

# Environmental Risk Overview

## Disinfection Services



Disinfection service providers utilize specialized equipment and chemicals to clean and sanitize surfaces, along with air duct systems in structures such as office buildings, airports, airplanes, doctor and dentist offices, schools, fitness centers, health facilities, food processing facilities, child care centers and retail stores. They may also respond to emergency situations, such as the treatment of locations that have been subject to exposure of infectious diseases. The use of specialized equipment, like foggers, misting systems, sprayer systems and vacuums can pose environmental risk liability. Accidents or leaks of collected contaminated wastewater can pollute sites or migrate into water systems. Concentrated disinfection chemicals can leave a residue on hard surfaces that may impact third parties. Leaks or releases of these chemicals

can enter floor drains and eventually flow into sanitary sewers damaging the downstream wastewater treatment plant. Transportation and disposal of used chemicals used in the disinfection process also pose environmental liability for disinfection service providers.

## Environmental Exposures May Include

- A variety of chemicals are used to clean and disinfect contaminated sites, including quaternary ammonium compounds, substituted and neat phenols, peroxides, hypochlorites (bleach), glutaraldehyde, iodophors and ozone, and they can be toxic if not properly applied. Even “natural” botanical disinfectants and deodorizers (e.g. thymol) are toxic at certain concentrations. Chemicals used at improper application rates or concentrations, in combination with other chemicals or with incorrect delivery systems, can cause residues and toxic fumes to remain in the building which impact human health by direct surface contact and inhalation.
- Improper use of equipment used to disinfect and deodorize, including ozone machines, foggers, and industrial-strength deodorizers can spread contamination to uninfected areas or leave behind hazardous residues that can impact building occupants when they return.
- Used personal protective equipment (PPE), high efficiency particulate air (HEPA) filters or washing fluids may be considered special or hazardous waste when discarded and require proper transporting and disposal procedures. Other potentially hazardous waste can include cleaning fluids, wastewater and used chemical containers. Improper manifesting and disposal of wastes, including hazardous materials may result in environmental cleanup and third-party liability, and there may be legal consequences for violating hazardous waste requirements.
- Ozone gas is used in the disinfection process and is an extremely strong oxidant and virucide. Ozone gas is effective in the destruction of viruses and harmful bacteria, but it is also very corrosive and reactive and must be used with corrosion-resistant material such as stainless steel. Ozone is extremely irritating at a minimum and possibly toxic to humans, therefore off-gasses from ozone must be destroyed to prevent third party bodily injury exposures.
- Stored stock supplies, including chemicals used to clean and disinfect sites are often in concentrated form. Container leaks of incompatible or reactive materials may cause a release of gas or fumes (such as hydrogen chloride or ammonia), or generate enough heat for combustion of nearby combustible/flammable materials that leads to fire at the storage facility. The fire could cause the release of potentially hazardous toxins, toxic fumes and smoke into the air causing third-party injury. Firefighting solutions such as water and foam could create contaminated runoff that spreads to nearby storm drains or properties and results in environmental cleanup and tort liability.
- Transportation of disinfection chemicals to and from sites can lead to environmental exposure. Chemical storage container breaches, or leaks and spills, along with loading and unloading could create cleanup liability or runoff that can cause ground and surface water contamination.
- Improper management, storage and disposal of untreated wash water generated from cleaning disinfection equipment and personal protective equipment, can lead to unauthorized discharges into the sanitary sewer system, potentially contaminating and damaging the downstream wastewater treatment plant.
- Ultraviolet light, known as UVC radiation has been used for years as a disinfectant for air, water, and non-porous surfaces such as counter tops, examination tables and bathroom fixtures. UVC radiation is used to reduce the spread of bacteria, and as such, UVC lamps are called germicidal lamps. The safest method of employing UVC radiation is inside air ducts to disinfect air because direct UVC exposure to human skin or eyes may cause injuries, such as skin and eye burns. Overexposure to UVC radiation administered by a disinfection service company could lead to bodily injury claims.

## Contractors Pollution Liability Can Provide Coverage For

- Contracting operations done “by or on behalf of” the insured
- Contracting operations performed at a job site
- Third-party claims for bodily injury and property damage
- Third-party claims for cleanup
- First-party emergency response costs
- Mold, legionella, bacteria, fungi and viruses
- Medical, infectious and pathological waste
- First and third-party transportation pollution liability
- Loading and unloading
- Sudden and accidental coverage for owned/leased locations
- A combined Commercial General Liability, Contractors Pollution Liability and Professional Liability package policy may be available. Worker’s Comp & Auto may be offered
- Non-owned disposal sites
- Defense of third-party claims
- Natural Resource Damage

# Claims Scenarios & Examples

- A large egg farm forced to kill millions of chickens due to the 2015 bird flu outbreak sued several companies that were hired by the federal government to disinfect their barns. According to the lawsuit, chlorine gas and heat treatments used by the disinfection companies to kill the virus destroyed barn equipment, electrical wiring, production equipment and water lines. The egg company also contends that the structural integrity of its barns was diminished in the process. The company is seeking to be repaid for the cost of repairs, interest, late charges and the defense costs associated with the lawsuit. It also claims negligence for causing significant property damage and breach of contract, saying the contracted companies “failed to adequately and properly mitigate its damages.”
- A disinfection service provider was used to clean a building with multiple doctor’s offices on daily basis. They used a product called OxyCide that contained peracetic acid, a known asthma-causing substance. A group of health care workers in the building had experienced nasal problems, respiratory irritation, headaches, burning of the eyes, nose, and throat, and other issues. A group of the health professionals in the building sued the disinfection company, along with the manufacturer of OxyCide, claiming bodily injury.
- An office building was being cleaned daily by a disinfection service during the COVID pandemic. A group of workers began to complain of memory loss, headaches, nausea, mood swings, and other symptoms. The symptoms were traced back to the overuse of disinfectants in the building. The workers sued the disinfection service provider for bodily injury damages.

## Final Consideration

As a contractor you can be faced with the cost to defend yourself against allegations or legal action from pollution related events, regardless if you are at fault or not. Having the proper insurance coverage in place will help fund the expenses incurred to investigate or defend against a claim or suit and provide you with environmental claims handling expertise.

*This environmental risk overview has been developed by Environmental Risk Professionals on behalf of J. Loos & Associates. It is intended to provide the reader with a broad range of potential risks they may encounter and may not reflect all risks associated with their business. To verify available insurance coverage, please consult your insurance representative.*

*© 2020 Environmental Risk Professionals*



J. LOOS & ASSOCIATES  
Daniel Loos  
919-256-6860  
daniel.loos@jloosins.com  
www.jloosins.com