Environmental RISK Assessment

What, Why, How?

Did you know a risk assessment approach can be considered an alternative to a full site remediation?

What do we Mean by Risk?

Definition of Risk: In the context of an environmental risk assessment, *risk is a measure of the probability that a hazard will cause harm to an individual, population or the natural environment under defined conditions of exposure to a contaminant.*

Needs for an Environmental Risk Assessment

These include:

1. Alternative to, or limited ESA Phase III (Remediation)
2. Risk Management Measures
3. Certificate of Property Use (CPU)
4. Certificate of Requirement

Commonly and under certain circumstances, it may be difficult for a property to meet the site condition standards set out by the province. In such cases, *the property owner has the option to **consider developing new standards specific to the property** through the preparation and acceptance of a risk assessment.*

An Environmental Risk Assessment is a technical and scientific examination of the nature and degree of risk defined by the *potential* contaminant effects within the site specific situations.

Let's get into a little more detail with each of the needs.

1. Risk Assessment

A Risk Assessment is the **scientific examination of the nature and magnitude of risk**. It is a scientific process used to describe and estimate the likelihood of adverse health effects resulting from exposure of both human and ecological receptors to environmental contaminants. Many contaminants may be present simultaneously in several media such as food, air, water, soil, dust, and/or consumer products. These contaminants reach human and/or ecological receptors through multiple exposure pathways.

The risk assessment approach is considered as an alternative to a full site remediation (ESA Phase3) option, when the owner of a contaminated property is looking to obtain a Record of Site Condition.

A "limited site remediation" program may be required prior to initiating the Risk Assessment if the concentration of contaminants of concern (present on, in or under a property) is too high to be risk assessed.

2. Risk Management Measures

Risk Management is a process which is distinct and separate from other components of risk assessment. This process *involves measures to control or reduce the level of risk (estimated by the Risk Assessment) that are then developed and implemented.*

Typically, the initial risk assessment would recommend the use of such risk management measures in order to provide protection to human health and the environment. In this situation, risk management **measures must be maintained** to achieve the same target level of risk as the site conditions standards.

Risk management integrates the results from the risk assessment with more information about technical resources, socio-economic factors, and control options in order to reach decisions about the best way to manage a property.

How you might ask?

Example implementation of Risk Management Measures include the following:

Hard cap or fill cap barrier; building with storage garage and vapour proof barrier; soil vapour intrusion mitigation system; building with no first storey residential, institutional or parkland use; building with minimum first storey ceiling height requirement; and, no ground water use.

3. Certificate of Property Use

A Certificate of Property Use (CPU) is a control document that is issued by the ministry (MECP) to a property owner in relation to an accepted Risk Assessment that is required to implement Risk Management Measures (RMMs).

RMMs are implemented on a property to ensure there is no adverse effect associated with the contaminants present on the site.

A Director is assigned who will form opinions and issue the document. He/she may also alter the CPU or possibly revoke it.

How you might ask?

Typical CPU requirements include:

- Take specified action outlined (by the Director) in the CPU to prevent, eliminate or ameliorate (lessen) any adverse effect identified in the risk assessment. This can include installing equipment, monitoring any contaminant or recording and reporting information for this purpose.
- Refrain from using the property for any use specified in the CPU.
- Refrain from constructing any building specified in the CPU.
- Register a Certificate of Requirement (CofR) on the title of the property at the municipal land titles office.
- The Director may include a requirement that the owner provide Financial Assurance for the performance of any action specified in the CPU or measures appropriate to prevent adverse effects in respect of the property to which the CPU relates.

A CPU will NOT require the owner to:

- Take any action that would have the effect of reducing the concentration of a contaminant (on, in or under the property) to a level BELOW the level required to meet standards specified for the contaminant within the risk assessment.

4. Certificate of Requirement

A Certificate of Requirement (CofR) is a document prepared by the ministry (MECP) which includes:

- A description of the Certificate of Property Use (CPU).
- A Record of Site Condition (RSC) registration number within the Environmental Site Registry.
- The requirement to give a copy of the CPU to every person who will acquire an interest in the property, *before* dealing with the property.

Fisher's multidisciplinary team will fully integrate and advise whether the Risk Assessment process is right for your site. Combine it with your initial environmental assessment and save funds.

Did This Help? There's more…

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