WORKSHOP W1

Wednesday, November 9
8:45 a.m.–9:45 a.m. and 10:15 a.m.–11:15 a.m.

CREATING AN ENVIRONMENTAL RISK PROFILE

Presented by

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Contractors encounter environmental liability in everyday situations, including job site operations, owned or leased properties, and transportation and disposal of waste. Environmental risk profiles (ERPs) are a tool for systematically identifying environmental risk and developing strategies for effectively managing environmental challenges as they arise. This presentation will highlight the steps necessary to create an organization-specific ERP, the potential impact of specific exposures, and risk management strategies for averting the potential financial impact of an environmental event. Strategies for financing environmental risks and the marketplace for insuring these risks will also be examined.

To print on both sides of the page, set your printer for duplex printing.
From road and rail bridges that span vast stretches of water to tunnel systems beneath busy cities, we all know how complex infrastructure projects are. You might think that insuring them must be too; but that’s not the way we see it at Swiss Re Corporate Solutions. From financing to construction to operation, from surety to liability to property, our Infrastructure experts possess a wealth of hands-on experience. This enables us to apply a fresh perspective and cut through the complexity. We can even create tailor-made solutions to cover multiple exposures for a single project. Why should insurance be over-engineered? We’re smarter together.

Swiss Re Corporate Solutions is proud to be a sponsor of the IRMI Construction Risk Conference.
Mr. Nawa is a senior consultant in the construction division of New Day Underwriting Managers, where he works with clients on the various environmental risks that all industries possess, including but not limited to construction, manufacturing, health care, and commercial real estate. In addition, he works to service professional liability risks that confront contractors on a daily basis.

Prior to joining New Day, Mr. Nawa was an A&E underwriting manager at RLI Insurance Company. His experience underwriting for architects and engineers professional liability allows him to assist broker partners with the environmental risk management and professional liability issues of their clients.

Mr. Nawa has earned his Registered Professional Liability Underwriter (RPLU) designation and Construction Risk and Insurance Specialist (CRIS) certification. He also recently completed his Chartered Property Casualty Underwriter (CPCU) designation. Mr. Nawa is a graduate of Temple University, where he earned a bachelor of business administration in marketing.
Notes
Creating an Environmental Risk Profile

Joseph Nawa, CPCU, RPLU, CRIS

New Day Underwriting Managers LLC

Let’s Start with some Stories...
Intent of Today’s Presentation

- Contractors face environmental liability exposures everyday
- Importance of managing environmental liability exposures
  - Risk management
  - Risk financing
  - Risk transfer

What is an Environmental Risk Profile?

- A management tool
- Review of organization’s operations
  - Focus on administrative strategies/protocol for reducing or managing particular environmental risks.
- What does a sample Environmental Risk Profile look like?
Generally speaking, all contractors face environmental liability exposures in four main facets of their operations.
Let’s run through an example Environmental Risk Profile...

**General Contracting Firm**

**Jobsite Exposures**

- Mold exposure caused by water entering into a building’s substructure as result of improper grading or excavation during site preparation
- Disturbance of pre-existing contamination – naturally-occurring asbestos in soils, lead paint, contaminated groundwater
- Vicarious exposure resulting from subcontractors hired by the general contractor on site performing work on the general contractor’s behalf
- Silica dust arising from demolition
General Contracting Firm

Owned/Leased Premises Exposures

- Leaking aboveground or underground storage tanks
- Residual contamination from spills of oils, lubricants, etc. as result of poor housekeeping during maintenance operations
- Leaks from vehicles or other equipment stored on premises

General Contracting Firm

Transportation Exposures

- Transport and disposal of unknown contaminated soil
- Spills of hazardous contents during transportation (fuel, asphaltic cement, etc.)
- Pollution conditions resulting from collisions with structures (transformers, aboveground storage tanks, etc.)
General Contracting Firm

Disposal exposures

- Superfund liability resulting from the inadvertent disposal of waste materials or unknown contaminated soil
- Improper disposal of waste or contaminated soil from the project site at unregulated facilities
- Vicarious liability from subcontractors that transport and dispose of waste materials or soil

Environmental Risk Profile example

Street/Road Contracting Firm
Many of the exposures are likely similar to those of GC's from a transportation, owned/leased premises and disposal standpoint, but may differ from a jobsite standpoint.

