



Regulatory Process for Remediation/Reclamation

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Introduction

- ◆ **Presentation focuses on regulatory requirements under the *Environmental Protection and Enhancement Act (EPEA)***
 - ◆ **Remediation and reclamation are addressed in two separate parts of the Act**
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Introduction (cont'd)

- ◆ **EPEA requires industry to remediate substance releases (contamination), reclaim the site and get a reclamation certificate**
 - ◆ **Other Acts and regulators also have requirements**
 - ◆ **Presentation will discuss remediation and reclamation regulatory structure**
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Introduction (cont'd)

- ◆ **Presentation will identify some common misconceptions**
 - ◆ **Environment and Agriculture held ten public meetings in 1998 on remediation and reclamation**
 - ◆ **Much of what is being discussed here is a follow-up to address the concerns raised at those meetings**
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Regulation of Remediation

- ◆ **Part 4 Release of Substances**
 - ◆ **s. 101 - duty to take remedial measures**
 - ◆ **Person responsible must repair, remedy and confine the effects where a substance that has caused, is causing or may cause an adverse effect is released to the environment**
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Remediation (cont'd)

- ◆ **s. 1(ss) defines a range of people who can be considered a person responsible**
 - ◆ **In practice, the person responsible is the current EUB licensee**
 - ◆ **s. 102 provides for an EPO to take remedial measures and restore the environment**
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Remediation (cont'd)

- ◆ **Remediation criteria and guidelines and standards released by province and Canada over past 11 years:**
 - ◆ Tier 1
 - ◆ CCME 1991
 - ◆ CCME 1999
 - ◆ CWS-PHC 2001
 - ◆ Salt Management Guidelines
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Remediation (cont'd)

- ◆ **Operators must identify and remediate all contamination to acceptable standards prior to applying for a reclamation certificate**
 - ◆ **Operators are required to conduct a Phase I assessment after July 1, 2001**
 - ◆ **Operators required to indicate on the application if remedial work done**
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Remediation (cont'd)

- ◆ **Operators must sign a declaration on the reclamation certificate application that there are no other soil chemical or physical conditions that resulted from the operator's use of the land that may adversely affect soil or vegetation or groundwater on or near the site**
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Remediation (cont'd)

- ◆ **Operators should retain documentation of the types, amounts, and locations of any substances identified and remediated, methods used and confirmatory sampling results**
 - ◆ **The records may be requested by Alberta Environment**
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Remediation (cont'd)

- ◆ **There is no formal closure mechanism for operators who conduct remedial work (i.e., no equivalent to reclamation certificate)**
 - ◆ **Alberta Environment is reviewing various closure options used in other jurisdictions**
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Regulation of Reclamation

- ◆ **Part 5 Conservation and Reclamation**
 - ◆ **s. 122 says an operator has a duty to conserve and reclaim and get a reclamation certificate**
 - ◆ **s. 119(b) lists a number of people who can be considered an operator**
 - ◆ **In practice the operator is the current EUB licensee**
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Reclamation (cont'd)

- ◆ **s. 125 to 128 provide for a variety of EPOs if an operator fails to conserve or reclaim**
 - ◆ **s. 129 says that no surrender or termination of a surface lease is effective or binding on any person until a reclamation certificate is issued**
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Reclamation (cont'd)

- ◆ **Over 45,000 reclamation certificates have been issued since 1963**
 - ◆ **18,314 have been issued since the release of the first version of the wellsite criteria in 1993**
 - ◆ ***The Reclamation Criteria for Wellsites and Associated Facilities - 1995 Update* are in effect for 2001**
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Reclamation (cont'd)

- ◆ **C&R/IL/99-4 (*Reclamation Certification Process for Wellsites*)** lays out the certification process from application to decision
 - ◆ **The purpose of the inquiry is:**
 - ◆ to confirm the operator's reclamation data
 - ◆ not to conduct full reclamation assessment
 - ◆ not to conduct a contamination assessment
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Reclamation (cont'd)

- ◆ **If Inspector finds contamination at an inquiry the company is asked to collect and analyze samples and prove that levels meet criteria**
 - ◆ **Obvious contamination results in automatic site failure**
 - ◆ **If the levels are acceptable the certificate will be issued**
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Reclamation (cont'd)

