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"Brownfields, Qualified Persons, Certification Brownfields Redevelopment Update"

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RECENT REGULATORY CHANGES

- S. 168.4(1) of the *Environmental Protection Act* ("EPA") states that an owner of property may file a record of site condition (RSC) in the Registry if certain criteria are fulfilled:
 - 1. A "Qualified Person" ("QP") has certified in the RSC that a Phase I ESA has been conducted; or
 - 2. A QP has certified in the RSC that either:
 - i. a Phase II Environmental Site Assessment (ESA) of all or part of the property was conducted with respect to one or more contaminants, or
 - ii. as of the certification date, no Phase II ESA is required by the regulations for any part of the property and, in the opinion of the QP, it is unnecessary to conduct a Phase II ESA for any part of the property



- 3. If a Phase II ESA was conducted but for only part of the property, a QP has certified in the RSC that, as of the certification date,
 - i. no Phase II ESA was required by the regulations for any other part of the property, and
 - ii. in the opinion of the qualified person, it was not necessary for any other reason to conduct a Phase II ESA for any other part of the property

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RECENT REGULATORY CHANGES

- 4. If a Phase II ESA was conducted for all or part of the property, a QP has certified in the RSC that as of the certification date, the property meets,
 - i. the full depth background site condition standards for all contaminants prescribed by the regulations, except for those contaminants specified by the QP,
 - ii. the full depth generic site condition standards for all contaminants prescribed by the regulations, except for those contaminants specified by the QP, or
 - iii. the stratified site condition standards for all contaminants prescribed by the regulations, except for those contaminants specified by the OP

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THE QUALIFIED PERSON (QP) REQUIREMENT

A QP is required under the *EPA* to:

- 1. Conduct or supervise a Phase I Environmental Site Assessment (ESA)
- 2. Conduct or supervise a Phase II ESA
- 3. Prepare or supervise a risk assessment
- 4. Sign certain certifications in the Record of Site Condition (RSC)



QUALIFIED PERSON DEFINED

- S. 168.1 defines a QP as "a person who meets the qualifications prescribed by the regulations".
- S. 5 of Regulation 153/04 sets out the interim qualifications for the QP (other than for risk assessment). As stated in the regulations, these interim qualifications will be revoked on October 1, 2006.
- S. 6 of Regulation 153/04 details the qualifications required to prepare or supervise risk assessments. These will not be revoked on October 1, 2006.



"QUALIFIED PERSONS" - Phase I ESA

For the purposes of performing a Phase I ESA, a QP includes:

- Professional Engineers (P.Eng)
- Professional Geoscientists (P. Geo)
- Chartered Chemists
- Professional Agrologists
- Applied Science Technologists
- Certified Engineering Technologists
- Architectural Technologists

Note: All subject to revocation October 1, 2006.



For the purposes of performing a Phase II ESA, a QP includes:

- Professional Engineers (P.Eng)
- Professional Geoscientists (P. Geo)
- Chartered Chemists
- Professional Agrologists

Note: All subject to revocation October 1, 2006.



"QUALIFIED PERSONS" - Phase I and II ESA Summary

Qualified Person (QP)	Phase I ESA	Phase II ESA
P. Eng	Yes	Yes
P. Geo	Yes	Yes
P. Chem	Yes	Yes
P. Agr	Yes	Yes
C.E.T	Yes	No
A Sc T	Yes	No
Arch. Tech.	Yes	No



"QUALIFIED PERSONS" – Risk Assessment (QP_{RA})

- ✓ Only a P.Eng and a P. Geo are qualified persons for the purpose of filing a RSC where there is an existing risk assessment for the property.
- ✓ The QP_{RA} qualification for the preparation or supervision of a RA include both an education and experience component:

Education: P.Eng, P.Geo., B.Sc., B. Eng., B. Applied Technology

Experience:

- 8 years + P.Eng, P.Geo., B.Sc., B. Eng., B. Applied Technology
- 7 years + Master's degree in science or engineering
- 5 years + Ph.D in science or engineering
- Within the specified periods of experience, the QP must have direct experience in the conduct or supervision of a RA or in the technical or scientific review of a RA on behalf of a public authority

"QUALIFIED PERSONS" - Risk Assessment Summary

Qualified Person (QP _{RA})	Filing RSC with Existing Risk Assessment	Preparing or Supervising Risk Assessment
P. Eng	Yes	(+8 yrs experience)
P. Geo	Yes	Masters (+7)
		Ph.D (+5)
		(two years direct experience)



"QUALIFIED PERSONS" - Risk Assessment Summary

Qualified Person (QP _{RA})	Filing RSC with Existing Risk Assessment	Preparing or Supervising Risk Assessment
B. Sc., B. Eng.,	No	(+8 yrs experience)
or		Masters (+7)
B. Applied Technology	No	Ph.D (+5)
		(two years direct experience)





