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AMENDMENTS TO THE BROWNFIELDS' REGULATION

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Over the December 2009 winter break, the Ministry of the Environment issued long awaited amendments to the Brownfields' Regulation – posted as O. Reg 511/09 made under the *Environmental Protection Act*, amending O. Reg 153/04 (Records of Site Condition – Part XV.1 of the Act). These amendments implement many of the loose ends from prior amendments to the *Environmental Protection Act* from 2007 and have been long awaited as a result. The amendments are quite detailed covering many facets of Phase I and Phase II Environmental Site Assessment requirements, Records of Site Condition, and incorporate the new concept of a modified generic risk assessment (or Tier 2 risk assessment). The following is designed to highlight particular sections of note. While some of the amendments came into force as of December 29, 2009, most of the amendments will not come into force until July 1, 2011, including the new Soil, Groundwater and Sediment Standards. Throughout the summary, we will reference whether the sections discussed are in force. The “new” standards are referenced in the amendments as of July 2009 but were only available to the public as of January 6, 2010. The actual Tier 2 modified risk assessment model is also available for review and is commented upon briefly below.

1. The Standards

While not all standards were changed, approximately 120 contaminants were updated. The standards do not come into force until July 1, 2011 and, as will be noted below with respect to Record of Site Condition transition provisions, there could be an additional 18 months thereafter to rely upon the former (2004 version) standards.

The standards now include 9 tables: 3 for full depth site conditions (background, potable, non-potable), 2 for stratified site conditions (potable and non-potable) 2 for shallow soil conditions (potable and non-potable), and 2 for use within 30 metres of a surface water body (potable and non-potable). The background standards were derived from groundwater monitoring information undertaken by the Ministry of Environment (MOE) between 1997 and 2007. The table below illustrates a comparison of certain contaminants relative to the 2004 standards. We have only included coarse textured soil for commercial/industrial properties:

Key = Increase from prior version / decrease from prior version

Contaminant	Potable Soil Standard (industrial/commercial) - µg/g		Potable Groundwater (all property uses) - µg/L		Non-Potable Groundwater (all property uses) - µg/L	
	Former (2004)	Current	Former	Current	Former	Current
Benzene	.24	.32*	5	5	1900	44
Ethylbenzene	.28	1.1	2.4	2.4	28000	2300
Toluene	2.1	6.4	24	24	5900	18000
Xylenes	25	26*	300	300	5600	4200
PHC - F1	230*	55*	1000 sum	750	n/v	750
PHC - F2	150*	230*		150	n/v	150
PHC - F3	1700*	1700*	1000 sum	500	n/v	500
PHC - F4	3300*	3300*		500	n/v	500
DCE, CIS-1,2-	2.3*	1.9	70	1.6	70	1.6
DCE, TRANS-1,2-	4.1*	1.3	100	1.6	100	1.6
Tetrachloroethylene	.45*	1.9	5	1.6	5	1.6
Trichloroethylene	1.1*	.55	50	1.6	50	1.6
Vinyl chloride	.003*	.032*	.5	.5	.5	.5

* The soil values noted are the same for non-potable conditions

Most of the groundwater standards have decreased for the contaminants referenced in the table above. The petroleum hydrocarbon concentrations are not as stringent as previously proposed and, in fact, the soil standard for F2 increased from the prior value. The groundwater concentrations are also not as stringent as previously proposed for petroleum hydrocarbons (F1 and F2). It appears that the MOE did listen to some stakeholders and attempted to balance competing interests of development and conservatism.

2. Some Definitions of Note

The Regulation now includes a definition of a “Phase I Study Area” which includes not only the Phase I property, but also includes any other property that is located within 250 metres of the Phase I property boundary, as well as any property that the qualified person/consultant determines should be included in this study area. It should also be noted that for purposes of certifications required under the Act for filing a Record of Site Condition (RSC), the property distance for use of non-potable standards has been changed from 100 m from the site to 250 m from the site (that section also does not come into force until July 1, 2011).

In addition, the definition of “Contaminant of Concern” includes a contaminant in excess of applicable site condition standards or a contaminant for which no standard is prescribed and which is associated with potentially contaminating activity. The last phrase is further defined by a chart/list as to what is a “potentially contaminating activity.” It contains the typical list of industrial activities, such as chemical manufacturing, processing, storage, handling and disposal. Of note is that it now contains activities including electricity generation and importation of fill material of unknown quality. Most of the definition sections do not come into force until July 1, 2011.

3. Qualified Persons (QPs)

The Regulation adds various conflict of interest sections associated with qualified persons designed to restrict those who hold direct or indirect interests in the property from also conducting the Phase I or II Environmental Site Assessments for the property in question.

