Directions for PFAS Sample Collection

These directions are intended for personnel authorized by the purveyor of the drinking water system. The samples collected at your water system are to identify any levels of PFAS (per- and polyfluoroalkyl substances).

This sampling effort is not being carried out under any federal regulation and is entirely voluntary. It is being provided as an EPA service to public water systems on Tribal land.

EPA will coordinate with the designated sample collector, to identify the sampling locations and number of samples needed. Raw water samples will be collected at a raw water tap location before the pressure tank, treatment or chemical addition. Finished water samples will be collected at the designated entry point tap, which is a location in the PWS after the pressure tank, treatment or chemical addition, but before the distribution system. This project requires a one-time sampling event at the public water systems, and EPA may follow up with recommendations for additional sampling.

EPA will arrange for the sample collectors to receive sample bottles, and to ship the finished drinking water samples to the lab for analysis. See below for shipping guidance.

This sampling guidance is prepared in accordance with USEPA Method 533 available at

www.epa.gov/dwanalyticalmethods/method-533-determination-and-polyfluoroalkyl-substancesdrinking-water-isotope

- 1. Sampling Equipment
 - a. You will receive multiple 250-mL polypropylene sample bottles in which the samples must be collected. These bottles will contain ammonium acetate which helps chemically preserve the sample.
 - b. You will also receive Field Blanks, which are sample bottles filled with PFAS-free water (verified by the laboratory) and preservatives, as well as an empty sample bottle. These are to be used as outlined in the sample procedure below.
 - c. You will receive a trip blank which is a bottle filled with PFAS-free water that is to NOT be opened. The bottle can stay in the cooler and sent back to the lab with the collected samples.
 - d. You will receive a cooler in which to store the samples for shipping back to the lab.
 - e. The operator or TA provider will need to procure wet ice for storing the samples inside the cooler.
- 2. Sampling Teams
 - *a.* **Two-person sampling teams are highly recommended**. Distributing the workload to ensure attention to the Sampling SOP is easier with a two-person team. PFAS sampling is highly vulnerable to cross contamination and a two-person team will help reduced the chance contamination.
 - b. When sampling for PFAS, a two-person team allows one person to be a dedicated "sample" handler, and the other person the dedicated "document" handler. One team member obtains the samples, and the other team member records the samples on the COC form with the sample collection information. If only one person is conducting the sampling, ensure care is taken to properly record all samples on the COC, and follow all the precautions noted in this

guidance.

- 3. Sampling Procedure (follow the steps in order)
 - a. The sample handler must wash their hands, with PFAS-free soap, before sampling and wear nitrile gloves while filling and sealing the sample bottles. PFAS contamination during sampling can occur from a number of common sources, such as food packaging and certain foods and beverages. Proper hand washing and wearing nitrile gloves will aid in minimizing this type of accidental contamination of the samples.
 - b. Bottle labels and the COC should be completed before sample collection with the exception of the sample time. Be sure to use a ball point pen. Other pens such as Sharpies contain PFAS compounds.
 - c. Open the Field Blank sample and pour into one of the empty sample bottles. Close the sample bottle, fill out the label and place it in a Ziploc bag and place in the cooler. Record the Field Blank identification number on the COC form. The empty Field Blank bottle does not need to be returned to the lab.
 - d. The presence of Teflon[®] and other fluoropolymer-containing materials should be clearly noted in the field notebook. Be sure to remove aerators, screens, washers, hoses, and water filters from the tap prior to flushing.
 - e. If the water source is in active use, only a short flush time is necessary (5 minutes) to ensure the impact of local sources of PFAS cross-contamination, such as Teflon[®] tape and valve seats, are minimized. If water source is not in active use, activate the source or open the tap and flush until the water temperature has stabilized, or until a minimum of one well casing volume has been flushed out (if the source is a well). Another approach is to run the source for 15 minutes before sampling to ensure that the sample reflects the water quality of the source.
 - f. Reduce the flow to a slow laminar stream to reduce air entrainment and overfilling of the bottle.
 - g. Uncap the sample bottle. Do not place the bottle cap on any surface when collecting the sample, and avoid all contact with the inside of the sample bottle or its cap.
 - h. Fill sample bottles, taking care not to flush out the sample preservation reagent. Samples do not need to be collected headspace free, but a volume of 250 mL is necessary for the sample analysis. Do not overfill.
 - i. After collecting the sample, cap the bottle and agitate by hand until preservative is dissolved. Keep the sample sealed from time of collection until extraction.
 - j. After sampling, insert sample containers into Ziploc bags. Tie a knot at the top of the inner bag around the sample containers.
 - k. Ice should not be placed outside of the cooler liner or the cooler may leak as the ice melts. As an alternative to a cooler liner, ice may be contained in double-plastic bags (e.g., 1- or 2-gallon Ziploc bags).
 - I. Place completed COC in a Ziploc bag and place them in the cooler on top of the outer liner.
 - m. Secure shut the cooler with packing tape before you ship it out.
 - n. Affix the shipping lab to the outside of the cooler.

