



Environmental Site Assessments (ESA)

Phase I, II, III and beyond

Environmental Strategies for Business Success...



Why an ESA?

In recent times, the risks of environmental site contamination has become an issue to anyone buying, selling or financing property. Due to past and present land use practices some sites have been and/or are becoming contaminated. Contamination on a site presents major concerns and possible liabilities for the buyer, seller and/or lender. To reduce this risk it has become necessary to undertake Phase I Environmental Site Assessment (ESA) to determine the actual and the potential environmental site contamination. By understanding the nature of the problem the next logical step towards a solution can be undertaken.

KC and ESA's

Since we began conducting ESAs approximately 15 years ago we have been evolving with the process and setting new standards of practice. KC is staffed with qualified, experienced and objective personnel who understand the requirements of an environmental site assessment. KC staff have a keen understanding of where to obtain the necessary information and how to present it effectively. We are a fully insured environmental engineering firm permitted by APEGGA. Our Phase I ESA meets the terms of reference consistent with CMHC and CSA requirements as well as being conducted according to the APEGGA code of ethics.



Soil sampling during a Phase II investigation

What is a Phase I ESA?

The Phase I ESA is often referred to by several different names - Phase I, real estate assessment, property transaction audit, pre-acquisition audit, etc. Often the phrases "Phase I Environmental Site Assessment" and "Environmental Audit" will be spoken in the same sentence or interchanged as having the same definition. According to the Canadian Standards Association a Phase I ESA and an Environmental Audit are not the same.

Specifically a Phase I ESA is:

A systematic process by which the assessor attempts to determine if a specific property is, or may be, subject to contamination from past or present site uses and from adjacent site uses. Information collected should be confirmed. A Phase I ESA involves no testing.

To conduct an acceptable Phase I ESA, several key criteria must be met:

- a Phase I ESA needs to be done by an insured, qualified and objective assessor, experienced in this field;
- prior to conducting a Phase I ESA the terms of reference or purpose need to be carefully determined;
- if in conducting the Phase I, further work is required than what is set out in the terms of reference the scope of work will need to be revised together with the client;
- a balance between the costs of the assessment and the required results needs to be determined to ensure that the Phase I ESA remains a useful business tool; and
- the Phase I ESA should be done using accepted systematic procedures (i.e. CSA, CHMC standards).

In conducting a Phase I ESA the client should be advised that the ESA is based only on the observations, information gathered and reviewed and provides no guarantee that all potential contamination is identified. Ultimately, a Phase I ESA serves to identify the likelihood of site contamination and as such the ESA can only reduce not wholly eliminate the chance of site contamination.

If contamination is discovered during the Phase I ESA, then further investigation is recommended to be undertaken in Phase II. If remediation is needed, this is conducted in Phase III (IV, etc.).

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Benefits

By performing a Phase I Environmental Site Assessment you can avoid the consequences of missing a potential problem that can result in losing a real estate sale, expensive litigation and legal penalties and/or unnecessary environmental sampling that could cost tens of thousands of dollars.

Other benefits include: determining the level of risk associated with a property due to environmental contamination; confirming property value, before completing a property purchase; identifying a property's standing with respect to environmental concerns so management practices may be improved with respect to environmental issues and areas of environmental concern may be rectified.

At KC, we believe it is essential that our clients and the public are aware of and understand the services and benefits provided by a Phase I Environmental Site Assessment.

A Sample of KC Project Achievements Include:

- Phase I ESA's of fourteen Highway Maintenance Yards for Alberta Public Works, Supply and Services.
- Detailed site investigations and 75 Residential Audits for Public Works and Government Services Canada; as well as Phase II investigations of three closed landfills and one gas station in the Loon River First Nations Land Claims Area. The investigations included extensive soil and ground water testing.
- Phase II ESA for the Department of National Defence, Cold Lake; for a bulk fueling station.
- Hundreds of Phase I ESA's across Western Canada of industrial, commercial, and multi-residential properties.

What is the difference between a Phase I, II, and III ESA?

- The ESA is usually performed in phases. The following description explains what Phase I, II, and III ESAs are and how they fit together.
- Phase I:** Consists of detailed research of available site information and visual site inspection to determine if there are indications of potential site contamination from the past and present site uses and from adjacent properties. Soil and other testing is not normally needed during the Phase I. If the Phase I indicates that there is a potential for site contamination then a Phase II assessment will be recommended. The Phase I report will include preliminary recommendations regarding the scope and cost for further investigation required. Phase II work begins only with client approval. This approach provides the client with the maximum results for the money spent. A Phase I ESA is accurate at the time it is conducted but as time passes site conditions may change. An appreciation of such changes in conditions must be noted when interpreting a Phase I ESA.
- Phase II:** Confirms the existence of contamination as well as the type and amount of contamination through soil and water testing. This is often done by drilling boreholes and installing ground-water monitoring wells. The scope of this work is delineated by what is discovered in the Phase I (location of testing, contaminants to be tested for, etc.) and will vary for each site depending on the type of contamination suspected.
- Phase III and beyond:** Verifies the extent of the problem, provides alternatives for site remediation and finally, site cleanup. The scope of work and the cost is directly dependent upon the nature of the contamination and the site itself.



KC Staff working hard for you!

► For a complete project listing, or a company brochure, please contact us:



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Fact Sheet