

September 7, 2018 OQA Listserv Notice

Field Reagent Blank (FRB) and/or Trip Blanks

It has come to the OQA's attention that not all certified laboratories are following the requirements for Field Reagent Blanks (FRB) and Trip Blanks. The use of 'laboratory' below, is specific to the laboratory performing the testing.

From EPA Method 504.1, Section 8.1.1 and EPA Method 524.2, Section 8.3.1 - Field Reagent Blanks (FRB) Duplicate FRBs must be handled along with each sample set, which is composed of the samples collected from the same general sample site at approximately the same time. At the laboratory, fill field blank sample bottles with reagent water and sample preservatives, seal, and ship to the sampling site along with empty sample bottles, and back to the laboratory with filled sample bottles. Wherever a set of samples is shipped and stored, it must be accompanied by appropriate blanks. FRBs must remain hermetically sealed until analysis. The laboratory must provide duplicate FRBs with each sample set, prepared at the testing laboratory with all necessary preservatives added prior to shipping the FRBs. The testing laboratory must analyze an FRB for every instance where an analyte is detected in a water sample. Samples received not accompanied with the appropriate blanks shall be qualified in the report.

Furthermore, for New Jersey Pollution Discharge Elimination System (NJPDES) testing, "Conditions Applicable to All NJPDES permits", N.J.A.C. 7:14A-6.5(b)4, Monitoring: Monitor in accordance with the edition of the Department's "Field Sampling Procedures Manual (Manual)" applicable at the time of sampling or an alternate method approved by the Department. The Manual describes the requirements for trip blanks.

From Subchapter 6 of the NJDEP Field Sampling Procedures Manual, Section 2.5.5.1 for Sample Handling and Holding Times: Handling Time: Blank samples must travel with sample containers and must arrive on-site within one day of their preparation in the laboratory. Blanks and their associated samples may be held on-site for no longer than two calendar days and must arrive back in the laboratory within one day of shipment from the field. This constitutes the maximum 4-day handling time. Exceptions to this NJDEP QA/QC imposed requirement may be granted by managers overseeing a project when legal holidays or weekend sampling conflict with laboratory shipment practices. Without exception, blanks and all samples must be maintained at 4°C while stored on-site and during shipment. Sample bottles and blanks must be handled in the same manner prior to their return to the laboratory.

For regulated wastewater testing: From EPA Methods 624 and 624.1, Section 3.2 for Interferences: Samples can be contaminated by diffusion of volatile organics (particularly fluorocarbons and methylene chloride) through the septum seal into the sample during shipment and storage. A field reagent blank prepared from reagent water and carried through the sampling and handling protocol can serve as a check on such contamination.

Also, if a laboratory is purchasing sample containers that are not certified to be contaminant-free or are cleaned or otherwise altered after receipt (independent of the matrix being sampled and tested) the laboratory receiving and performing the alterations of the sample containers shall ensure that the sample containers have been demonstrated to be free of contamination prior to use in sample collection. Such demonstrations shall be documented, and the documentation retained by the entity providing the sample containers. All laboratories performing testing where FRBs and trip blank requirements apply, and all facilities collecting samples for analysis, must follow these requirements.