4. Records of Site Condition (RSCs)

The procedure for filing Records of Site Conditions has been amended to incorporate the concept of submission for filing to enable the Ministry to deal with defects in filing materials and allow for time for

notices or acknowledgements. There is a 30 day period in which the Ministry must respond to a submission for filing a RSC.

Transition sections with respect to previously filed RSCs are contained in the Regulation but do not come into force until July 1, 2010. As of July 1, 2010, and depending upon when the RSC is filed (which could be up to January 1, 2013 depending upon when certain other legislation comes into force), certifications may use the 2004 version of the Standards up to July 1, 2011.

5. Phase I and Phase II Environmental Site Assessments (ESAs)

(a) Phase I:

The current sections of the Regulation dealing with Phase I and Phase II Environmental Site Assessments have been revoked and replaced but do not come into force until at least July 1, 2011 (and possibly later by virtue of other amendments to the *Budget Measures and Interim Appropriation Act, 2007*).

In general, the requirements for Phase I ESAs are designed to give greater certainty and uniformity to what is to be included, and appear to provide a one-stop shopping list for what is to be included. There is a separate Schedule setting out the content of the Phase 1 ESA, with the general objectives being to develop a preliminary determination of the likelihood that one or more contaminants have affected any land or water on, in, or under the Phase I property, to determine the need for a Phase II, to provide a basis for carrying out a Phase II and to provide adequate preliminary information about site conditions for the conduct of any risk assessment following completion of a Phase II. The components of the Phase I are to include a records review, interviews, site reconnaissance, evaluation of the information gathered, a report and submission of the report to the owner of the Phase I property.

The amendments also include a stale date for information that may be used in support of a Phase I - being 18 months before the submission of a RSC or the commencement of a Phase II ESA. However, in order to take advantage of the stale date 18 month period, the QP must also determine that there is no new or materially changed area of potential environmental concern on the property and that the report they are using is the most recent document that otherwise meets the requirements of the content of the Phase I ESA. Otherwise, an updated Phase I is required.

It should be noted that the Phase I requires the QP to create a Phase I Conceptual Site Model. This Conceptual Site Model must consist of figures, narrative descriptions and assessments showing existing buildings, water bodies, adjacent properties, areas where potentially contaminating activity has occurred and any areas with potential environmental concern. The QP must also provide a description of any uncertainty or absence of information obtained that could affect the validity of the Conceptual Site Model. The mandatory elements of the Phase I (and Phase II) are incorporated in tables in the Regulation and will no doubt shape a new look and feel of ESAs.

(b) Phase II:

A Phase II ESA is required if during a Phase I a potentially contaminating activity is identified on, in, or under the property or if the property has, is or has ever been used for any industrial usage or as a garage, bulk liquid dispensing facility, including a gasoline outlet, or for the operation of dry cleaning equipment. There are designated requirements for the contents of Phase II. These provisions do not come into force until at least July 1, 2011. The general objectives of the Phase II are to determine the location and concentration of contaminants in the land or water on, in or under the property, determine if site condition standards are met as of the certification date, or obtain information necessary to undertake a risk assessment. Similar to the Phase I, there is an 18 month stale date provision for Phase II reports provided no new or material changed area of potential environmental concern exists within the property, and the materials otherwise meet the requirements for the content of the report. Otherwise, an updated Phase II is required.

There is now a specific legislative requirement on the QP to ensure that the site investigation includes investigation, sampling analysis of groundwater on, in, or under the Phase II property where it is required or advisable to do so to achieve any of the objectives of the Phase II or any other provisions of the Regulation. This is mandatory in the event that the property qualifies as an "enhanced investigation property" which is defined as a property that is used or has ever been used in whole or in part for industrial use. In addition,

there are enhanced requirements on the QP to ensure that all areas where a contaminant is present at a concentration greater than the applicable site condition standard has been delineated laterally and vertically for each contaminant present. There are also specific groundwater sampling methods requiring samples to be taken from a monitoring well and not from a test pit.

In addition to the Phase I Conceptual Site Model, the Ministry requires a Phase II Conceptual Site Model demonstrating the current conditions of the property. Where a contaminant is present in excess of the applicable site condition standards, the Conceptual Site Model must include a description of the distribution of the areas, information about migration and, if applicable, information concerning soil vapour intrusion. This model must also include a diagram identifying the contaminant transport pathways and receptors. Mandatory components of the Phase II are set out in chart form in the Regulation.

