

Sampling Aids - should include core or thief samplers, bottom samplers, liquid and solid waste samples, augurs, recorder, and a calculator. The Inspection Team may also need to carry supplies of distilled water, reagent grade solvents, and containers to clean the samplers and decontaminating solutions to aid in a spill.

There should also be a sufficient amount of labels, receipts, stickers, seals, etc., (pre-numbered and with space for dating, signature, and printed identification), recording notebooks and other record keeping documentation, as appropriate.

Sample Storage/Transport - should include numbered cold boxes which can be secured and sealed for sending sets of samples to a controlled and secured laboratory, perhaps analogous to the containers used to transport certain radioactive materials.

Sampling Equipment:

The samples to be transported for off-site analysis should be packaged as described above and repackaged in safe/secure refrigerated containers according to safety product information (include in container) and shipped in accordance with pertinent national environmental and public health regulations to the central laboratory for analysis. At the laboratory the samples will be unpacked, identified and weighed in accordance with the procedure for chain of custody of samples and verified with the identification provided by the inspectors. The material courier receipts will be documented to assure sample integrity and control.

Tags and seals: Sealing and identification devices must be simple, relatively inexpensive and unique on the basis of features easily and permanently affixed to a sample. Verification of the authenticity and the integrity of the seal also should be relatively simple. In many existing and proposed systems, the seal is simple but the method for authentication is prohibitively complex. The following candidate methods preserve identity of samples from collection to analysis and satisfy a major verification problem, i.e., keeping track of samples in transit. Three dimensional reflective systems, passive interrogation systems with unique identity, methods that exploit biological specificity, and methods for permanently affixing tags and seals are relatively mature technologies that can be incorporated into sampling and transport schemes to ensure integrity.