1. **Purpose and Requirements**

The following procedure establishes the minimum environment, health and safety requirements for cleanup of raw sewage spills within Cornell University Property. Raw sewage contains biological agents such as bacteria, viruses, fungi, and parasites that can cause serious illness and even death.

2. **Scope**

This standard procedure applies to all raw sewage spill cleanup at all Cornell University facilities.

3. **Responsibilities**

   3.1 **Environment, Health and Safety:**
   
   - Maintain Sewage Spill Cleanup Procedure
   - Educate Building Coordinator, Facility Manager, or Equivalent on the Sewage Spill Cleanup Procedure
   - Manage Bloodborne Pathogens and Bodily Fluids training in accordance of the Bloodborne Pathogens for Non-Research Personnel Program (HS22)

   3.2 **Building Coordinator, Facility Manager, or Equivalent:**
   
   - Establish building specific procedures for facilities maintenance employees’ who may enter and perform maintenance on sewage lines
   - Procedures shall be coordinated with building occupants to minimize interruptions and to prevent occupants from potential exposures associated with raw sewage

   3.3 **Facilities Management Employee:**
   
   - Schedule with Building Coordinator, Facility Manager, or Equivalent the subsequent cleanup activities associated with a service request that causes the spill
   - Attend required training
   - Follow the procedure below and utilize properly fitting personal protective equipment throughout the outside sewage clean up

4. **Training**

   - EHS – 1073 – Bloodborne Pathogens and Bodily Fluids Initial
   - EHS – 1876 – Bloodborne Pathogens and Bodily Fluids Annual Refresher

5. **Procedure Instructions**

   5.1 **Personal Protective and Clean Up Equipment**
As appropriate, use the following equipment when cleaning sewage spills.

<table>
<thead>
<tr>
<th>Personal Protective Equipment</th>
<th>Cleanup Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile Gloves (5ml and 15 ml)</td>
<td>Buckets</td>
</tr>
<tr>
<td>Safety Glasses</td>
<td>Mops</td>
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<tr>
<td>Impervious Coveralls</td>
<td>Tongs</td>
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<tr>
<td>Rubber Boots</td>
<td>Shovels</td>
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<tr>
<td>Faceshield</td>
<td>Disinfectant</td>
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<tr>
<td>Confined Space Entry Equipment, as needed</td>
<td>Portable Pumps</td>
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<td></td>
<td>Fans/Blowers</td>
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<td></td>
<td>Wet/Dry Vacuum</td>
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<td></td>
<td>Sprayers</td>
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<td>Spreader</td>
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</table>

5.2 Proper Hygiene

- Wash your hands thoroughly after clean up work. Use plenty of soap, scrub for at least 30 seconds, and rinse thoroughly.
- Do not touch fecal matter or raw sewage with bare hands. Wear waterproof gloves and use an instrument such as tongs or a spade when direct contact with fecal material is necessary.
- Do not touch your nose, mouth eyes or ears with your hands unless you have just washed.
- Do not smoke, eat, drink, apply lip treatments, or chew gum while cleaning up fecal matter or raw sewage.
- Clean tools and footwear, that came in contact with the fecal matter or raw sewage.

5.3 Cleanup Procedure

5.3.1 Containment

1. Evaluate how big the spill is (or may become) and take actions to contain the spill in the smallest area possible.
2. Stop the spill from entering storm drains and nearby natural water sources.
3. Turn off the main water supply, if possible, to prevent more water from entering the sewer.
4. Clear out debris that is causing the sewage spill, if the cause is evident.
5. Place sandbags, dirt or plastic tarps around the perimeter of the spill to stop the sewage from spreading.
6. Reduce exposure by keeping those who are not part of the cleanup from entering the area.

5.3.2 Risk Assessment

7. Investigate the potential for electrical hazards and de-energize electrical circuits as necessary.
8. Determine if confined space procedures are required and implement as necessary.
9. Follow the “Proper Hygiene” section of this document during any clean-up activities.
5.3.3 Preparation

10. Acquire all appropriate Personal Protective Equipment (PPE) and clean up equipment.
11. Prepare or acquire disinfectant(s)
   a. In bucket(s) and/or Sprayer(s), Spreader(s) in accordance with the manufacturer’s directions.
12. Put on appropriate PPE

5.3.4 Indoor Clean Up

1. Remove all furniture, loose rugs, and other items from the contaminated area.
2. Saturated wall-to-wall carpeting (including padding) are to be removed, wrapped in plastic, and delivered to a sanitary landfill.
   a. If it is decided to keep the carpeting, hire a licensed carpet cleaning company to steam clean and disinfect the carpet.
3. All hard surfaces, such as linoleum, hardwood floors, concrete, wood moldings, wood, and metal furniture, etc. should be thoroughly cleaned with hot water and disinfectant detergent. Let the surface air-dry.
4. Upholstered furniture, loose rugs, draperies etc., should be professionally cleaned.
5. Remove and replace plaster, plasterboard, and lath that have been saturated and are soft to the touch.
   a. If the surface has only been wetted, clean as you would a hard surface, but do not saturate the plaster.
6. Clean sinks, rinse basins, and/or other plumbing fixtures that have had sewage back-up, with disinfectant detergent.
7. Collect and dispose of raw sewage and/or fecal matter into an active sewer system.
8. Increase air circulation to reduce odors and mold growth. Open all windows and doors. The use of fans and heaters can speed the drying process.

5.3.5 Outdoor Minor Spills

- Minor spills are 10 gallons or less when outdoors. If larger contact appropriate septic vendor for cleanup.
- If sewage reaches, storm water drains or natural waterways contact EHS.

1. Spills on Soils
   a. Pick up all the debris (paper, plastic, etc) – use rubber boots, gloves and safety glasses
   b. Disinfect with lime
   c. Follow the lime container’s label instructions for personal protective equipment needed. Use lime outdoors only.
   d. Sprinkle the lime onto the spill so it is dusted mostly white on the surface.
   e. Barricade the treatment area with ropes and signs to allow for appropriate dwell time of 24-48 hours
   f. After 24-48 hours, rake up the thicker deposits and place it in a trash bag for disposal.
   g. Use a sprinkler or hose to water the remainder into the soil.
h. Barricade off area until dry, approximately 24 hours with a sunny day
i. If there is still white lime dust visible on the yard, water it until the white dust is gone.

2. Concrete and other Hard Surfaces Outdoors
   a. Scrub man-made surfaces with approved disinfectant (Alpha HP) and a brush broom or mop after letting dwell for 10 minutes
   b. Rinse with water

5.3.6 Post Cleanup

1. Wash your hands thoroughly
2. Disinfect “clean-up” mops, brooms, shovels, tongs, brushes, etc. with disinfectant detergent.
3. Remove all barricades and signs
4. Notify Building Coordinator, Facility Manager, or Equivalent

References:
Appendix 1: Sewage Spill Clean Up Area Signage – Outdoor

WARNING

DO NOT ENTER

Sewage Spill Clean up Area

Raw sewage contains biological agents such as bacteria, viruses, fungi, and parasites that can cause serious illness

Lime is being utilized to disinfect the soil