

Stakeholder Submission

Professional Reliance in Natural Resources

Government of BC

Submitted by Richard Römer, M.Sc.

Introduction

For 10 years I witnessed the struggle of the Province of British Columbia (BC) with land remediation strategies, policies and regulations and the strong reliance of the BC government on Qualified Professionals (QPs). As an environmental project manager working for many of the largest companies in BC in this area, including WSP, SLR, SNC-Lavalin and my own company, I have dealt with contaminated sites on a daily basis for many years. Before my work in BC I was a senior project manager and remediation specialist in the Netherlands for 14 years working for environmental consultants like Royal Haskoning and Tauw. I was involved in a wide variety of environmental projects including complex in-situ remediation utilizing a wide range of techniques, feasibility studies, remediation plans and monitoring programs concerning natural attenuation. Clients included bulk storage tank companies, chemical plants, oil refineries and shipyards in the Rotterdam harbour and dry cleaners and landfills in several municipalities.

During this time, I watched the Dutch contaminated sites regulations change from a prescriptive and technical approach which was heavily relying on a few experts with scientific contaminated sites knowledge, into a more pragmatic and holistic approach strongly enhancing the opportunities for in-situ remediation techniques and biodegradation. The Netherlands learned that the key to success was: striving for the most balanced (sustainable) approach in the management of contaminated sites by taking social, economic and all-encompassing environmental aspects into account.

I worked with industries, cities and governmental organizations on challenging and complex problems in order to achieve this balanced approach. In feasibility studies I compared remedial options to social, economic and environmental aspects. The selected remediation approach was highly supported by stakeholders including the general public because the most sustainable approach 'makes sense'.

Unfortunately, the wisdom of the sustainable approach taken to contaminated sites in the Netherlands is not employed in BC. A prescriptive, technocratic and counterproductive approach still exists in BC and has not changed much in 20 years of contaminated sites regulations.

The current practice in BC focuses heavily on site investigations and assessments, relies on a limited amount of solutions and is accompanied by a vast administrative burden. As a consequence, more and more QPs are needed to guide proponents through the overly complex process, BC's landfills are almost filled to capacity, sites are underutilized or abandoned and site remediation becomes an

insurmountable financial burden. In many cases the chosen site remediation solution creates more problems than it solves (e.g. 'dig and dump') and offers no overall benefits to the public's general well-being, the environment or the economy.

In the past few years, after decades of practice, the current practice of professional reliance left me with a personal 'ethical crisis.' I chose this field to protect human health and the environment - to leave this world better than we found it. But the BC methods left me with critical questions. How 'ethical' is the excavation and transportation of a minute contamination burning thousands of liters of diesel in the process and dumping contamination in a landfill located in the floodplain of a major river and for other generations to deal with? How 'ethical' is the request for more site investigation when the outcome is predictable and only needed to feed the administrative 'paper monster'? How 'ethical' is imposing a costly site remediation when cost-effective measures would suffice under a more lenient regime? How 'ethical' is fencing off a contaminated site and leaving it for years to come? How 'ethical' is an underutilized and unattractive downtown hampering social and economic growth of an entire city? I confronted these questions and after years of lobbying for more progressive approaches, decided to discontinue my professional designation as Professional Agrologist and distance myself from the contaminated sites regime as we know it.

Needless to say this was a big decision with many consequences to me, yet I had no other ethical option. It is from this base of professional qualifications and decades of experience in two continents that I offer the following comments.

Why the current professional reliance model in BC is not effective for contaminated sites

It is my opinion that since the introduction of the BC Contaminated Sites Regulation (CSR) in 1997 the BC Government has persistently underestimated the complexity, diversity and uncertainty of contaminated sites including the impacts they have on the environment, our social well-being and the BC economy with detrimental effects 20 years down the BC's remediation road. This is based on the following observations:

- The absence of a BC wide background study on the number of contaminated sites in BC including the types of contamination and the social, environmental and economic effects of site assessments and site remediation. This study is imperative for a government for making informed, effective and balanced decisions.
- The amount of government staff working on contaminated sites management; in comparison to other jurisdictions the BC Ministry of Environment & Climate Change Strategy (MOE) is and has been critically understaffed.
- The limited progress of contaminated sites regulations; changes have been focused on technical aspects of the CSR but not on the core perspectives and processes of site remediation including its consequences contributing to a constrained environmental focus instead of a broader encompassing social, environmental and economic focus.
- The limited use of a wide variety of well-tested and trusted (in situ) site remediation techniques. The main site remediation technique in BC is still the complete removal of contamination by using the excavation and haul approach ('dig and dump').
- The almost complete absent use of Remediation Evaluation Reports; the comparison of remediation alternatives to encompassing social, environmental and economic aspects.
- The amount of underutilized or unused contaminated sites (brownfield sites) in BC.

