

Environmental Risk Overview



Concrete / Masonry

Contractors working with concrete and masonry face many environmental risk exposures. The installation, repair and removal of concrete can create respirable cement dust, which contains crystalline silica and other hazardous substances that can cause third party bodily injury. Highly publicized respirable OSHA standards for silica may result in a rise of environmental tort claims. Materials used, including cement, sealants, coatings and acids contain chemicals and toxic substances that can emit hazardous fumes and also create environmental liability in their transportation and disposal. Concrete washout water is caustic and corrosive and improper storage or washouts can lead to cleanup and natural resource damage. Concrete and masonry installation can also create moisture conditions that can lead to mold and mildew growth.

Environmental Exposures May Include

- Crystalline silica is one of the varying components contained within sand rock and cement used in concrete mixtures by contractors. Construction processes such as blasting, cutting, chipping, drilling and grinding make the silica respirable. Third parties can breathe in crystalline silica dust which is very hazardous and has been classified as a human lung carcinogen. Silica exposure can lead to lung injuries including lung cancer and silicosis, which in severe cases can be disabling, or even fatal.
- Exposure to cement dust can irritate eyes, nose, throat and the upper respiratory system. Skin contact may result in moderate irritation, thickening/cracking of skin and severe skin damage from chemical burns. Etching, refinishing or resurfacing of concrete may release respirable compounds. The demolition and removal of old concrete can create fugitive dust, which can contain silica and other contaminants such as asbestos, becoming respirable to third parties and exposing a contractor to tort liability.
- Concrete washout water contains toxic materials and is caustic and corrosive. Improper concrete washouts or leaks can run off to offsite locations and run into storm drains which discharge to surface waters such as rivers, lakes or estuaries and cause significant damage to natural resources and aquatic life. Rainfall may cause concrete washout containers that are uncovered to overflow and cause contaminated runoff that can pollute surrounding land and groundwater.
- Contractors may come in contact with shallow subsurface utilities or storage tanks while preparing concrete forms for a new pour. This may result in releases to the subsurface and lead to environmental liability.
- Materials used during the installation or removal of concrete/masonry products which can be hazardous or toxic, including sealants, coatings and emulsions, mortar admixtures, acids, chemicals used in the hardening of concrete and cleaning chemicals for masonry and equipment. Air emissions, such as the fumes from these chemicals, may drift during application and cause bodily injury to third parties. Spills, improper storage and exposure to rainfall can cause chemicals to run-off and contaminate surface water, groundwater and soils resulting in cleanup and potential natural resource damage claims.
- Spills or leaks can occur during the transportation to and from jobsites and during loading and unloading of materials, including cement, chemicals and jobsite waste, resulting in clean-up costs and tort liability.
- Concrete floor and wall installations can cause moisture problems and lead to mold and mildew growth, which pose significant health problems to third parties. Moisture issues can develop from improper installation or design of drainage and moisture barrier systems or by moisture wicking through concrete from the surrounding soil. Mold and mildew growth can also result if there's an excess of moisture in the concrete mixture, if the concrete did not dry sufficiently before continuing other construction work over it or if the concrete was improperly mixed and later cracks.
- Improper disposal of jobsite debris and waste, chemicals used in the course of work and/or concrete washout water can cause contamination at a landfill or disposal facility. Claims at these facilities could include clean-up and third party liability and can come back to the original generator of the waste.

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
- Defense of third-party claims
- First-party emergency response costs
- Mold, legionella, bacteria and fungi
- Silt and sedimentation
- Lead and asbestos
- Non-owned disposal sites
- First and third-party transportation pollution liability
- Loading and unloading
- Sudden and accidental coverage for owned/leased locations
- Natural resource damage
- Crisis/publicity management

Claims Scenarios & Examples

- To shorten the concrete curing time, a masonry contractor used a concrete curing compound which contained xylene, a carcinogenic volatile organic chemical. Xylene vapors migrated to a shopping mall near the project site. Ten people became sick and filed suit against the contractor. The contractor's general liability carrier denied coverage because of the pollution exclusion.
- A contractor added a curing agent to a concrete utility trench. The curing agent, which contained xylene, emitted vapors. When an employee at the facility entered the space with the newly poured trench, he was overcome by the vapors. He got dizzy and fell into the trench. The employee filed suit against the contractor for the injuries sustained in the fall. The contractor filed a claim with his general liability insurance carrier. The carrier denied coverage under the pollution exclusion, and the court upheld the exclusion, stating that an absolute pollution exclusion in the policy restricted coverage.
- A concrete contractor was placing the concrete at a gas station. While setting up the concrete forms, the contractor punctured a fuel line with a rebar stake; however, the damage was not noticed until the leak was found later in the day. The contractor filed the claim with his general liability insurance, but they denied the claim due to the pollution exclusion.
- During the inspection of a silage pit (clamp), inspectors found effluent flowing from the concrete slab area onto the hard-core yard area. Further upstream, the inspectors saw a black pipe actively discharging to a river. Three samples of the discharge were tested, and they each confirmed that the discharge contained poisonous, noxious or polluting matter which was described as "potentially harmful to fish life" in the waterway. The construction firm was fined for causing pollution to a waterway.
- A ready-mix contractor washed out his truck chute in a nearby creek. Vegetation and aquatic life were damaged as a result of the washout with natural resource damages totaling over \$200,000.
- A crew working on a hospital's 6-story parking garage was spreading sealant on the newly cured concrete when they ran out of sealant with 2 floors to go. The job foreman replaced the original brand of sealant with a standard DIY-type of product and completed the job. The foreman didn't know that the first sealant was specifically chosen because of its low level of toxic fumes. The new material released toxic fumes, which made their way into the 2nd floor HVAC intake system, leading into the hospital nursery. Because of this, 6 newborns were left in respiratory distress.
- A contractor left an unfinished concrete vault open over the weekend. Heavy rains came in and washed away sediment controls, allowing sand and silt to migrate from the unfinished vault into a nearby bay. As a result, the contractor was fined by a regulatory agency for natural resource damage caused from the release of sediments into the bay.
- Two contractors received notices of violations from the state for illegally disposing of concrete waste. One contractor had 103 truckloads that were disposed of on contaminated soil at a residential construction site. The other contractor had 24 truckloads of concrete slabs disposed of at a concrete recycling facility that was unpermitted.
- An elementary school hired a masonry contractor to work on the exterior wall of the cafeteria. The building was originally built in the 1950s. After removing 30 feet of shoring, the wall collapsed onto the tiled floor. The contractor finished up the job, and the cafeteria started its operations again. However, the lunchroom staff complained about respiratory illness and sued the contractor, alleging that the collapsed wall caused a release of asbestos from the tiled floor.
- A contractor used muriatic acid while doing a concrete etching job in a commercial building. The acid's corrosive fumes were not properly contained. They were released into the building, damaging chrome fixtures that had been newly installed. The contractor was responsible for property damages.
- A masonry contractor performed a renovation project at a historic building and was sued by employees of a nearby office building who claimed that they were exposed to silica dust that came from the job site. The claimants reported bodily injury and declared that required measures were not taken to prevent or minimize dust emission during the project.
- A concrete contractor was hauling bags of cement to a job site, when a bag fell off the back of the truck and created a dust plume. The dust plume caused damage to a car that was behind the truck. The contractor filed a general liability claim with their insurance carrier, but the policy excluded the damage under the total pollution exclusion.
- While constructing a new runway at an international airport, a contractor used an undercoat of slag. After completion of the project, it was found that the slag was contaminated and leaking pollutants into a lake tributary.

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.

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