

**Radionuclide Samples
Collected at Points-of-Entry (POE)**

COMPLIANCE SAMPLE COLLECTION INSTRUCTIONS

for

KANSAS PUBLIC WATER SUPPLY SYSTEMS

USING THE KANSAS HEALTH & ENVIRONMENTAL LABORATORIES



Kansas Department of Health and Environment
Bureau of Water
Public Water Supply Section

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Radionuclide Sampling at Points-of-Entry (POE)

Compliance radionuclide monitoring is part of the Radionuclide Rule. Radionuclide monitoring requirements are stated in the Code of Federal Regulations 40 CFR 141.26, and can be found online at the Kansas Department of Health & Environment, Public Water Supply Section website <http://www.kdheks.gov/pws> .

Radionuclide monitoring at POEs includes the following analytes.

GROSS ALPHA, EXCLUDING RADON & URANIUM

GROSS ALPHA, INCLUDING RADON & URANIUM

RADIUM-226

RADIUM-228

COMBINED RADIUM CALCULATION (RADIUM-226 + RADIUM-228)

COMBINED URANIUM MASS

The purpose of this document is to provide instructions for handling sampling kits from the Kansas Health and Environmental Laboratories (KHEL) for collection of compliance monitoring radionuclide samples. A Radionuclide Rules Survival Guide is available online at the KDHE, Public Water Supply Section website <http://www.kdheks.gov/pws/> , and is a more extensive guide on all facets of the Radionuclide Rule.

The Kansas Health & Environmental Laboratories (KHEL) is part of the Division of Environment under the Kansas Department of Health & Environment (KDHE).

Upon receipt of a sampling kit, it is best not to assume what is inside. Open and review the contents to

- Check the sample collection date that is on the sample submission form, and
- Check that the sample submission form shows your system's name and federal ID #.

What Is In A Radionuclide Sampling Kit from KHEL?

- 5 Liter rectangle, white plastic jug
- Sample submission form with the bottom half containing 8 small labels and two address labels.

The sample collector is responsible for making sure that each bottle in a sampling kit has one of the small labels from its sample submission form placed upon it. This ensures that the sample bottle and the sample submission form will stay with each other from time of collection all the way until the sample results are reported. Do not be concerned about any leftover, small labels; unused ones can be left on the form.

Collecting and Shipping the Inorganic Sample

The form inside the sampling kit will specify a time frame in which to collect the sample. The Collect On date is a suggestion of which week to collect the sample. The sample must be collected before the end of the compliance monitoring period (usually, within the calendar quarter or within the calendar year) or the system may incur a Failure to Monitor Violation.

Collecting

Before collecting the sample, read through the sample collection instructions that came in the sampling kit. For questions or concerns about the sample collection process, please call KHEL at 785-296-1620 for assistance.

Radionuclide compliance monitoring samples are collected from finished water. Listed on the sample submission form is the Site ID number where the sample needs to be collected. At the sample collection site there should be a STATE OF KANSAS tag with a number that matches the Site ID number on the form. The Collection Location is the name of the site as it exists in the KDHE database, and it will often reflect which water sources flow to that particular POE.

A tip to guard against leaking: after collecting the sample, wrap teflon tape around the threads on the jug's spout, twist the cap on to close, then wrap the outside of the cap with some Teflon tape. Place the jug into a plastic bag and tie shut. Tape and plastic bags are not included in the sample kit. This tip to guard against leaks is not part of the official sample collection protocol, but it is good advice from the KHEL. If the jug leaks at all, it could arrive to KHEL empty or with not enough sample left to analyze. Also, many couriers when they see that a package is a bit wet, they will most likely throw the package in the trash. Either of these scenarios would require the water system to re-collect the sample.

Shipping

Before packing, place the adhesive address labels from the sample submission form onto the shipping box. Place into the shipping box the labeled container with the collected sample and the completed sample submission form. Tape the box shut for shipping and ship as soon as possible after collection.

The laboratory must receive the sample and preserve it within 5 days from when it was collected. Many water systems will need to pay for additional courier services (next day or priority shipping) to ensure their sample will be delivered to KHEL before 5 days pass from the sample collection date.

Summary of Radionuclide Sampling

- Upon receipt of a sampling kit, it is best not to assume what is inside. Open and review the appointed sample collection date that is on the sample submission form.
- Check that the sample submission form shows your system's name and federal ID #.
- Follow the sample collection instructions that came with the sampling kit.
- Each bottle in a sampling kit needs a barcode label from its sample submission form placed upon it so that it will stay matched with the correct sample submission form from time of collection until the time results are reported.
- Fill out the sample submission form neatly.
- Consider using the tip given in this guide to guard against leaking.
- Use the address label from the sample submission form for shipping the collected sample back to the lab.
- Include the completed sample submission form in the package with the sample, and ship as soon as possible after collection.

Calling KDHE with questions or concerns you may have is highly encouraged.

For questions about your radionuclide sampling kit or the sample collection process, please call KHEL at 785-296-1620.

For questions about radionuclide compliance or your compliance monitoring schedule, please call KDHE's Bureau of Water, Public Water Supply Section at 785-368-8336.