

A risk profile is a structured management tool for identifying the various exposures associated with an operation. Typically, a risk profile will encompass a review of an organization's operations with a focus on administrative strategies / protocol for reducing or managing particular risks. Environmental risk should not be exempt from this process. In fact, many organizations create stand-alone Environmental Risk Profiles (ERPs) to specifically address the area of environmental liability. This process adds to an organization's ability to systematically identify environmental risk and effectively manage it. Below is an excerpt from an ERP for Data Centers, which identifies some major exposures. A completed ERP can show the impact such exposures can have on the organization, as well as the risk management strategies available.

Data Centers confront environmental liability every day. Specifically, they face environmental exposures in five major areas: property development, operations, transportation, disposal liabilities and owned premises. Each area must be explored to identify risks that may expose the organization to environmental liability. This hypothetical ERP identifies some of the major exposures and associated claims.

EXPOSURES

PROPERTY DEVELOPMENT

- Data center development can create environmental risks from stormwater runoff, sediment discharges, and improper management of fuels, oils, or construction chemicals.
- Spills from equipment, generators, or temporary storage areas can contaminate soil and waterways.
- Renovation or site redevelopment may disturb asbestos, lead, or PCBs in older structures, requiring regulated abatement and disposal to prevent environmental releases.

OPERATIONAL EXPOSURES

- Creating "heat islands". Data centers that are 1 million square feet or greater potentially contributing to an increase of surface temperatures of 3.6 degrees up to 6.2 miles away.¹
- Diesel stored in aboveground or underground tanks poses ongoing risks of leaks from tanks, day tanks, piping, or transfer equipment. Accidental releases can impact soil, groundwater, or nearby surface water. Generator testing may

also create air emissions compliance exposures if particulate or NOx thresholds are exceeded.

- Refrigerant leaks from chilled-water or Direct Expansion (DX) cooling systems can release greenhouse gases subject to environmental regulation. Water treatment chemicals used for corrosion control or biofilm prevention may spill or be improperly discharged into drains or soils, creating contamination concerns.
- Data center (uninterruptible power supplies (UPS) systems using lithium-ion, valve-regulated lead-acid (VRLA), or NiCad batteries can release hazardous materials through thermal events, off-gassing, or electrolyte leaks. These failures may generate chemical contamination or require specialized cleanup procedures.
- Facilities may face environmental liability from improper stormwater management, illicit discharges, or misdirected condensate or process water flows. Failures in Spill Prevention, Control, and Countermeasure (SPCC) Plans for oil-filled equipment such as generators or transformers can also result in noncompliance and cleanup obligations.

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EXPOSURES (CONT'D)

- Improper storage of cleaning chemicals, maintenance supplies, small containers of oils or solvents, or accumulated e-waste can lead to spills or releases that cause onsite or offsite contamination.

TRANSPORTATION EXPOSURES

- Deliveries of diesel fuel create exposures during transfer operations at the site, including overfills, hose failures, or driver error. Spills during road transport can also lead to environmental liability for cleanup of impacted soil or waterways.
- Batteries, refrigerant cylinders, and certain chemicals may be classified as hazardous materials. Transportation accidents, improper packaging, or shifting cargo can lead to spills, leaks, or fires that create environmental contamination.
- Outbound shipments of servers, lithium batteries, or other e-waste materials may release hazardous substances if damaged during transit, resulting in contamination or regulatory actions.

DISPOSAL EXPOSURES

- Lithium-ion, VRLA, and NiCad batteries require regulated handling and disposal. Misclassification, improper packaging, or mishandling at disposal facilities can lead to fires, chemical leaks, or environmental violations for which the generator of the waste may remain responsible.
- Refrigerants must be properly recovered and reclaimed to prevent atmospheric release. Improper venting or leaking during removal, storage, or transfer can violate environmental regulations and may require reporting or remediation.
- Servers, cables, Power Distribution Units (PDUs), and other electronic components contain hazardous metals that must be properly managed. If disposed of improperly or sent to non-compliant recyclers, contamination at third-party sites may trace back to the data center as the originating waste generator.
- Renovation-related materials such as asbestos, lead paint, or polychlorinated biphenyls (PCBs) must be properly abated, transported, and disposed of. Failures in characterization or documentation can result in contamination at disposal sites or along the handling chain.

- Errors in labeling, manifesting, or tracking hazardous waste or universal waste can result in regulatory violations and potential liability for environmental releases during transportation or disposal.

OWNED PREMISES EXPOSURES

(maintenance garages, plant facilities, offices, etc.)

- Diesel tanks, day tanks, hydraulic systems, and oil-filled transformers introduce ongoing risk of leaks that may impact soil, groundwater, or stormwater infrastructure. Secondary containment failures can increase the severity of contamination events.
- Spills of cleaning agents, maintenance chemicals, refrigerants, or water treatment substances can contaminate indoor areas, soils, or drains, requiring environmental cleanup.
- Improperly maintained stormwater controls, drain blockages, or illicit connections can lead to offsite discharges or contamination of nearby surface waters during rain events.
- Generator emissions may exceed permitted thresholds during testing or operation, creating regulatory or environmental impacts related to NOx, particulate matter, or greenhouse gas emissions.
- Site expansion or redevelopment may uncover pre-existing contamination from former operations or historical industrial use, requiring investigation, remediation, and potential reporting.
- Contamination from spills, leaks, or stormwater runoff may migrate beyond property boundaries, creating liability for impacts to nearby properties, surface waters, or groundwater.

¹ <https://www.cnn.com/2026/03/30/climate/data-centers-are-having-an-underreported>

DATA CENTERS

Name of Organization: _____

Last Updated: _____

SAMPLE ENVIRONMENTAL RISK PROFILE

Below is the start of a sample ERP for Data Centers. A complete ERP can be added to provide a detailed profile: reference documents, website links, details on prior claims / incidents and the organization’s response.

A complete ERP can be used to help risk and insurance managers better identify, manage, reduce and even eliminate the organization’s exposures to environmental liability and the related costs.

EXPOSURE	IMPACT ON ORGANIZATION	RESPONSIBILITY	RISK MANAGEMENT TECHNIQUE	PRIOR INCIDENTS
OPERATIONAL EXPOSURES:				
OWNED PREMISES EXPOSURES:				
TRANSPORTATION:				
DISPOSAL EXPOSURES:				

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