



Electrical Contractors

Electrical contractors can face environmental liability through various operations, materials and disposal activities. Contracting operations can lead to an inadvertent release of existing pollutants or could create a pollution release, such as fumes from welding or brazing. Improper installation of electrical equipment could allow for water intrusion into building materials and result in the growth of mold. Waste materials could classify as hazardous, and improper handling and disposal could lead to environmental liability and potential fines. Electrical design is also becoming a fast growth area for electrical contractors, particularly under the design-build deliver model which can expose contractors to professional liability either by direct design services or by direct subcontracting to electrical design firms.

Environmental and Professional Exposures May Include

- Asbestos was used in many electrical materials, including wiring insulation, panel components, motors and cables, which utilized asbestos-based fabrics and gaskets for insulation and fire protection. Release during decommissioning or maintenance can occur. Additionally, other asbestos-containing materials can be found at a job site, including ceiling and floor tiles, insulation and roofing materials. Drilling to access wiring and install conduits can inadvertently disturb existing asbestos and release inhalable fibers that can result in cleanup and potential toxic tort claims.
- During installation and repair, existing pollutants could be inadvertently disturbed including lead-based paint, mercury, which can be in electrical switches and compact fluorescent lighting lamps, and PCBs, which can be found in many materials including electronic equipment (switches, voltage regulators and switchboards) fluorescent light ballasts, electrical cables, and oil used in electrical equipment such as transformers. Exposure to third-parties of these materials can cause serious health hazards.
- Improper installation and sealing of electrical equipment through roofing and interior or exterior walls could create an opening for water intrusion and result in the growth of mold. During installation or repair work, piping could also be punctured behind walls and cause a leak that can result in mold growth.
- Disturbance or relocation of soils from excavating or trenching could result in unknown pre-existing contaminated soil being collected and spread to clean areas of a site or being improperly disposed. Improper stockpiling of soils could also allow a runoff of silt and sediment. Exposure to storm water or a water pipe break could lead to surface runoff of these soil particles, which could impair proper functioning of storm water drainage systems and cause ecological damage to streams and rivers.
- Failure to properly locate underground utilities such as gas lines, water and sewage pipes, or unknown hazards such as septic tanks, could result in striking a line or causing an accidental puncture and release of pollutants like fuel oil, chemicals, toxic gases or sewage.
- Job site waste could contain hazardous materials, including asbestos, lead-based paint, mercury or PCBs and require special disposal procedures. Container breaches or improper handling may result in releases during transit between the job site and disposal location. Hazardous waste could be inadvertently mixed with construction debris/waste and then disposed of improperly. Some of these wastes are also regulated, such as mercury and PCBs, and improper disposal can not only result in environmental contamination and tort liability but also result in fines and penalties.
- Plastics are present in electrical conduit, fiber optic cables, electronic potting compounds, insulators, circuit boards, transducers, solar collectors, lighting, housings, enclosures, sockets and switches. Some materials produce small inhalable particulates as wear and tear occurs or can be emitted during a hostile fire. When exposed to humans or environmental organisms, they can act as endocrine disruptors, reproductive toxins or carcinogens.
- During soldering, brazing and welding work, metal fumes are produced and released into the air, where they can be readily inhaled. Metals can also be present in the flux or pastes used. Metal fumes are often toxic after multiple exposures and have developmental impacts and effects on the kidneys, liver and nervous system.
- Electrical design entails planning, creating, testing or supervising the development and installation of electrical equipment. Contractors may provide design services that can result in professional liability, which could include design-build, design assist or providing professional opinions on design aspects. Errors and omissions can result in time delays, budget overruns and rework.
- Contractors may make modifications to design specs while at the job site. Malfunctions arising from these changes create a direct professional responsibility for the contractor.
- Selection and supervision of subcontractors creates professional liability. Contractors may have to defend against claims relating to work for which they were responsible due to the hiring of the sub.