The above problems in combination with an understaffed MOE has contributed to the misconception that responsibilities could easily be diverted to qualified professionals (QPs). However, a contaminated site is not like building a bridge.

Many aspects of a contaminated site are unknown and significant site investigations and assessments are required to reduce this uncertainty. Furthermore, there are many variables in contaminated sites; types of contamination, depth, soil type, contaminant behaviour, groundwater flow, volatility, solubility, land use, age of contamination to name a few (needless to say, much more complicated than building a bridge). As a response the MOE created a prescriptive, technocratic and complex regulation. The CSR grew organically by adding protocols, guidelines and procedures as issues and omissions became imminent. And now the environmental policy is suffering from the cauliflower effect; the basis of the Environmental Management Act and the Contaminated Sites Regulation are solid: protection of human health and the environment (the stem of the cauliflower). Protocols, guidelines, technical and administrative procedures (the florets of the cauliflower) prevent a plain sight of the stem i.e., over-protocolled regulation lead to losing sight of the encompassing goals.

This prescriptive, technocratic regulation and the heavy reliance of the government on QPs to guide proponents through this maze is far removed from the system as described in the government's request for submissions on professional reliance:

... "the current professional reliance model is a regulatory model in which government sets the natural resource management objectives or results to be achieved, and professionals hired by proponents decide how those objectives or results will be met".

In contaminated sites the government not only provides the objectives and results but dictates the QP how to reach these objectives and results. As a consequence, we now have to deal with:

- A focus on site investigations and site assessments instead of site remediation. The prescriptive CSR and the resulting requirement for strict QP due diligence, turns every contaminated site into an academic research project (risk elimination instead of risk management).
- An administrative 'paper monster' where every contaminated site has to be shoved through the same administrative funnel with off course the help of QPs.
- Unsustainable site remediation solutions where more contamination is created in the clean-up process than actually is cleaned up.
- Landfills that are filled to capacity with contaminated soil and the urgent need of more landfill space with potential outcomes like the Shawnigan Lake incident, as well as the risks and GHG emissions associated with the transport of contaminated soil over great distances. As an example, contaminated soil is now transported from Vancouver Island to the mainland of BC and Alberta as landfill capacity for contaminated soil is extremely limited on Vancouver Island.
- A disproportionate high financial burden on the clean-up of contaminated sites ('the polluter pays' sounds fair but 'the polluter' can only pay so much) to the detriment of entire urban downtowns – areas which need to be in use in order to achieve sustainable city objectives.
- A high amount of underutilized, unused and/or abandoned sites across many communities, with the resulting social and economic impacts, especially in areas outside the highly populated Vancouver and Victoria region.
- A diminishing public's trust in the effectiveness and competence of the government demotivating redevelopment and hampering economic growth.

Changes needed to improve public trust in the contaminated sites professional reliance model

For years I offered recommendations for change starting as a presentation for MOE staff in 2010. After that, I presented my ideas at a Science Advisory Board for Contaminated Sites in BC conference in 2011. I forwarded a document concerning sustainable management of contaminated sites to the BC Minister of Environment in 2016 and I presented a webinar concerning holistic approaches to the BC Institute of Agrologists.

It is my opinion that BC could benefit from a major change to a more sustainable approach. The BC government has relied too heavily on the input of QPs. A QP's role is to guide a proponent through the contaminated sites administrative and technical process. A QP is therefore focused on compliance of a proponent with the regulatory regime and not focused on the over-encompassing social, environmental and economic aspects. This role is first and foremost with the BC government and she should start to take this responsibility more seriously in order to regain public trust. Off course the help from many stakeholders including QPs is required for this change but the BC government is responsible for initiating and guiding this process. She alone can think and act for the 'greater good' of its inhabitants, the economy and the environment on a larger scale. This responsibility immediately implies increased flexibility towards the process for change.

The changes needed are extensively described in the 22-page document:

“Sustainable Management of Contaminated Sites – Changing to a Holistic Approach –“

which was forwarded to the Minister of Environment on November 28, 2016 and is included to this submission as attachment.

It is my opinion the BC government can regain the public's trust by changing the contaminated sites regulation into a more sustainable approach. A more flexible, pragmatic and cost-effective regulation can be achieved by taking the following steps:

1. Learn from previous site assessments and risk assessments.
2. Have the dialogue with communities.
3. A broader focus on contamination – the sustainability debate.
4. Incorporate sustainability in the selection of a site remediation strategy.
5. Focus on site remediation.
6. Allow redevelopment early in the remediation process.

I hope this submission and attached document will become a starting point for a lively debate on how to incorporate a holistic approach in contaminated sites management. It is my sincere belief the change to a holistic approach will result in a significant increase in site remediation, redevelopment and economic growth for BC and will win back the public's trust in the BC government.

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Attached Document: "Sustainable Management of Contaminated Sites – Changing to a Holistic Approach-", November 2016 by Römer Consulting