- Requirements for "Qualified Person":
 - Sign and take responsibility for the work'
 - Maintain Professional Liability Insurance (2 years)
 - Maintain reports (7 years)
- Laboratories and methodologies must be accredited and QP must confirm acceptability of laboratory data



ADDITIONAL REQUIREMENTS

Professional Liability Insurance:

- O. Reg. 153/04 requires that QPs maintain a minimum of \$1 million professional liability insurance
- Coverage to continue for two years if QP is bankrupt, insolvent, incompetent or dies
- Could be a problem for small companies or sole practitioners



REG. 153/04 - THE "TURF WAR" CONTINUES...

- Concerns have been raised by several interested groups in regard to the sufficiency of the current interim qualifications. These include:
 - Questions regarding the validity of the exclusion of certain groups (e.g. engineers holding limited licences)
 - Concerns that the current qualifications for interim QPs fail to meet the broad-based skills required in environmental assessment
 - Concerns that the current qualifications fail to adequately protect the public interest
 - Economic concerns



REG. 153/04 - POSSIBLE CHANGES

- Consultations with the Ministry of Environment (MOE) and other interested stakeholders are scheduled for this Fall in regard to the changing interim QP qualifications
- Possible changes could include:
 - The creation of a certification program for QPs
 - Additional qualification requirements (e.g. Continuing education)
 - Elimination of the restriction on limited licence holders



EDUCATIONAL PROGRAMS

Seneca College of Applied Arts and Technology

- Integrated Environmental Site Remediation (IER)
 - 4 year program (8 semesters)
 - Program Description: "[a] ground-breaking program, examining all aspects of site contamination, including scientific evaluation, property assessment and sustainable redesign. Graduates will be knowledgeable professionals and major participants in a field that provides significant local and international opportunity."
 - ➤ IER integrates the academic areas of science, law, planning, communications, engineering and computer applications and focuses on environmental site remediation and land redevelopment
 - Graduates of the program are limited to Phase I ESA.

INTEGRATED ENVIRONMENTAL SITE REMEDIATION APPLIED DEGREE

Curriculum

Year I Year 2

Introduction to Chemistry

Computer Fundamentals

Algebra

Scientific Methods

Fundamentals of Canadian Law

Environmental Social Issues

Corporate Communications I & II

Environmental Chemistry

Calculus

Soils and Geomorphology

Health and Safety

Field Measurement

Aqueous Environmental Sampling

Locational Analysis and Surface Water Sampling Statistics and Computer Applications

Geology

Physical Geography

Introduction to Urban and Regional Planning

Soil, Vapour and Air Sampling

Environmental Law I & II

Professional Issues and Continuous Learning

Co-op Professional Practice

Geochemistry

Terrestrial and Aquatic Ecology

Urban and Regional Planning II

Subsurface Exploration and Sampling

Liberal Studies

Soil Sampling and Ecology

Paid Work Experience Option

INTEGRATED ENVIRONMENTAL SITE REMEDIATION APPLIED DEGREE

Curriculum

Year 3 Year 4

Physical Hydrogeology

Air Photo Interpretation/Remote Sensing

GIS Data Management/Advanced GIS

Landscape Design with AutoCAD

Phase I and II Investigations

Co-op Integration and Career Planning

Industrial Chemistry

Contaminant Hydrogeology

Computer Modelling

Sustainable Communities

Liberal Studies

Hydrogeological Sampling and Analysis

Paid Work Experience Option

Applied Hydrogeological Case Studies

Phase IV Technologies

Real Estate Valuation

Environmental Management Systems

Liberal Studies

Feasibility Studies

Phase IV Case Studies

Project Management

Environmental Risk Management

Major Project or Thesis

EDUCATIONAL PROGRAMS

• Environmental Technician Diploma (ETD) Program

Graduates of the Environmental Technician Diploma program are eligible for a bridging program to gain access to the 2nd year of the IER program, with the necessary GPA

Environmental Technology Diploma Program

Graduates of the Environmental Technology Diploma program are eligible for a bridging program to gain access to the 3rd year of the IER program, with the necessary GPA





- Seneca is currently attempting to have its students become affiliated with one of the various accreditation bodies of groups qualified to conduct Phase II ESAs (PEO, APGO, OIA, ACPO) in order to allow graduates the ability to conduct Phase II ESAs
- Representatives of the IER program will be heavily involved in the upcoming consultations scheduled to occur with the MOE
- Although it is unclear what will replace s.5 of Reg. 153/04, it is anticipated that the IER program will be significantly altered as a result



