

Appendix K

Spill Disinfection Policy

Standard Procedures for Cleaning Up Domestic Wastewater Spills Inside Buildings

Please note: Access to the spill area must be restricted until 24 hours after cleanup is completed.

If sewage is on nonabsorbent floor material like tile, vinyl, concrete or other nonabsorbent surfaces, cleanup of the visible water and semi-solid material should be accomplished using a vacuum or mop and by using the proper concentrations of sanitizers to disinfect. Make sure that the sanitizer is of proper concentration and that all affected areas are thoroughly sanitized.

If the sewage is on an absorbent floor material, such as carpet, the material that has absorbed the sewage should be vacuumed to remove as much of the waste as possible.

Do not mix cleaning / disinfecting products or chemicals. Cleaning products can react with one another to produce toxic vapor or liquid substances.

The following is a list of common sanitizers:

Chlorine: For chlorine solutions, the chlorine concentration should be in the range of 50 to 1000 parts per million (ppm) or (mg/l) for disinfecting surfaces of appliances and food preparation areas and 200 ppm (mg/l) for walls and floors.

You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies.

As a rule of thumb, add 3/4 cup Clorox Bleach to one (1) gallon of water. ONLY USE BLEACH THAT HAS "SANITIZES" OR "KILLS GERMS" ON THE LABEL.

Alternative disinfectants: Other disinfectants, which include iodine and quaternary solutions, must be used according to the manufacturer's specifications/recommendations if used for disinfecting sewage spills.

Please note: Using chlorine or alternate disinfectants on absorbent materials (such as carpet) may cause damage to the material and loss of color may occur.

Because it is difficult to adequately sanitize carpet, carpet pad and absorbent flooring materials, ADEC recommends that saturated flooring materials be removed and disposed of at a permitted solid waste disposal facility.

Standard Procedures for Cleaning Up Domestic Wastewater Spills Outdoors

The following are recommended procedures for cleaning up untreated or inadequately treated sewage, spilled to the ground surface.

1. *In all conditions:*

- A. If the area in which the spill occurred is accessible to the public or domestic pets, the contaminated area must be clearly marked or cordoned off to restrict access.
- B. Protective clothing (at a minimum, rubber or latex gloves and rubber boots) should be worn when cleaning up a sewage spill. (Dispose of gloves and wash rubber boots when leaving spill site). Keep children and interested bystanders away from cleanup activities.
- C. Please note that hydrated lime is a caustic material and can be dangerous to handle and apply. Lime should only be used or applied by people experienced in using this material.
- D. Do not mix cleaning / disinfecting products or chemicals. Cleaning products can react with one another to produce toxic vapor or liquid substances.

2. *In non-freezing conditions, when sewage is a mixture of liquid and solid material, the following steps should be taken:*

- A. If the spilled material can't be recovered using hand tools, a commercial vacuum / pump truck should be called to remove all visible liquid and solid material.
- B. When the area is visibly clean, either a chlorine / water solution (using Clorox or an equal bleach) or hydrated lime should be applied to the spill area to disinfect. To make a 5% chlorine solution, add 3/4 cup Clorox bleach to one (1) gallon of water. You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies. **ONLY USE BLEACH THAT HAS "SANITIZES" OR "KILLS GERMS" ON THE LABEL.**

If the spill occurred in a heavily populated area and odor may be an issue or within 100 feet of surface water, hydrated lime should be applied to the area in place of chlorine bleach. Enough hydrated lime should be applied to raise the pH to at least 12. By raising the pH to 12 for at least 1 hour, the area will be disinfected. You can test the pH by using litmus paper obtained at a chemical supply facility. Because lime is a caustic material, access to the area treated with lime must be restricted during the disinfection period.

- C. After the spill area has been cleansed (24 hours after the chlorine solution or hydrated lime has been applied), the barriers may be removed and access to the area restored.

3. *In freezing or frozen conditions.*

- A. An attempt should be made to clean up the spill before it becomes completely frozen.
- B. If possible, the frozen sewage should be removed down to the natural ground surface (or at least one inch below the spilled sewage if on thicker ice) and the recovered material disposed of properly. This could require that approval be obtained from the local government for disposal in a permitted landfill. An acceptable alternative solution is to stock pile the frozen sewage in an approved lined containment area until conditions are more favorable for transport and disposal. (Because each spill site and situation is different, please contact your local ADEC office for recommendations regarding constructing an acceptable containment area.) If the material thaws, the liquid must be properly handled and disposed of at a permitted wastewater treatment and disposal facility. Keep in mind that frozen and / or thawed sewage may still contain active, harmful bacteria, cysts and viruses.
- C. When the area is visibly clean, either a chlorine / water solution (using Clorox or an equal bleach) or hydrated lime should be spread across the spill area to disinfect. You can verify the chlorine concentration by using test paper available at food supply warehouses or chemical supply companies.
- D. If the spill occurred in a heavily populated area and odor may be an issue or within 100 feet of surface water, hydrated lime should be applied to the spill area in place of chlorine bleach. The hydrated lime will raise the pH to 12, which will disinfect the area. By raising the pH to 12 for at least 1 hour, the area will be disinfected. You can test the pH by using litmus paper obtained at a chemical supply facility. Because lime is a caustic material, access to the area treated with lime must be restricted during the disinfection period.
- E. When the spill area has been cleansed (24 hours after the chlorine solution or hydrate lime has been spread), the barriers can be removed and access to the area restored.