

Investigating & Cleaning Contaminated Sites in Ontario

by Steven Rose, PEng, PGeo

Industry best practices and regulatory guidance have evolved over the past 30-plus years in Ontario so that it is now a part of each land owner's or land purchaser's due diligence to assess properties with a history of either commercial or industrial property use for evidence of environmental impairment.

Starting in 2004 and with updated regulations in 2011, there are now two common approaches to undertaking investigations of potentially contaminated Brownfield sites in Ontario:

- the Record of Site Condition (RSC) approach leading to filing on Ontario's environmental registry and limited protection against future Ministry of the Environment (MOE) orders; for this, the Regulation provides Site Condition Standards and a highly prescribed methodology for completing Phase 1 and Phase 2 Environmental Site Assessments of the property before the characterization of the site is acceptable
- the Environmental Due Diligence approach (EDD); for these, the Site Condition Standards are still applied to determine what is "clean", but somewhat less stringent industry standard practices – Canadian Standards Association CSA Z768-01 (Phase I) and Z769-00 (Phase II) – are employed for defining the scope of work.

The RSC approach represents a "gold standard". However, the level of scrutiny and details of reporting required under RSCs will not always be required or necessary.

Using the RSC approach instead of EDD ESAs can often represent a doubling or even tripling of the cost and time for investigative work – even before you find out whether any site clean-up will be necessary.

So, it is important to understand when the extra expense and time required for RSC type work are warranted.

WHEN THE ACT REQUIRES AN RSC

Transaction or Development	RSC Required	EDD May Be Used
Property sale, no change in use	No	Yes
Change of land use from a lower risk use to a higher risk (e.g., commercial, residential, agricultural to industrial)	No	Yes
Change of land use from higher risk use to lower (e.g., industrial to commercial, residential)	Yes	No
Site cleanup using Property Specific Standards based on Risk Assessment	Usually	Where RSC is not required
Voluntary filing of RSC, even though not required	Must use RSC approach	Not accepted

Most often, the requirement for an RSC is triggered by a municipality during the permitting process when a change of land use (or more specifically a change in zoning) is required for property redevelopment. Banks and other lenders may also demand that an RSC is filed, as a condition of financing. Also, property owners can decide voluntarily to follow the RSC process and file the document on title, to establish site conditions at a given date.



Air Sampling Equipment (left)
Field sampling program under the EDD approach is designed based on CSA standards and application of sound professional judgment.

ARTICLE ILLUSTRATIONS:
Courtesy Malroz Engineering Ltd.

Conceptual Site Model (Below)
Projects going through the RSC process must meet very strict standards for reporting, including development of a Conceptual Site Model for both Phase 1 and Phase 2 Environmental Site Assessments.



Continued on Page 5

WHERE RSC & EDD ESAs ARE THE SAME:

	RSC	EDD
Ontario Site Condition Standards are used to determine the test of “clean” versus “contaminated”	Yes	Yes
Standard field methodologies are employed e.g., new field methods for sampling volatile contaminants in soil (for Ph 2 ESAs) use current methodologies for comparison to the 2011 Site Condition Standards.	Yes	Yes
RSC reports signed by a Qualified Person (QP) licensed in Ontario	Yes	Has become standard

WHERE RSC & EDD ESAs DIFFER:

	RSC	EDD
Level of detail in documentation	Very extensive. Development of conceptual site model required for both Ph 1 and Ph 2	Less extensive. Conceptual site model developed only in Ph 2 ESAs
Extent of sampling (for Phase 2 ESA work)	Highly prescribed in the RSC regulation, based on a published list of Potentially Contaminating Activities (PCAs)	Field sampling program design based on CSA standards and application of sound professional judgment
Process and reviews	For an RSC to be filed, both Ph 1 and Ph 2 ESA work may be subject to external review, plus acceptance by MOE staff	No legislated requirement for external reviews and filing; can save time and money

PROCESS AND PROFESSIONALISM

The RSC process is extremely prescriptive, especially in reporting. Requirements for the Table of Contents and all report Sections are highly standardized – which doesn’t always deliver value for the client.

Some clients elect to do all the investigation and cleanup work to meet the RSC requirements, but decide filing the document on the Environmental Site Registry is not worth the extra time for Ministry reviews and approvals.

Tightened standards of investigation required for RSC assessments have raised the minimum level of work being done under the EDD process as well. Whether the RSC or EDD process is being used, it is very important to hire well qualified, experienced and licensed professional engineers or geoscientists for the work. Success depends on educated interpretation of interviews and available documents, site visits and aerial photographs. In summary, where RSCs are not

mandatory in Ontario, property owners may find the best value and outcomes come from using the EDD approach. Professional advisors and experienced QPs should be capable of providing input and insight at the outset of any project with respect to the relative merits and costs of each approach to investigative work.

Steven Rose is co-founding principal of Malroz Engineering Inc., Kingston, Toronto, Ottawa. www.malroz.com



Groundwater sampling Standard field methodologies are used in both the RSC and the EDD approaches.

**Welcome
New Members!**

Dave Brewer, AACI, PApp, BComm, PGCV, PLE
Appraisers Canada Inc.
705-726-4651
dave@davebrewer.ca

Caroline Cregan, BSc, MSc, MRTPI, PLE
urbanMetrics inc.
416-351-8585 x 227
ccregan@urbanmetrics.ca

Nicolas de Salaberry, BA, MSc, PLE
PCL Constructors Canada Inc.
416-357-6032
ndesalaberry@pcl.com

Joseph G. Emmons, PQS, PLE
Steenhof Building Services Group
705-325-5400 x295
jemmons@steenhofbuilding.com

Craig Ferguson, BComm, MA, PLE
urbanMetrics inc.
416-351-8585 x230
cferguson@urbanmetrics.ca

Shanna James, AACI, PApp, PLE
Puckrin and Company Inc.
905-985-6291
shanna@puckrinandcompany.com

Nick McDonald, MCIP, RPP, PLE
Meridian Planning Consultants
905-532-9651 x202
nick@meridian-vaughan.ca

Bradley Post, BES, MCIP, RPP, PLE
GeoMarket Advisors
647-274-2206
bradpost@geomarketadvisors.ca

David Scott, BBM, AACI, PApp, PLE
Avison Young Commercial Real Estate
416-673-4021
david.scott@avisonyoung.com