

Environmental liability and the construction industry

Building and construction activities have the potential for significant water, soil or air pollution by a range of contaminants. The risk of these pollution exposures in the construction industry can be influenced by the surrounding environmental receptors; the subsurface contamination conditions; the exposure pathways; the chemicals and pollutants involved; and the mechanism of pollutant transport.

In Australia, construction projects require an Environmental Impact Assessment (EIA) to be conducted by an environmental consultant if the potential risk of harm to humans or the environment is regarded as significant. The EIA consultant attempts to identify and quantify environmental exposures using onsite monitoring, the published literature and calculations to determine the risk of harm; however, the scope of the EIA may be limited by time, information and cost factors.

Establishing accurate baseline (pre-project) conditions is crucial in determining whether there is a risk of harm from a certain project. Baseline conditions are accurately determined in the majority of cases; however, time and cost constraints may impact, for example, access to detailed groundwater information; the adequate review of the controls employed to accurately determine the discharge and recharge potential during construction; or the sampling of both the soil and ground water at sufficient depths to include all potential contaminants within the area.

Although it is easy to imagine the sudden, often dramatic pollution events that attract media attention, pollution exposures of a more gradual, even concealed, nature should not be overlooked.

An example of concealed risk is the increasingly prevalent problem of volatile organic compounds (VOCs), which are contained in a wide variety of commercial, residential and industrial products, such as fuel oils, solvents, cleaners and degreasers, paints, inks, dyes, refrigerants and pesticides. When VOCs are spilled, a portion will evaporate, but some may soak into the ground and may end up in groundwater, wells and even drinking water. VOCs that become trapped within a peat or subterranean rock formation may pose a human health hazard when they vaporise over a period of time. This manifests on the surface only if there is a channel (such as a crack in the rock) allowing a route for the vapour to escape. To correctly identify the vapour intrusion potential of a VOC, an environmental consultant requires not only specialist knowledge of the specific chemical of concern, but also needs information about the structure of buildings, the transport pathways and the site geography. Such information is not always readily available.

Another example of a concealed risk relates to historical contamination. A site user or owner is well advised to enquire about the historical use of the site, since he or she may be exposed to environmental risk when they inadvertently disturb contaminants that predate their site use or ownership.

Finally, it is important to bear in mind that although a pollution condition may not initially exist onsite, construction works may cause a pollution situation that has the potential to create a significant financial burden. Examples of this are when asbestos is inadvertently brought as fill material onto a site requiring cleanup, or when plant and equipment required for construction works spill pollutants. The result may be contamination either of the site or external receptors, such as natural resources in close proximity to the site boundary, or both.

What are the main contaminants?

The main types of contaminants that present potential environmental liabilities for construction projects are:

- ▶ Metals (e.g. lead, mercury and arsenic)
- ▶ Inorganic compounds (e.g. sulfuric acid)
- ▶ Oils and tars
- ▶ Pesticides
- ▶ Other organic compounds (e.g. benzene, toluene, ethyl benzene and xylenes, polychlorinated biphenyls, trichloroethylene [TCE] and perchloroethylene [PCE])
- ▶ Toxic, explosive and asphyxiant gases (e.g. methane)
- ▶ Flammable and combustible substances (e.g. petrol and diesel)
- ▶ Fibres (e.g. asbestos and synthetic mineral fibres)
- ▶ Putrescible or infectious materials (e.g. medical waste)
- ▶ Other harmful waste (e.g. unexploded ordnance and syringes)

What are the exposure pathways?

Pathways for pollution exposure may include:

- ▶ Vapour intrusion (e.g. of TCE, PCE and hydrocarbons);
- ▶ Storm water and sediment run-off causing erosion or contamination
- ▶ Noise and vibration from heavy machinery
- ▶ Contaminated soil, either existing or brought on to the site, or both
- ▶ Plume disturbance (e.g. from pile driving)
- ▶ Groundwater disturbance from borehole drilling
- ▶ Release of hydrocarbons, lead, silica dust and road dust from plant and machinery during construction
- ▶ Release of toxic construction materials from the use of substandard or non-compliant materials
- ▶ Vandalism
- ▶ Interference with the site's natural resources (i.e. flora, fauna, aquaculture, wildlife and ecosystems), which, by definition, are part of the property
- ▶ Disturbance of unknown pre-existing, often historical contamination
- ▶ Disturbance from natural disasters (e.g. floods, earthquakes, storms and windstorms)

What are some examples?

- ▶ A landscaping contractor inadvertently brought fill material containing asbestos onto site as part of the soil for the landscaped gardens. The Environmental Protection Agency (EPA) issued a cleanup order to remove the fill and complete subsequent soil screening to ensure that the asbestos had been removed. The costs of the mandatory cleanup and monitoring significantly increased the overall costs of the landscaping project.
- ▶ After several people in a public housing project suffered from lead poisoning and were hospitalised, lead in excess of the World Health Organisation drinking water standards was found in their drinking water. Although it is alleged that the pipes were manufactured to detailed specifications, which excluded the use of lead materials, lead was found in the solder materials of the pipes. A costly investigation and remediation process was initiated to rectify the issue.
- ▶ During construction of the basement of a multistorey residential building, several construction contractors became ill and were hospitalised. The construction site was shut down until the cause of the release could be investigated by both the EPA and environmental consultants. It was subsequently determined that the soil on the building site contained trapped hydrocarbons that had been transported over time to the site from the leaking fuel tank of a nearby service station. The remediation costs in this example are expected to be in the order of several hundreds of thousands of dollars.

What can we conclude?

Experience has shown that the complexities of identifying the cause or the extent of contamination at a construction site may mean significant environmental liability exposures for the construction industry. Despite the common misconception that only environmental contractors need to obtain environmental coverage (when the Principal to the subcontractors can indeed be implicated), and given ever-stricter environmental legislation and regulatory enforcement and increased media and community awareness, it is important to have adequate financial protection in place to minimise the financial and reputational implications to your business in the event of a pollution incident.



When looking for robust environmental insurance, it is therefore prudent to consider these issues:

- ▶ A fine may be issued when the **Department of Environment Regulation (DER)** or the **Environmental Protection Agency (EPA)** are involved, even if no property damage, personal injury or cleanup requirement is established.
- ▶ **Emergency response and recovery** are key elements in environmental incident loss mitigation, and warrant specific insurance coverage. Appropriate protection will afford protection for the insured's own costs incurred for response and mitigation expense.
- ▶ A General Liability policy may not be triggered by a **regulatory body-enforced cleanup notice**, whereas a specific environmental liability policy will offer protection.
- ▶ Increasingly, **directors and officers and employees** – not merely the business – are being held liable for environmental incidents, which means that having personal liability coverage is becoming a must.
- ▶ The **cleanup costs** cover offered by a good environmental liability policy should include the insured's expenses in their ongoing engagement of consultants and environmental experts engaged in site rehabilitation.
- ▶ Appropriate environmental insurance cover is important not only to cover the potentially significant costs that may be incurred, but also to limit the potential damage to your business **reputation and brand**, which can suffer irreparable damage following a poorly managed environmental incident.

Liberty Specialty Markets (Liberty) offers tailored products that address all of these issues, and more. To find out about the peace of mind of insuring with Liberty, contact your broker or visit libertyspecialtymarkets.com.au

References:

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