

Nebraska Department of Water, Energy, and Environment

Standard Operating Procedure (SOP)

Groundwater Division - GW

SOP Number: GW-171

Title: Handling Wastes Generated During Groundwater Sampling

Written Date: July 2025

Purpose: To ensure that investigation derived wastes generated during ground water sampling are handled and disposed of in a safe, consistent, and environmentally responsible manner.

This SOP addresses non-hazardous wastes typically generated at groundwater sampling sites. (Potential waste generated with sampling may non-hazardous or hazardous. If it is suspected that hazardous wastes may be generated, then a site-specific sampling and analysis plan (SAP) or QAPP (quality assurance project plan) may be developed which will address handling and disposal of generated wastes. (In general, if it is suspected wastes generated are listed or characteristic hazardous wastes then the waste should be handled, tested, and disposed as specified in USEPA regulations.))

Typical waste that maybe generated may include but not be limited to:

1. Filter paper or filter cartridges
2. PPE (such as disposable nitrile gloves).
3. Sample containers, plastic/ glass
4. Disposable bailers or sample tubing.
5. Field kit reagents/ test kits
6. Used acid ampules (plastic)
7. Miscellaneous waste
8. Purge water

Equipment/Materials Needed:

- Appropriate ground water sampling equipment and materials as per SOPs
- Plastic garbage bags

Procedures:

1. Obtain ground water samples and perform field operations as per SOPs.
2. The general types of waste generated during ground water sampling will be containerized in the field as follows:
 - 2.1. Used filter papers, paper envelopes or filter cartridges and cartridge plastic bags: dispose in a suitable plastic garbage bag.
 - 2.2. Used plastic acid vials:
 - 2.2.1. Empty acid vials: place it upside-down in the styrofoam vial container.
 - 2.2.2. Styrofoam vial containers (after all vials are used): place both halves of the styrofoam container together, place the container in its original plastic bag and place the container and bag in the cardboard box in which the vial container originally came.
 - 2.3. Used PPE: used gloves, dispose in a suitable plastic garbage bag.
 - 2.4. Used disposable bailers or tubing: drain and dispose in a suitable plastic garbage bag.
 - 2.5. Used filter reagent kits Hach™ nitrate reagent pillows: dispose in a suitable plastic garbage bag.
 - 2.6. Used triazine immunoassay tubes: rinse thoroughly and dispose in a suitable plastic garbage bag.
 - 2.7. Empty triazine immunoassay reagent bottles: secure the entire empty triazine field kit and dispose in a suitable plastic garbage bag.
 - 2.8. Miscellaneous waste: paper, candy wrappers, drink containers, unusable containers, etc.: dispose in a suitable plastic garbage bag.
 - 2.9. Non-hazardous purge water may be disposed on the ground near the well.
3. The containerized field waste will be disposed of as follows:
 - 3.1. Plastic garbage bags containing nonhazardous and miscellaneous waste: dispose in a suitable trash container (e.g. dumpster, trash bin, etc.) in the field or upon return.
 - 3.2. Used plastic acid vial containers: deliver to the NHHS lab either when delivering samples or when picking up additional supplies or dispose in a suitable trash container (e.g. dumpster, trash bin, etc.) in the field or upon return. Partially used acid containers may be neutralized using baking soda and disposed of as indicated above.