Contractors Pollution & Professional 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 cost
- Mold, legionella, bacteria, fungi, lead, asbestos and more
- Sudden and accidental coverage for owned/leased locations
- Non-owned disposal site liability
- First and third-party transportation pollution liability
- Loading and unloading
- Professional liability
- Mitigation/rectification
- Excess/contingent design
- Defense of third-party claims

Claims Scenarios & Examples

- A convention center was undergoing a renovation and addition construction project. Two years after the project was completed, it was found that some of the equipment installed by the electrical contractor was installed incorrectly, which allowed unconditioned air from the outside to enter the building, even when the unit was off. The duct work for the exhaust grills was also found to have been installed with gaps to the outside. Both of these contributed to an increase in air and water in the interior wall space, which fostered mold growth. Damages exceeded \$2 million. The electrical contractor ended up paying more than \$60,000 toward remediation and almost \$200,000 toward the claim settlement. In addition to these expenses, defense costs were also accrued.
- An electrician was hired for a large renovation project, and as part of the job, removed hundreds of old lighting fixtures, replacing them with new ones. The old fixtures were put into 55-gallon drums and placed with the rest of the construction debris to be disposed of. A year later, the contractor received a letter from the EPA which held him responsible for the hazardous PCBs that were found in the old light fixtures. The PCBs had leaked from the drums and polluted the sanitary waste landfill. The cleanup costs exceeded \$1 million.
- While working on a renovation and expansion project for a university's library, the general contractor (GC) subcontracted the electrical design to an electrical contractor under a design/build contract. After the work was done, the electrical system malfunctioned and caused economic delay in the project. The GC sued the subcontractor for professional negligence. The subcontractor's E&O carrier paid \$750,000 to settle the claims.
- As part of a job at a hospital, an electrical contractor removed duct work from the HVAC system. Later, it was discovered that the removal process and the dismantled duct work sitting on site caused a fungus inside the duct to spread throughout the hospital. Patients became infected, some critically. The contractor was held responsible for the fungus spread and faced bodily injury and property damage claims that exceeded \$1 million.
- An electrical contractor was in the middle of a project and needed a sealed drawing of an electrical panel so that he could meet code requirements. The contractor asked a friend, who was a retired professional engineer, to seal the drawing. After the project was completed, it was found that the electrical panel was not correct and led to several power outages. The contractor was held responsible as the engineer did not carry professional liability insurance.
- An electrical contractor was working on an overhead electrical lines installation project and used a subcontractor to sink the new utility poles. While using an auger to install the poles, the subcontractor hit an underground sewer line with the tool, which damaged the line and released raw sewage to the subsurface. Through contractual liability, the electrical contractor was held responsible for the actions of the subcontractor.
- Ten years after disposing of project material at a municipal solid waste landfill, an electrical contractor was contacted by the EPA as a de minimis potentially responsible party for contamination at the landfill. The contractor was denied coverage under their general liability policy.
- A contractor sawed through the ceiling during an electrical installation project at a historic building, and inadvertently disturbed and released asbestos-containing insulation material. The contractor was held responsible and had to pay cleanup costs for the asbestos fibers released throughout the building.
- After designing and installing an electrical system for a hotel project, the contractor was sued by the project owner, as the electrical system was found to be out of compliance and did not work correctly. The design errors were in excess of \$9 million, and because the contractor didn't have professional liability insurance, he had to get bankruptcy protection.
- An electrical contractor had an aboveground storage tank onsite that was used to fuel trucks and equipment. One night vandals shot a hole in the tank, and the next morning the contractor found that thousands of gallons of gasoline had been released from the tank. The spill resulted in a government-mandated excavation and disposal of all the soil that had been contaminated.
- An electrical control panel had an error and was reporting a valve as closed when it was actually open, allowing the release of chlorine gas. After several employees and nearby residents became sick, they noticed the leak. The facility was sued along with the electrical contractor who installed the equipment.
- An electrician was hired to upgrade transformers in a manufacturing building. During removal, a pole-mounted PCB transformer that contained oil was unintentionally dropped on the ground, causing a spill of PCB-contaminated oil. Investigations determined that contaminated soils had to be excavated and disposed. The site owner sued the contractor for the resulting costs.

Final Consideration

As a contractor you can be faced with the cost to defend yourself against allegations or legal action from pollution or professional 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 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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