Street/Road Contractor

Jobsite exposures

- Residual lead in site soils from leaded gasoline and lead chromate (pigment used in paint used to line the road)
- Release of fuels, primer oil and tack coat as result of over-application or storm-water discharge
- Spills from application of asphalt

Environmental Risk Profile example

Mechanical/Electrical Contracting Firm
Mechanical/Electrical Contractor

Jobsite exposures

- HVAC construction/maintenance errors causing release of airborne bacteria, mold subsequently growing from water intrusion and moisture encapsulation
- Bacterial releases from improper installation of ventilation systems (for example, legionella)
- Inadvertent releases from power cut off of fire sprinkler systems, electronic monitoring devices, pollution control equipment, etc.

Exposures likely similar to those of a street/road and GC but may differ when it comes to jobsite exposures

Risk Management Alternatives

Education
- Educate employees to assist them in identifying various environmental exposures faced during their day-to-day activities
- Training courses offered by consulting firms
- Jobsite/owned site walkthroughs

Contractual Language
- Request environmental disclosure statements from the project owner
- Pre-existing contamination clause
- Change in conditions provision
- Environmental insurance requirements
Risk Management Alternatives

Fill Acceptance Procedures
- Visual inspections
- Sample analyses
- Conduct audits of the facilities from whom you accept fill
- Never accept fill from unknown origin

Administrative Controls
- Objective – reduce injury, decrease cost associated with managing risk, reduce liability exposure
- Assign accountability
- Response plans – after mold exposure is identified, lay out the plan
- Management of subcontractors
- Owner management
- Execution

Risk Transfer Alternatives
- Marketplace – breadth of industry
- Rates/Pricing
- Capacity
- Buying Motivators
- Claims, Underwriting and Coverage Trends
Marketplace

Claims Management + Modest Loss Ratios → Market Expansion, Enhanced Coverage

Rates/Pricing

“Soft” market

Static Limits < $5,000,000

Dynamic Limits > $5,000,001

Aggressive Pricing
Market Capacity

$50,000,000 limits

$10,000,000 limits

$15,000,000 limits

$2,000,000 limits

Buying Motivators

Primary Motivator: Insurance Specifications

Insurance:
Contractors Pollution Liability

Secondarily: education on exposures lending itself to asset protection
Trends

- Diluting Talent Pool
- Limited Authority
- Coverage restrictions?
- Servicing

Questions?

Thank you!
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. As a matter of fact, many organizations are creating stand alone Environmental Risk Profiles (ERPs) to specifically address the area of environmental liability. Such a process adds to an organization’s ability to systematically identify environmental risk and effectively manage it.

When building a structure of any kind, contractors and owners confront environmental liability everyday; it may be real or perceived, known or unknown. Owners and contractors face environmental exposures in four major areas: jobsite operations, historical conditions on the project site, transportation and disposal liability. Each area must be explored to identify risk exposing contractors and owners to environmental liability.

Below are some of the general environmental exposures associated with construction projects. Although this is a generic profile, this information could be used to create an organization-specific ERP.

Job Site Operations

- Accepting supposedly “clean” fill from unknown origins and finding out at a later date that it was contaminated with petroleum or other hazardous substances.
- Water infiltration arising from construction defects in roofing systems, window systems, sprinkler systems, etc. that eventually leads to mold/fungal growth.
- Inadvertent disturbance of pre-existing contamination/product:
  - Asbestos-containing materials
  - Naturally-occurring asbestos in subsurface soils
  - Lead paint
  - Contaminated soils, surface or groundwater
  - Silica dust created from the earth/dirt work
- On site release from improper or inadequate storage of lubricant oils and other fluids from equipment.
- Completed operations exposures from incomplete HVAC system hook-up, including incomplete line hook-up, improper system construction, improper balancing, etc., which could lead to release of airborne bacteria and fungus.
- Fumes, emissions and spills from chemicals (volatile organic compounds) applied during construction (finishers, sealants, curing compounds, floor coatings, adhesives, etc.) that cause respiratory hazards for third parties.
- “Toxic” mold exposure from the improper grading or excavation during site preparation that results in improper drainage of the site - causing water to enter the substructure or basement of a building.
- Heating, ventilation, air conditioning (HVAC) construction or maintenance errors, causing release of airborne bacteria, mold or carbon monoxide build-up, in addition to mold resulting from water intrusion or moisture encapsulation. Other exposures associated with mold:
  - Incomplete remediation of a structure exposing residents to mold.
  - Misidentification of mold in structure prior to demolition.
  - In the event total demolition does not take place, the part of the structure not demolished will be exposed to the elements.
  - “Re-growth” of mold as a result of not addressing potential structural changes needed to reduce/remove moisture and/or water intrusion.
  - Over application of solutions used to remove mold resulting in inhalation hazards.
  - Establishment of regulation that may lead to additional remediation of structures already remediated.
• Release from improper or inadequate storage of fuel tanks on site.
• Release of oils/fuels from tanks/drumns as a result of vandalism.
• Site preparation/excavation work through pre-existing contaminated soil (e.g., unknown residual contamination such as petroleum contamination from leaking underground tanks) exacerbating the extent of contamination.
• Spills from application of primer oil/tack coat from asphalt operations.
• Impacting underground utility lines and other underground structures.

