Environmental Risk Overview

E-Waste Recyclers

Electronic waste (e-waste) recyclers store, process and dispose of various types of scrap electronics and components, which can contain hazardous materials such as heavy metals and chemicals. Recycling activities to break down devices and salvage reusable resources involve processes such as grinding, crushing, stripping and leaching. This produces dusts, vapors, smoke and effluent containing hazardous materials that can contaminate air, soil and water and harm human health and natural resources. Additional environmental exposures can result from the storage and use of materials and equipment used in the recycling process along with the generation and disposal of wastes, which may be hazardous and regulated. E-waste facilities may also collect unwanted electronics and can retain liability for any improper disposal to facilities not permitted to accept the waste.

Environmental Exposures May Include

- Electronic scrap components, such as CPUs, printed circuit boards, cathode ray tubes, LCD/LED screens, power packs, computer wires, chips, printers and keyboards, can contain potentially hazardous materials. This can include electronic glass, flame retardants, plastics and heavy metals such as lead, cadmium, arsenic, mercury, silver, tin, chromium, nickel and beryllium.
- Treatment of e-waste can include dismantling, crushing, grinding, de-soldering, shredding, stripping, smelting and other operations that create smokes, mists, vapors, dust and other by-products that contain hazardous or toxic materials. These activities can release hazardous air emissions or result in an accumulation of hazardous materials in soil, water and interior spaces of the facility. This can lead to environmental cleanup and cause harm to natural resources and the health of nearby third-parties inhaling toxic fumes and particles or ingesting contaminated water and food sources.
- The process of leaching or extracting precious metals, such as gold, from e-waste can involve chemicals and acids such as cyanide, nitric acid and hydrochloric acid. Processes that involve heating can release dangerous toxins into the air that can cause skin disorders, liver problems, heart disease or cancer and impair the immune, endocrine and reproductive systems. During processing, improper containment of spent materials can result in their release into soil or water sources that can damage natural resources and harm human health. Spills or containment breaches of stored chemicals and acids onsite can also contaminate soil and water systems.
- E-waste facilities may end-up with unwanted electronic waste which must be disposed of in accordance with local, state and federal regulations. Much e-waste still ends up in landfills not permitted to accept such waste, where hazardous materials can leach out and contaminate the soil and underlying groundwater. Anyone disposing of hazardous or universal waste in landfills retains the liability for the damage these wastes might create. Most e-waste recyclers have a non-owned disposal site liability created by waste streams they have channeled to landfills.
- Soil contamination can occur from effluent or waste products from leaching practices and from particles and ash from dismantling, shredding or burning practices that can deposit into soils. Contaminants can include heavy metals and flame retardants (PFAs and PFOs), which can be persistent and last a long time in soils.
- Cleaning agents and solvents used in de-manufacturing or dis-assembly operations might be flammable, combustible, toxic or otherwise harmful to the atmosphere, soil or groundwater. Improper use, storage or disposal could lead to cleanup liability as well as third-party claims for bodily injury and property damage.
- Storm water may come in contact with contaminated soils and outdoor stockpiles of e-waste, which can undergo weathering and release hazardous compounds. If storm water runoff is not properly controlled, contained and pre-treated prior to discharge into sanitary or storm drainage systems, it can pollute adjacent soil and groundwater or discharge directly into surface waters.
- Collection vehicles, conveyor belts, sorting machines and other production equipment may leak lubricants, oil, grease and/or fuel. Spills or leaks can also occur from stock supplies or during maintenance and fueling. Releases can contaminate soil, may be collected in storm water runoff or contribute to fire hazards.
- E-waste recyclers are in the distribution channel and can be held liable for bodily injury and property damage caused by pollution conditions emanating from products that contain parts from the de-manufactured or dis-assembled electronic equipment. This is a products pollution exposure not covered by a standard GL policy.
- Many components of e-waste are classified as hazardous or universal waste (a category of hazardous waste containing very common materials but still falling under regulatory guidelines) and require special treatment, storage and disposal procedures. Labeling or sorting errors may lead to the improper storage and disposal of waste and result in fines or environmental liability.