- ◆ **If the levels are not acceptable, the site fails and the company must remediate and resubmit an application**
 - ◆ **Decisions about contamination and the subsequent direction to carry out remedial work are made under Part 4 of the Act not Part 5**
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Misconceptions

- ◆ **Reclamation certificate means no contamination**
 - ◆ The certificate means that the operator has met all the **reclamation** criteria.
 - ◆ If the Inspector finds contamination no certificate will be issued.
 - ◆ However, the issuance of a reclamation certificate does not imply that a site has no contamination.
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Misconceptions (cont'd)

- ◆ **Remediation is only required to a depth of ... [e.g., one metre]**
 - ◆ **Remediation is only required on the lease**
 - ◆ All soil, water and groundwater contamination must be remediated.
 - ◆ Depth and location are not relevant.
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Misconceptions (cont'd)

- ◆ **“Substance release” means the substance has to move off the lease**
 - ◆ The full wording is “where a substance that has caused, is causing or may cause an adverse effect **is released into the environment**”.
 - ◆ The environment means air, soil, water or groundwater within and outside a lease.
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Misconceptions (cont'd)

- ◆ **Following EUB Guidelines will meet Alberta Environment requirements**
 - ◆ G50 and 58 are waste management protocols.
 - ◆ In case of dispute, Alberta Environment's remediation criteria are the ultimate requirement.
 - ◆ The EUB will review G50 and 58 and harmonize with remediation criteria.
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Misconceptions (cont'd)

- ◆ **Effective remediation techniques yield effective reclamation results**
 - ◆ Most do.
 - ◆ Some techniques may create problems by altering chemical, physical or biological properties of soil.
 - ◆ Example would be bioremediating hydrocarbon-based waste in topsoil without considering impact of clay or salt content.
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Misconceptions (cont'd)

- ◆ **Burial or landfilling of contaminated topsoil is best remediation option**
 - ◆ Topsoil is a valuable resource.
 - ◆ Burial or removal requires additional disturbance to replace lost soil.
 - ◆ Some landowners and municipalities are restricting topsoil movement.
 - ◆ In-situ treatment and reuse should be practiced wherever possible.
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Misconceptions (cont'd)

- ◆ **Contamination effects will always be visible at the inquiry**
 - ◆ Most will be.
 - ◆ Some (e.g., metals) may show no soil or vegetation effects.
 - ◆ Some (e.g., salts) may not impact current crop but will impact a different crop.
 - ◆ Some (e.g., hydrophobic soils) take a long time to appear.
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Misconceptions (cont'd)

- ◆ **Dry and abandoned (D&A) sites are never contaminated**
 - ◆ Most are not.
 - ◆ In some cases there are spills or improper waste disposal that result in contamination.
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Misconceptions (cont'd)

- ◆ **Reclamation certificate automatically cancels a lease**
 - ◆ Lease is a private agreement.
 - ◆ Certificate is a pre-requisite to cancel.
 - ◆ Both parties should agree all terms and conditions have been met before lease is cancelled.
 - ◆ Some leases may have automatic cancellation on certification clause.
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Misconceptions (cont'd)

- ◆ **Reclamation certificates are not required for off-lease areas (e.g., remote sumps)**
 - ◆ All construction impacts require a certificate, even if there is no lease.
 - ◆ Without certificate operator remains liable.
 - ◆ Operators should make sure they know all off-lease impacts when buying properties from other operators.
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Summary

- ◆ Remediation and reclamation are regulated by the *Environmental Protection and Enhancement Act*
 - ◆ Person responsible for contaminant remediation is current EUB licensee
 - ◆ Alberta Environment expects operators to identify and remediate all contamination caused by activity
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Summary (cont'd)

- ◆ **Remediation must be done prior to reclamation**
 - ◆ **Inspector will not issue certificate if contamination is found at inquiry**
 - ◆ **Reclamation certificate means reclamation criteria have been met**
 - ◆ **Certificate does not imply a site has no contamination**
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Summary (cont'd)

- ◆ **Current EUB licensee is liable for contamination problems identified anytime after site construction begins, including after certificate is issued**
 - ◆ **Get more information at the websites**
www.gov.ab.ca/env/protenf/landrec/index.html
www.gov.ab.ca/env/protenf/soilgrndwater/index.html
or e-mail land.management@gov.ab.ca
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