Delivery: The Chain-of-Custody (CoC) is a legal document.

- It's accurate completion is necessary to validate the integrity of the samples.
- Write clearly so that the laboratory correctly enters the information on to the report; sample identification, collection dates and times, etc.
- Sample descriptions on the bottle should exactly match the sample description on the CoC.
- Document on the CoC any concerns that the laboratory should be aware of that may affect the data quality or ability to safely and accurately analyze the samples. For example: strong petroleum odor or lots of sediment, etc.
- Every person who takes custody of the samples, even for a short period of time, must sign the CoC.
- If shipping, the last person to have possession of the samples should indicate the means of delivery to the Laboratory.
- Once samples have been transferred to a cooler and the cooler is sealed, the courier service, etc. does not need to sign the CoC.
- Samples should be delivered to the laboratory as soon as possible. Sufficient ice or ice packs must be used to ensure the samples are less than 6 ^{o}C.