Environmental Risk Overview

Laboratories

Laboratories store and handle a number of materials and generate wastes and wastewaters that can expose them to pollution liability. Materials that can be hazardous include chemicals, solvents and infectious wastes, and releases can occur during storage, handling, transport or disposal leading to environmental liabilities. Chemicals used may be incompatible, leading to releases of toxic fumes or other adverse reactions. Solvents and compressed gases used in laboratory processes may be flammable, increasing the risk of a fire and the potential for a release that impacts the environment. Laboratories that handle infectious materials may generate medical wastes, which can cause bodily injury exposures to third-parties.

Environmental Exposures May Include

- Laboratories may exhaust hazardous gases, dusts, mists, and vapors from their operations. If ventilation systems are inadequate or develop issues, then releases could occur that impact third-parties, such as other tenants in a multi-tenant building.
- Transportation of lab chemicals, hazardous chemical wastes, or medical wastes present additional pollution risks and public exposures. A release during transit could lead to environmental liability risks for the laboratory as the generator.
- Combinations of incompatible chemicals are prone to react violently or produce toxic byproducts/gases when stored together or mixed. Some chemicals and compressed gases stored at laboratory facilities are flammable and an ignition source near these materials could cause a fire that spreads and releases other contained materials. Peroxides are sometimes present in labs, and these chemicals are very unstable, reacting to shock, sparks, heat, friction, impact, and light. These types of chemicals can explode. An explosion can cause third-party property damages and bodily injuries, and a fire at the facility could emit toxic fumes and smoke from the materials stored at the site or from a mix of materials that occurs as a result of the fire. Firefighting solutions such as water or foam could create contaminated runoff that spreads to nearby storm drains or properties and results in environmental cleanup and tort liability.
- Cleaning of lab equipment and containers can generate contaminated wastewaters. Lab processes can also generate hazardous and solid wastes These wastes and wastewaters require proper handling and storage. Spills from storage areas can cause environmental cleanup liability and pose health hazards to third-parties. Improperly segregated and disposed of solid, hazardous, or biomedical wastes can result in regulatory fines and lead to cleanup and environmental tort liability.
- Samples of blood, tissue, and other bodily fluids may be tested in a laboratory as part of their services. These can carry infectious organisms including MRSA, HIV, Hepatitis B and C, E. coli and other transmissible disease-causing microbes. Adherence to protocols for isolation, handling and decontamination of these materials is essential to preventing exposures to others and to avoid further spreading the contamination throughout otherwise clean areas. Improperly segregated and disposed of medical wastes, generated from these testing operations, can result in regulatory fines and third-party bodily injury claims.
- Mold, fungi and other microbial mater can grow and disperse in a facility due to a number of sources, including leaks or flooding from plumbing, sewer, HVAC or fire sprinkler systems, poor ventilation, insufficient humidity or condensation controls and intrusion of storm water into the building. Exposure to mold may pose severe health hazards to building occupants and can absorb into building materials creating cleanup liability.
- Laboratories may have emergency generators. These may be diesel-powered and require storage of fuel in aboveground or underground storage tanks. Leaks of fuel, exhaust fumes, tank/piping deterioration and inadequate or no secondary containment can result in a release that contaminates soil and water systems or can enter into the facility.
- Various chemicals may be stored in a laboratory, including solvents, acids, bases, reagents, peroxides, etc. Spills or leaks of these chemicals can pose environmental risks. Some chemicals could form toxic air releases. Other chemicals could impact soil or groundwater by migrating through cracks in flooring, into drains, or during loading or unloading. Contaminants could also migrate to surface water in stormwater if chemicals are leaked or spilled outside the lab building.

Environmental Pollution Liability Can Provide Coverage For

- On-site cleanup of new and preexisting pollution conditions
- Of-site cleanup of new and preexisting pollution conditions
- Third-party claims for bodily injury and property damage
- Third-party claims for cleanup
- Both sudden and gradual pollution conditions
- Aboveground and underground storage tanks
- Non-owned disposal sites
- Mold, bacteria, viruses, legionella and more
- Business interruption resulting from pollution conditions
- First and third-party transportation pollution liability
- Loading and unloading
- Defense of third-party claims
- Illicit abandonment
- Natural resource damage
- Civil fines and penalties
- Emergency response costs

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Claims Scenarios

- Sodium cyanide inadvertently came in contact with an acid in a lab. Hydrogen cyanide, a highly toxic gas was produced. The entire building, including a number of other businesses, had to be evacuated, and several third-parties had to be taken to the hospital after exposure to the gas. Third-party bodily injury and business interruption claims were filed against the laboratory.

- A historic medical lab experienced an unknown release of mercury at a site. The lab building was converted for office use, and years later the mercury contamination was discovered. The medical lab was named as a potentially responsible party under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and it faced a costly cleanup, adverse publicity, and bodily injury claims from the building's occupants. The remedial costs alone totaled more than $300,000.

- A lab employee knocked over a glass container of liquid mercury, and it shattered on the floor. In order to prevent other tenants of the building from being exposed to toxic vapors related to the release, the building was evacuated for several hours. The other tenants filed business interruption claims against the owner of the lab.

- Historically, a lab sent wastes to a particular hazardous waste landfill. The landfill had a significant release that impacted groundwater and migrated offsite. The landfill went bankrupt, and the EPA sought relief for cleanup costs from the generators who sent waste to the landfill. The laboratory paid $50,000 in a settlement with the EPA as a de minimis waste contributor.

- A drum of spent solvent waste located in a storage shed on the property of a laboratory was knocked over as employees were attempting to move several drums. The solvent waste flowed across the laboratory's parking lot and onto soil at an adjacent property. The laboratory owner was responsible for the associated emergency cleanup costs.

Final Consideration

Your facility can be faced with the cost to defend itself 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.

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