

# Case Study - Emergency Response Sewage Contamination/Spill

**Project Description:** Sewage Remediation, Customer Call Center

**Scope of Services:** AET was contracted by phone at 11:30 p.m. on a Tuesday evening, by the managing agent of a call center. AET's CIH responded to the call and arrived at the site by 2:00 a.m. Emergency response was due to a back flow of sewage from a sewage injector system on the occupied basement level of the building. The call center operates on a 24/7 basis.

**AET Experience:** Sewage-borne contamination includes disease-producing viruses, bacteria, mold, and parasites. Exposure to these pathogens and allergens occurs by inhalation, ingestion or skin contact (especially where the skin has cuts or open sores). The severity of the health threat depends on the quantity of sewage present and the amount of time the sewage remains in contact with building materials/contents. Quick reaction/response and prompt decision-making saves time and money and protects property and health.

## *AET's Investigative Approach/Tools:*

1. **Visual Inspection:** Affected interior finishes included 2x2 carpet square flooring and drywall walls with vinyl cove base molding. Approximately 2600 SF of carpeting was impacted by the spill.
2. **Moisture Measurement Testing:** AET's CIH developed a remediation map of affected building locations at the site. Approximately 500 LF of drywall walls were affected to a height of 1-2 feet up the wall surface.
3. **Project Supervision:** AET managed the restoration contractors' daily work activities in accordance with the restoration plan. Final visual inspections for contractor release were performed by AET's on-site professional.

## **Site Specific Sewage Remediation Plan**

- The sewage area(s) were isolated from the remainder of the building and access restricted to authorized, properly protected workers only.
- Remediation was performed by experienced, properly trained and screened workers wearing NIOSH approved respirators (dual cartridges with HEPA filters and organic vapors). Personal protective equipment also included rubber gloves, goggles, boots and full bodied Tyvek suits.
- Bulk water and associated debris were removed from the affected surfaces and the surfaces sprayed with a disinfectant to minimize biological reservoirs. Sufficient contact time as recommended by the manufacturer (at least 15 minutes) was followed.
- The sewage work area(s) were placed under negative pressure by venting with air filtration devices equipped with HEPA filtration.
- Affected drywall was removed to a minimum height of 2 feet above floor level. Porous insulation (where present) inside wall cavities was also removed.
- Carpet squares were removed and the concrete floor surface below the squares disinfected.
- Fine cleaning was performed by HEPA vacuuming all surfaces followed by application of and wet wiping with a disinfectant.
- The affected surfaces and building materials in the work area(s) were dried. Desiccant dehumidifiers and fans were used and the extent of drying was verified by moisture measurement testing. Relative humidity levels in the work area were kept below 40% during the drying process.
- Visual inspection of the work areas was performed by AET's restoration professionals.
- Rosin paper was applied to the cleaned concrete floor surfaces as a temporary measure until the new carpeting could be applied.

When you need professional help or advice, email Alan Sutherland, CIH, CHMM at [a.sutherland@aetinc.biz](mailto:a.sutherland@aetinc.biz) or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services we provide at our website [www.aetinc.biz](http://www.aetinc.biz).