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 Commercial Real Estate, 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.

Commercial Real Estate firms confront environmental liability every day. Specifically, they face environmental exposures in five major areas: operational activities, property development, construction activities, transportation and disposal liabilities. 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 EXPOSURES

- Contamination from historical usage of property.

    - Large parcels of undeveloped property tend to have fewer environmental issues. As a result, many times, there are poor or inadequate records of activity on those lands. Phase I environmental assessments are cursory reviews of the site with a "walk-through" of the property to physically identify issues. Environmental reports might not identify illegal or "midnight" dumping of waste or materials on these lands. The contamination may only be revealed during development, i.e., former dry cleaning operations which used perchloroethylene (PERC or PCE), and former gas stations.

    - Select a quality firm to perform the Phase I assessment. The Phase I is minimal in scope when it comes to environmental assessments, and quality assurance is important for an accurate risk profile of the property.

- Increased "soft" costs associated with delays in development due to discovery of pollution conditions on site.

CONSTRUCTION EXPOSURES

Property owners can be exposed to environmental liability from simple construction activities:

EXPOSURES (CONT'D)

- Exposure from contracted HVAC system hook-up, including incomplete line hookup, improper system construction, improper balancing, etc., potentially leading to release of airborne bacteria and fungus.

- Fumes, emissions and spills from chemicals (volatile organic compounds such as finishers, sealants, curing compounds, floor coatings, adhesives, etc.) applied during construction, causing third-party respiratory hazards.

- Accepting supposedly "clean" fill from unknown origins, discovering later that it was contaminated with petroleum or other hazardous substances – in turn, exacerbating the extent of contamination.

- "Toxic" mold exposure from improper grading or excavation during site preparation, resulting in improper drainage, causing water to enter the substructure or basement.

- Heating, ventilation, air conditioning (HVAC) maintenance errors, causing release of airborne bacteria, mold or carbon monoxide build-up, in addition to mold resulting from water intrusion or moisture encapsulation.

- Depending on prior use, inadvertent disturbance of pre-existing contamination / products (e.g., asbestos-containing materials, naturally-occurring asbestos in subsurface soils / geology, lead paint, contaminated soils, surface or groundwater)

- Release from improper or inadequate storage of lubricant oils and other fluids.

- Release from improper or inadequate storage of on site fuel tanks.

- Release of oils / fuels from tanks / drums as a result of vandalism.

- Spills from application of primer oil/tack coat from asphalt operations.

- Impacting underground utility lines and other underground structures.

OPERATIONAL EXPOSURES

- Air emissions from ammonia-based refrigeration (i.e., anhydrous ammonia) systems that leak and create third-party inhalation hazards.

- Neighboring properties containing pollutions conditions that may migrate and contribute to contamination to the owned property.

- Improper storage and / or disposal of hazardous chemical storage (laboratory chemicals, medical wastes from doctor / dentist offices, cleaning chemicals, pool chemicals, dry cleaning solvents, pesticides / herbicides) that can be released in- or outdoors via inadequate containment and vandalism.

- Attractive nuisance" exposure of waste containers that may contain improperly disposed hazardous materials, potentially harming curious youths.

- Inadequate containment at loading / unloading areas that could result in the release of many of the materials described above.

- Existence of lead (paint and pipes), asbestos (insulation and tiles), polychlorinated biphenyls (PCBs in light ballasts and transformers) and radioactive material (x-rays and lab waste) creating liability associated with third parties coming onto or working in and around the property.

- Pre-existing contamination associated with:

  - Methane generation from buried debris such as tree stumps, grass clippings and construction materials.

  - Unauthorized dumping of waste on vacant land parcels ("midnight dumping") that could include hazardous materials.

  - Known and unknown past landfills, lagoons and other solid waste disposal areas.

  - Past / present use of septic systems for disposal of wastes such as cleaning chemicals, lab wastes, etc.

- Poor indoor air quality, leading to "Sick Building Syndrome." This can occur from not only fungal or mold growth in the building or ventilation system but also from system releases of carbon monoxide, or bacterial build up in the air conditioning system.

- Water intrusion / moisture build up / mold growth from landscaping errors to poor concrete work in basements to improperly positioned sprinkler systems to wallpapers that retard or prevent the movement of air in the building and trap moisture.

EXPOSURES (CONT'D)

- Surface water runoff, resulting in the spread of contamination to contiguous parcels of property.

- Liability associated with local or regional soil / groundwater contamination not necessarily created by the prior usage of the site.

- Poor underground and aboveground tank management programs, resulting in surface and subsurface soil and groundwater contamination.

- Natural Resource Damages, resulting in substantial costs for state- and federal-mandated cleanup requirements and potential fines.

TRANSPORTATION EXPOSURES

- Inadvertent transport and subsequent disposal of unknown contaminated soil from on-site activities.

- Spills of contents (e.g., fuel, cleaning products, sealants, solvents, etc.) during transport.

- Resulting pollution from collisions with various structures (e.g., pole mounted transformers, aboveground tanks, etc.).

- Fuel / oil spills / leaks from vandalism during the transport.

DISPOSAL ACTIVITIES

- Inadequate or improper disposal of waste materials on the property.

- Cleanup and liability associated with the disposal of waste / materials at disposal facilities or recyclers. This has potential Superfund ramifications for the property owner.

COMMERCIAL REAL ESTATE

Name of Organization: _____

Lasts Updated: _____

SAMPLE ENVIRONMENTAL RISK PROFILE

Below is the start of a sample ERP for Commercial Real Estate. 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: 1. **Pre-existing environmental conditions on acquired property**	• Costs associated with developmental delays • Remediation costs • Face liability associated with contamination as the current property owner.	• Property manager, legal counsel or risk manager, those responsible for due diligence in property acquisition	• Perform environmental data searches on designated EPA websites • Hire environmental data firm to collect information on the property • Conduct an environmental assessment • Retain environmental consulting firm. • Environmental indemnities in contract of sale • Environmental insurance	The company was tied into a Superfund action as a potentially responsible party (PRP), with the prior owner, as a result of property purchase. A Phase I was completed but failed to document the existence of two underground storage tanks (USTs) containing fuel. Cost to remediate was only $200,000, but it is a good example of the impact this type of liability can have on the organization.
OWNED PREMISES EXPOSURES: 1. **Loading docks at back of strip mall**				
TRANSPORTATION EXPOSURES:				
DISPOSAL EXPOSURES:				