Historical Site Conditions/Future Operations

Whether it is known or unknown to the owner or contractor, many project sites have environmental problems associated with them - and it doesn’t matter where these sites are located. Give some thought to the major movements in redevelopment that are occurring nationally – urban renewal and Brownfield development. Many organizations want to move back to the city and do so on “used” land. When considering Brownfields alone, the number of Brownfields in the United States has been approximated at 500,000 sites and most states have incentive programs to redevelop these properties. The likelihood that contamination will be encountered on typical construction projects increase significantly. Below are some examples of environmental issues owners and contractors may run into:

• Errors and/or omissions created by the environmental engineering firm during the environmental assessment process. Typically, Phase I assessments are limited in scope and therefore can easily miss areas of contamination or concern.
• Undocumented disposal (“midnight dumping”) of hazardous waste/materials at, on, or near the job site.
• Improper handling of waste found on-site.
• Leaking underground tanks or other contamination on the perimeter or near the job site that may contribute to contamination on the job site.

• Excavation disturbing naturally-occurring asbestos or silica, creating inhalation hazards.
• Residual contamination from historical operations:
  • Leaking underground/aboveground storage tanks
  • Minor spills of oils, fuel, lubricants, etc., and poor housekeeping.
  • Improper disposal of waste materials from past owners.
• Exposures associated with existing structures:
  • Asbestos in ceiling tiles, floor tiles, insulation, etc.
  • PCBs in capacitors or light ballasts and transformers.
  • Lead paint, pipes, etc.
  • “Toxic” molds from poor maintenance.

Transportation Exposures

• Inadvertent transport and subsequent disposal of unknown contaminated soil.
• Spills of contents (e.g., fuel, asphaltic cement, etc.) during transport.
  * Resulting pollution from collisions with various structures (e.g., pole mounted transformers, aboveground tanks, etc.)
• Fuel/oil spills/leaks from vandalism.

Disposal Liability

• Superfund liability for the inadvertent disposal of waste materials or unknown contaminated soil.
• Improper disposal of waste contaminated soil on the project site or at unregulated facilities.
• Vicarious liability from subcontractors that dispose of waste materials or soil.
### SAMPLE ENVIRONMENTAL RISK PROFILE:
#### CONSTRUCTION PROJECTS

Name of Organization: 

Last Updated: 

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Impact on Organization</th>
<th>Responsibility</th>
<th>Risk Management Technique</th>
<th>Prior Incidents</th>
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<tbody>
<tr>
<td><strong>OPERATIONAL EXPOSURES:</strong></td>
<td></td>
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<tr>
<td>1 Exacerbation of pre-existing contaminated soil or other material</td>
<td>Financial impact associated with the cost to clean up the problem, legal defense and any resulting damage to property or injury to others. Such claims can have a dramatic impact on our reputation if we were to truly injure someone or cause extensive damage.</td>
<td>Project manager or other on site personnel, environmental manager and/or safety manager.</td>
<td>Contract documents with owner or GC requesting disclosure of existing environmental issues/problems.</td>
<td>In 2002 we were excavating for the construction of a parking structure at a local college. During drilling operations for the shoring, we identified a black, sludge substance coming from the borehole. Construction was stopped. The owner called in an environmental consultant to assess the situation. The consultant concluded it was an unidentified 55-gallon petroleum drum. We felt we had little to no liability since we only identified the problem and agreed to work with the owner on identifying the problem. We were directed to excavate and remove the drum under the auspices of the environmental firm. When we hit the source it was not a drum rather a 5,000 gallon underground tank apparently used to heat a previous building. After the UST was removed extensive environmental studies were conducted at the direction of the college. It was concluded that petroleum leaked for years causing extensive groundwater and subsurface soil contamination that extended off site and underneath a major highway. A multi-million dollar remediation ensued but we were never brought in as a “contributor” because we only found the problem. This was a good example of what could have happened to us.</td>
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| **TRANSPORTATION EXPOSURES:** | | | | |
| 1 Refueling vehicles | | | | |

| **DISPOSAL LIABILITY:** | | | | |
| 1 Non-owned disposal sites | | | | |
Notes