



Jacques Whitford

An Environment of Exceptional Solutions

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Carbon Neutral
Consulting

A Developer's Perspective of Risk, Legal Issues and Insurance

The consultant's side...

Overview of talk

How RISK is assessed from a technical point of view

Comparative standards and recent changes to regulatory framework used to assess RISK

Current remedial solutions

Likely implications of proposed standards

How RISK is assessed from a technical point of view

This is an evaluation of ecological and human health risk, not financial or other risks

Risk is assessed by identifying:

- Confirmed or Suspected Contaminants of Concern (CofC)
- Concentrations in various media of the CofC and comparison to regulated (or not!) values
- A clear understanding of the spatial distribution and expected behavior of the CofC is key:
 - i.e., a good site characterization

How RISK is assessed from a technical point of view

RISK is evaluated by estimating exposure of people, plants, animals, and comparing concentrations of CofCs to no effect levels

RISK can be present if and when soil, sediment or groundwater is identified at, on or under a site at concentrations exceeding generic and/or risk derived (site specific) values

(Sometimes the very presence of detectable concentrations can create issues)

How RISK is assessed from a technical point of view

Risk tolerance and public perception/acceptance is beyond the consultant's realm

However, to better serve the project's objectives while still protecting the public, the consultant must be aware of the risk tolerance of the stakeholders

A dollar value can be attached by the consultant to the presence of the impacts by evaluating remedial costs

- other considerations may be the appearance of stigma or the restriction on potential land uses
- In some cases exceedences of background values lead to legal action by 3rd parties

Comparative standards and recent changes to regulatory framework used to assess RISK

Concentrations of CofCs are compared to values put forth by the Province detailed in 6 tables, in force since October 1, 2004. To consider in the selection:

- soil texture

- potable groundwater setting or not

- depth to bedrock

- land use

- various depth of impact

- presence of sensitive areas, etc.

Revised values have been proposed by the Province and are available on the Environmental Registry for comment currently



Comparative standards and recent changes to regulatory framework used to assess RISK

Other Proposed Regulatory Changes:

- Enhanced RSC Integrity
- Liability Protection and Off-site Migration of CofCs
- **Streamlined RA Approach**
- Technical amendments
- Transition provisions

Comparative standards and recent changes to regulatory framework used to assess RISK

Streamlined RA Approach:

In some site settings, a modified generic Risk Assessment (RA) process (Tier II) will be made available to Qualified Persons for RA on-line. However, based on current proposal:

- it is unlikely to be that useful for sites with risks associated with vapour intrusion

- it only allows for the modification and consideration of a limited number of site specific parameters

- it will allow for some limited risk management approaches such as soil encapsulation



Comparative standards and recent changes to regulatory framework used to assess RISK

Streamlined RA Approach:

When this is up and running, such an RA may be obtained in as little as 8 weeks.

Comparative standards and recent changes to regulatory framework used to assess RISK

Proposed changes are posted for comment for 120 days as of October 6, 2008

standards and regulatory modifications may or may not change from their current form based on the comments

It is proposed that the changes come in force 1 year after they are adopted

The Tier II process would only become available after the 1 year period is over

Current remedial solutions

If the assessment work has identified the need for intervention, whether due to:

- likelihood of a health or ecological risk

- offsite issues

- regulatory requirement (e.g., mandatory filing of a RSC)

There likely will be a need for some corrective action.

Current remedial solutions

Three solutions are most often implemented, often in combination:

Active remediation

- Excavation and offsite disposal
- In-situ remediation
- Ex-situ remediation

Risk Assessment

- with risk management measures and CPU
- without risk management measures

Monitoring

Likely implications of proposed standards

With very few exceptions, the extent of contamination plumes must be understood and delineated. One key point, is the presence or absence of impacts at or beyond the site's property lines. This means:

For CofCs with lower comparative standards, the areal extent of the plumes will likely increase, and so will the remedial costs

Likely an increased number of cases where property line concentrations will exceed the proposed revised standards, when compared to today's values:

obligations? when does this trigger notification

when does this trigger more assessment



Likely implications of proposed standards

Some technologies currently used in Ontario may not be readily applicable in the future without the use of a RA as the remedial targets may now be too stringent

Some programs initiated in the past with today's remedial targets may be at risk of having to meet the proposed standards if the programs are not completed before the 1 year implementation delay lapses.

Conclusions

Consultants must be involved early in the process and have a clear understanding of the project's outcome, constraints and pressure points

The better the site characterization, the lower the likelihood of delays, unexpected submittal rejections or cost overruns

If you have a site under way, it may be wise to verify now what the changes to your CofCs are, you may want to see if the process can be expedited

Thank You!

Questions?