Environmental Pollution Liability Can Provide Coverage For

- Integrated GL/site pollution, options to include excess, auto and WC may be available
- Monoline site pollution liability
- Third-party claims for bodily injury, property damage
- First-party and third-party cleanup
- Defense of third-party claims
- Emergency response costs
- Natural resource damage
- First and third-party transportation pollution liability
- Loading and unloading
- Products pollution liability
- Crisis/reputation management
- Civil fines and penalties
- Off-site services pollution liability
- Business interruption expenses
- Non-owned disposal sites

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Claims Scenarios & Examples

- State regulators fined a recycling facility for allowing lead and other hazardous materials to seep into the ground. Records show the Department of Environmental Conservation (DEC) began investigating the recycler based on a materials "spill." The recycler came to state environmental regulators' attention after multiple tips alleging mismanagement of scrap electronics, including CRT devices. The DEC consent order said the recycler accumulated approximately 780 tons of e-scrap materials at its site. The recycling company was ordered to pay $500,000 for improperly handling e-scrap and must clean up their site and impacted soils.

- Two electronics recycling companies ended disputes with state regulators that centered on the handling of metal-laden dust from e-scrap shredders. They agreed to pay $400,000 and $390,000, respectively, as part of settlements with the state's Department of Toxic Substances Control (DTSC). Both cases involved the management of baghouse dust, a mixture of particles of metal and other materials that is created in the shredding process and then stored in a shredder's baghouse. Metals such as copper, lead and zinc can be present in the dust. The DTSC determined that the dust constituted a hazardous material. The recyclers were selling the dust for smelting and refining because they considered it a recyclable material. The DTSC first issued notices of violation after an inspection where they determined the recyclers had violations that included "the illegal treatment, storage, transportation and disposal of hazardous waste containing mercury, copper, lead, nickel, and zinc, among other compounds, and failure to operate its facility in a manner to minimize the release of hazardous waste", according the a DTSC press release. DTSC also alleged there was hazardous dust on the floor of the facility. The violations have led to procedural changes. Workers perform full plant sweeps of the floor at the end of each shift now. In addition, no e-scrap is stored directly on the floor; the company built large metal containers to hold material.

- A hydraulic line on a waste removal collection company's truck ruptured and released 30 gallons of hydraulic oil in a parking lot, and the driver drove the leaking truck back to the facility. The company was given a $38,480 penalty for not promptly notifying the state Department of Environmental Protection of the release from their vehicle. They also failed to investigate the spill and perform cleanup actions in a timely manner.

- Two warehouse owners filed suit seeking cleanup funds from over 40 electronics recycling companies they claim contributed to what became the largest cathode-ray tube (CRT) glass stockpile in U.S. history. The owners invoked Superfund law in their suits. CRTs contain lead, and as they went obsolete, they became a negative-value material for electronics processors. The lawsuit alleged the e-scrap companies shipped the CRT glass to businesses that had since shut down and left an estimated 316 million pounds of CRT materials across multiple properties in two states. The complaint claims suppliers are responsible to help fund the cleanup under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the same law that governs Superfund sites. In just one of the states, the estimated cleanup costs of 158 million pounds of the e-scrap was $18.2 million.

- A lawsuit accused an e-waste recycler of being responsible for a "sham recycling scheme" that led to the abandonment of over 100 million pounds of CRT material. The suit alleged that the recycler, its leaders and its upstream partners flouted federal environmental law in the interest of financial gain. CERCLA, the federal act tied to Superfund site designation, made the recycler and those that sent waste to them liable for cleanup costs, according to the suit. The suit demanded over $14 million in payments from the defendants to cover the cost of cleanup operations.

- A recycling facility used sulfuric acid in their process and stored it onsite in a 20,000-gallon aboveground storage tank. The storage tank was contained by two foot high, chemically sealed masonry walls. Overnight, an area high on the wall of the storage tank ruptured, releasing the sulfuric acid. The leak squirted beyond the containment, releasing approximately 3,000 gallons of the tank contents into the soil and into an adjacent stream. Government-mandated costs for cleanup of onsite soils, the stream and the stream bank exceeded $1 million.

- A recycler was segregating waste when they accidentally released a mixture of industrial solvents, affecting a waterway that led to a water treatment plant. The treatment plant was forced to permanently close due to the contamination. The recycler was found responsible for the environmental contamination, property damage and business interruption and was required to pay for the cleanup costs.

Final Consideration

Your business 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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Insurance and Bonds

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