

Outline for the Use of Professional Judgement as a CSAP

PREAMBLE

The overall goal of the BC Contaminated Sites Regulation and the Environmental Management Act is the protection of Human Health and the Environment. The assessment and remediation of that contamination can greatly vary in its complexity. Various guidance documents and resources have been developed to aid in the assessment and remediation process. As the science upon which environmental contamination is based is relatively young and because no two sites that involve the natural environment are the same, there needs to be a mechanism to allow for professional judgement to be exercised within the regulatory process. This has been recognized by the Ministry of Environment and is specifically stated in the preamble of many documents. eg: *“The procedures outlined here are not applicable to every site; others may also be used. (TG1)”*.

In conversations with stakeholders it has become apparent that perhaps the contaminated sites professional industry as a whole is not fully utilizing their professional judgement and that the BC Ministry of Environment fully supports increased use of professional judgement where it is warranted and backed by sound rationale – it is a critical piece in keeping contaminated sites work at the leading edge. This document provides guidance on where professional judgement can be used and how it should be technically supported.

The purpose of this white paper is to provide guidance on the use of professional judgement in the assessment and remediation of contaminated sites in British Columbia.

What is Professional Judgement?

Professional Judgement has received much attention in the academic press recently with many definitions applied to various professions. With respect to contaminated sites investigation and remediation in BC professional judgement can be defined as:

The process of using one’s accumulated scientific and technical knowledge and project experience to develop site specific strategies for making decisions while undertaking a project. Implicit in this is the application of one’s knowledge and experience in combination with relevant regulatory requirements and guidance to the specific conditions and setting of a site. Where strategies vary from generic guidance, the application of professional judgement must be accompanied by a clear, defensible rationale and supporting information upon which the judgement is based.

For ministry purposes, “must be accompanied by a clear, defensible rationale and supporting information” is integral to the consideration of professional judgement. Supporting information can include documentation, data and summary information.

Using Professional Judgment

Applying professional judgement uses accumulated technical knowledge, work experience and knowledge of current research. This skillset will not be the same for any two individuals; therefore, the

amount and type of professional judgment that can be exercised by any one person will differ from another. This difference in knowledge and experience is magnified by contaminated sites work in BC being practiced by engineers, geoscientists, biologists, agronomists, and chemists as well as other disciplines.

Based on this understanding, the use of professional judgement requires adhering to the following three tenant's:

- indicating and documenting when professional judgment is used;
- clearly explaining the rationale behind the use of professional judgement by providing information and documentation; and
- approaching the review of professional judgement from the standpoint that all professionals may not independently reach the same conclusion, but can follow the basis of the rationale used and accept it.

Application of Professional Judgement

The specific application of professional judgement needs to consider the ability of the current regulatory framework to allow for it. Some areas of guidance allow for deviation, while other areas do not permit deviations. The following is a list of the various documents under the BC Ministry of Environment and the Contaminated Sites Approved Professionals and whether professional judgement is appropriate.

Document	Professional Judgement Permitted	Action Required
Environmental Management Act	No	Contact MOE
Contaminated Sites Regulation	No	Contact MOE
Protocols	No, except Protocol 1 where overridden by Protocol 13 and Protocol 20.	Contact MOE
Approvals	No	Obtain required approvals
Administrative Guidance	Yes	Documentation of Rationale
Technical Guidance	Yes	Documentation of Rationale
External Guidance	Yes	Documentation of Rationale
Procedures	Yes	Documentation of Rationale
Fact Sheets	Yes	Documentation of Rationale
Bulletins	Yes	Documentation of Rationale
Policies	Yes	Documentation of Rationale

Documentation of Professional Judgement

Documentation of professional judgement must be provided within the applicable report (Stage I PSI, Stage II PSI, DSI, RAP, COR, RA, etc.) in a manner that is clear, complete, easy to find and transparent. In addition, a summary of the professional judgement used should be provided in the Summary of Site Condition, Section 4.8 for investigation and Section 5.6 for remediation.

Examples of Where Professional Judgement Can be used

The following are examples of where professional guidance could be used. These are simply examples to illustrate the ways in which professional judgement could be used they are not meant to provide specific guidance.

1. Deviations to TG1: Sampling Density. TG1 indicates that a sampling density of 10 to 20 m be used for a DDSI level investigation. Deviations to this sampling density will be considered technically defensible if the data and site specific conditions support a larger density.
2. Deviation of TG4: Seasonal Sampling. TG4 indicates that seasonal sampling for soil vapour is required, however; TG4 allows for the use of guidance from other jurisdictions. The Interstate Technology and Regulatory Council (ITRC) has provided maximum ranges for seasonal variations. If measured concentrations are below the standards by these factors then there may be no need for seasonal evaluation.
3. Deviations to TG1: TG1 provides specific guidance for the sampling of soil stockpiles so that they may be characterized. Where a data set shows the soil pile is homogeneous and the data are consistent across the stockpile, justification can be provided allowing for a lower number of samples to be used to characterize the stockpile.
4. Protocol 9 indicates that samples from a minimum of three "background wells" are required to establish background concentrations and that "Background wells should not be located within the area of influence of any on-site or off-site human-made point sources of contamination." However, use of sample results from such wells to supplement the data set could be justified if it can be demonstrated that on-site or off-site contamination does not include the parameter(s) for which background concentrations are being proposed, and would have no interactions with site conditions that could affect the concentration of the 'background parameter(s)'