4. SAMPLE SHIPMENT AND STORAGE – Samples must not exceed 10 °C during the first 48 hours after collection.

Minimize use of the following products on the day of the sample event, preferably **24 hours prior to the event**:

- Cosmetics, moisturizers, sun-blocks, insect repellants, fragrances, creams, or other personal care products (including hair products). Exceptions: Products that are known to be 100% natural.
- Other items that are likely to contain PFAS and to be avoided include:
 - Paper packaging for food or fast food.
 - New or unwashed clothing.
 - Clothing washed with fabric softeners or dried with anti-static sheets.
 - Synthetic water-resistant/or stain-resistant materials (such as waterproof clothing and shoes such as Gore-Tex), waterproof or coated Tyvek[®] material (special attention to boots).
 - Teflon[®] and other fluoropolymer-containing materials (e.g., polyvinylidene fluoride [PVDF], Kynar[®], Neoflon[®], Tefzel[®]).
 - Waterproof/treated paper on field notebooks.
 - Waterproof markers (such as Sharpie[®], etc.).
 - Chemical or blue ice, which may contain PFAS and may not reduce and/or maintain the temperature of the samples adequately.
- Avoid sampling in the rain if possible (if necessary, please use vinyl or polyvinyl chloride [PVC] rain gear).
- Avoid filling your gas tank the day of the sampling (prior to sampling)
- 5. On the Chain of Custody, write the following information:
 - a. The sampler's (your) name, position, signature and date.
 - b. Date (MM/DD/YYYY) and time (24-hour time) that each sample is being taken
 - c. If applicable, write comments, including any potential abnormalities during sampling procedures. Examples: water pressure was high causing water to splash out of bottle, bottle was too big to fit under drinking fountain and water spilled, etc.
- 6. On the sampling bottle, write the sample ID, your initials, date and time of the sample, and general location. Write "Ammonium acetate" in preservative box, and "PFAS" in analysis.
- 7. The chain of custody seal is a sticker that can be put over the lid of the cooler to show that nothing has been opened since the sample was taken. Please sign the seal and print the sampler's (your) name and date.
- 8. Mail the cooler back to the designated lab in accordance to the UPS shipping instructions. Include the chain of custody form.

Samples must be received by the lab with ice left in the cooler, or within 2 days of collection and below 10°C, so please ensure you return the samples promptly.

- 9. Scan and email a copy of the completed Chain of Custody form to your Program Manager.
- 10. Results from this monitoring effort and information about PFAS will be provided to you as soon as practical. However, if PFAS detections are found, EPA Region 9 will immediately notify the appropriate individuals (usually 1-2 working days after EPA Region 9 learns of the results).
- 11. Contact your EPA program manager if you have not received timely information regarding shipping or lab results or have any questions regarding these instructions.