With respect to analytical procedures (not in force until July 1, 2011), there are a host of specific requirements, including a few curious ones:

- labs are required to include all information from any analytical report, and may not exclude any contaminants sampled;
- all correspondence between the lab and the QP, or anyone under the supervision and control of the QP with respect to the sample collection, must be provided by the lab;
- with respect to meeting site condition standards for potable groundwater, there is now a provision (in force) indicating that a property does not meet the applicable potable groundwater site condition standard unless the QP has determined there is “no indication of objectionable petroleum hydrocarbon odour and taste associated with the groundwater”. (The previous version required the QP to determine that the groundwater was free from objectionable hydrocarbon odour and taste. The requirement for lack of sheen is still present and has not been changed.)

6. Imported Soil

The Regulation adds (as of July 1, 2011) a section relating to importation of soil that did not originate on an RSC property. The amendments enable soil to be imported to an RSC property provided that the soil has been sampled to verify that it meets the RSC site condition standards or risk assessment standards (or otherwise meets Table 1 of the Soil, Groundwater and Sediment Standards). Imported fill may only be used to backfill an excavation or for final grading.

7. Modified Generic Risk Assessment Model

The major amendments to the risk assessment sections (Schedule C of the Regulation) provide for an approved model for the Modified Generic Risk Assessment, which is defined as the model dated October 19, 2009. The model is intended to enable a site specific approach without a full blown risk assessment. The model allows for adjustments to several assumptions underlying the generic site condition standards including soil type, fraction of organic carbon, distance to closest surface water body, minimum depth to water table and hydraulic conductivity. It also allows for risk management measures to eliminate exposure pathways, such as a 1 metre cap of unimpacted soil which may be a hard cap or a combination of hard cap and fill cap, or fencing off without a cap prior to use or development. The model provides for a minimum and maximum allowable variance in certain input parameters – if the data entered is outside of the range, a warning is noted.

At present, the model available is only intended as an interim model but still provides a fairly robust system for data analysis. If the property specific standards are not acceptable, the information can be used to support some of the work required for a Tier 3 (or full) risk assessment or to identify limited areas for remedial action. If the property specific standards are met, the risk assessment may be submitted to the MOE for approval using those property specific numbers. It is important to note that not all parameters are adjustable in the model, such as groundwater actually used for drinking water purposes. In addition, the model is not applicable if the site is on or within 30 metres of an area of natural significance or is environmentally sensitive.

If a modified generic risk assessment is undertaken, there are additional requirements for the content of a Phase II ESA – slightly more onerous in terms of sampling data.

As for timing, there were no amendments made to the timing for response from the MOE to a risk assessment, however, a modified generic risk assessment is considered a limited scope risk assessment. Under the original regulation, that requires notice from the Director within 8 weeks after the date of submission.

Although the modified risk assessment approach will not be fully implemented until July 1, 2011, the MOE has advised that it will enable the use of the interim model provided existing risk assessment requirements are followed. The risk assessment would be subject to the current 16 week review time and separate pre-submission form completion.

It is also the MOE's intention to implement an on-line submission for the approved model along with a pre-submission form. The timeline for review would remain 8 weeks, however, the MOE has suggested that there may be ways to expedite the review.

Summary

In sum, the process to get to the amendments has been one involving significant consultation on the part of the MOE with various stakeholders since 2007. The intent was to level the playing field for those involved in brownfield redevelopment and those that happen to find themselves as brownfield owners. The Ministry reported that, throughout the consultation, they received generally supportive comments with concerns expressed in only a few key areas:

- offsite liability protection – which the MOE decided not to move ahead with but will continue to work towards;
- the increased stringency of the standards – which the MOE has indicated balances the need to protect public health and the environment with brownfield redevelopment;
- the modified generic risk assessment (or Tier 2 risk assessment) may only be applicable in limited cases – which the MOE has indicated that the Tier 2 risk assessment was pilot tested to demonstrate the cost compared to remediation was less using the Tier 2 approach and they anticipate a significant number of sites will be able to use this approach;
- the transition needed to accommodate projects that were underway – which the MOE indicated was addressed by the July 1, 2011 implementation date and potential further extension to July 1, 2013 depending upon whether a site qualifies and other amendments coming into force.

The implementation of all of this is really the key to determining whether the MOE accomplished what it set out to do. The MOE has indicated that guidance will be provided to assist in interpretation of the regulatory requirements for ESAs. While the standards have the general effect of re-categorizing certain sites as “brownfields,” there are new tools to attempt to address the risks associated with any contamination. There remains much uncertainty as to whether this will help or impede brownfield redevelopment - a question that only time will resolve.

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