

APPENDIX I

MICROBIOLOGICAL SAMPLING TECHNIQUE FOR DRINKING

Sample Size: For most purposes, a 100 to 120 ml sample will suffice. Prior coordination with the testing agency is recommended.

Type Container: A sterile, clean container with a screw cap will be used in microbiological sampling. EPA approved water sampling bags containing sodium thiosulfate may also be used.

PROCEDURE

I-1. Open the cold water tap and allow the water to flow freely for several minutes to ensure drawing water directly from the mains. Determine the chlorine residual and pH, and record the value.

Note: Samples must not be collected from faucets with aerators, swivel or add-on devices unless these devices are removed before running the water in this step.

I-2. Reduce the flow to produce a small stream of water. Carefully remove the cap or stopper of the sample bottle by grasping the outside of the cap. Do not touch any surfaces which the sample will contact. Hold the cap in the hand. Fill the bottle to within one-half inch of the bottom of the neck and replace the cap.

I-3. Complete, the information required on DD Form 686 (Fluoride Bacteriological Examination of Water) identifying the sample as to exact source, time of collection, chlorine residual, special circumstances if any, and the address to which the report will be forwarded. Identify the sample bottle and the data card by the same number.

I-4. Sodium thiosulfate should be added to the sample container before collection of the sample. This chemical stops the bactericidal action of the

chlorine residual present in the drinking water sample. Consult the current edition of *Standard Methods for the Examination of Water and Wastewater* for preparation of this chemical. DO NOT RINSE OR FLUSH THE SAMPLES CONTAINER PRIOR TO COLLECTING THE SAMPLES AS THE SODIUM THIOSULFATE WILL BE WASHED OUT!

I-5. In the case of individual potable water samples sent to the laboratory by courier, the elapsed time between collection and examination will not exceed 6 hours. (The exception to this 6-hour rule is for samples mailed from distant installations; these samples may be held for up to 30 hours.) Samples will be refrigerated to 4° C during shipment. The time and temperature of storage of all samples will be recorded and must be considered in the interpretation of data.

I-6. Flaming water taps before collecting potable water samples is not necessary if reasonable care is exercised in the choice of sampling tap (clean, free of attachments, and in good repair) and if the water is allowed to flow at a uniform rate before sampling. Alterations in the valve setting to change the flow rate during collection could affect the sample quality. Superficially passing a flame from a match or an alcohol-soaked cotton applicator over the tap a few times may have a psychological effect on observers, but it will not have a lethal effect on attached bacteria. The application of intense heat may damage the valve-washer seating or create a fire hazard to combustible materials next to the tap. If successive samples from the same tap continue to show coliforms, the tap maybe disinfected with a hypochlorite solution to reduce external contamination as the source of these organisms.