



# **Phase 1 Environmental Site Assessment Guideline for Upstream Oil and Gas Sites**

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## Why Conduct a Phase 1 ESA?

- ◆ **A Phase 1 Environmental Site Assessment (ESA):**
    - ◆ Provides information on what was on the site prior to abandonment
    - ◆ Indicates location of potential contamination and adverse effects
    - ◆ Offers increased confidence for reclamation certification
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## Types of Sites

- ◆ **A Phase 1 ESA will be required for all upstream oil and gas sites:**
    - ◆ Wellsite
    - ◆ Pipeline
    - ◆ Battery
    - ◆ Oil production site
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## **Time Line for Implementation**

- ◆ **A Phase 1 ESA will be required on all sites where a soil assessment is conducted after July 1, 2001**
  - ◆ **Sites where a soil assessment is conducted prior to July 1, 2001 will not require a Phase 1 ESA**
  - ◆ **A Phase 1 ESA should be conducted prior to starting reclamation**
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## Information Required

- ◆ **Information is obtained from:**
    - ◆ A desktop review
    - ◆ Interviews
    - ◆ A site visit
  - ◆ **No physical sampling of soils**
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## **Purpose of Desktop Review**

- ◆ **Obtain information about current and historical land uses and activities**
  - ◆ **Identify potential sources of contamination**
  - ◆ **Establish the framework for subsequent site investigations**
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# Components of a Desktop Review

## ◆ Company files

- Process flow diagrams
  - Historical records of spills, releases, accidents
  - Previous environmental audits and monitoring reports
  - Location of underground utility services
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# Components of a Desktop Review

## ◆ Air Photo Review

- ◆ Site history
  - ◆ Changes to lease size
  - ◆ Changes to equipment, buildings, pits/sumps
  - ◆ Spills
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## **Components of a Desktop Review**

- ◆ **Alberta Energy and Utilities Board's spill database**
  - ◆ **Alberta Environment's water well records**
  - ◆ **Maps that indicate soil, surficial geology, bedrock topography and bedrock geology**
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## Site Visit

- ◆ **Verifies the results of the desktop review**
  - ◆ **During the site visit look for and record:**
    - ◆ Surrounding land use, topography and vegetation
    - ◆ Location of surface water bodies, water wells, etc.
    - ◆ Potential sources of leaks, spills or releases
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## Site Visit

- ◆ Visual evidence of on-site and off-site contamination
  - ◆ Waste management practices
  - ◆ Equipment, infrastructure or underground utilities that may be affected during a subsurface investigation
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## Interviews

- ◆ **Interviews should be conducted with:**
    - ◆ Lease or adjacent landowners/occupants
    - ◆ Current and past facility operators and their staff
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## Interviews

- ◆ **Discussion topics include:**
    - ◆ Location of any off-lease facilities
    - ◆ Location of backfilled and/or previously remediated drilling sumps and pits
    - ◆ Location, characteristics and extent of unproductive land
    - ◆ Location of underground storage tanks, pipelines
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## Interviews

- ◆ Details of past spills and clean-up procedures
  - ◆ Details of waste management and waste disposal practices
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## Forms

- ◆ **Results of Phase 1 ESA to be completed on the form found in Appendix 3 of the document, *Phase 1 Environmental Site Assessment Guideline for Upstream Oil and Gas Sites*.**
  - ◆ ***Wellsite Reclamation Application Form Revised 2001* includes a Phase 1 ESA question.**
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## Forms

- ◆ ***Wellsite Reclamation Certificate Application (WRCA)*** forms will be refused if a Phase 1 ESA has not been conducted.
  - ◆ **The questions in Part III of the WRCA must still be answered.**
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## **Expectations of the Phase 1 ESA Process**

- ◆ **Completion of a Phase 1 ESA will generate confidence that the possibility of contamination has been investigated prior to commencing reclamation activities.**
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## Phase 2 ESA

- ◆ **If contamination is suspected at a site, a Phase 2 ESA may be required to determine if contamination is present.**
  - ◆ **Currently, Alberta Environment does not require the results of any Phase 2 ESAs or the remediation work that flows from the Phase 2 ESA to be submitted.**
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## Completed Phase 1 ESA Forms

- ◆ A completed Phase 1 ESA form is not submitted to Alberta Environment with the WRCA Form.
  - ◆ All Phase 1 ESA information must be retained on file in the operator's office and provided upon request.
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## **Phase 1 ESA Audit**

- ◆ **Approximately 10% of WRCAs received in Edmonton will be randomly audited for the Phase 1 ESA.**
  - ◆ **Operators will have 30 calendar days to provide Phase 1 ESA to Alberta Environment.**
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## Phase 1 ESA Audit

- ◆ **The Phase 1 ESA will be checked for completeness and sufficient, detailed information.**
  - ◆ **After review, the Phase 1 ESA and WRCA is forwarded to Alberta Environment regional staff**
  - ◆ **Regional staff can request the Phase 1 ESA if they suspect contamination issues at a site.**
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## Phase 1 ESA Audit

- ◆ **If information is missing, lacks detail or clarity, the operator will have 30 calendar days to supply requested information.**
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## Phase 1 ESA Audit

- ◆ **If the Phase 1 ESA is not supplied or requested additional information is not received:**
    - ◆ The Director can refuse to accept the WRCA.
    - ◆ If the inquiry has already been held, the Reclamation Inspector can refuse to issue a reclamation certificate.
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## **Phase 1 ESA Audit Results**

- ◆ **Audit results will be tracked on Alberta Environment's database.**
  - ◆ **Sites that fail the Phase 1 ESA audit must supply an acceptable Phase 1 ESA when the operator re-applies for a reclamation certificate.**
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## **Publications**

- ◆ ***The Phase 1 ESA Guideline for Upstream Oil and Gas Sites* is available on Alberta Environment's website at:  
[www.gov.ab.ca/env/info/infocentre/index.cfm](http://www.gov.ab.ca/env/info/infocentre/index.cfm) and under "Search By Topic List" select "Soil".**
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## Publications

- ◆ **An Information Letter, *Guidance for Use of the Phase 1 ESA Guideline for Upstream Oil and Gas Sites*, D&R/IL/01-1, can be found at the same website address.**
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## **Publications**

- ◆ **General procedures for conducting a Phase 2 Environmental Site Assessment is available from the Standards Council of Canada.**
  - ◆ **Website [www.scc.ca](http://www.scc.ca) and select “Search” and enter “Phase II Environmental Site Assessment”.**
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## Conclusions

- ◆ **A Phase 1 ESA will be used as a screening tool to determine if contamination is likely present**
  - ◆ **Applies to upstream oil and gas sites: wellsites, batteries, pipelines, oil production sites**
  - ◆ **Completion is mandatory for sites with a soils assessment conducted after July 1, 2001**
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## Conclusions

- ◆ **A Phase 1 ESA consists of a desktop review, site visit and interviews to estimate the likelihood, types and location of surface and/or subsurface contamination.**
  - ◆ **Desktop review includes information from company files, air photos, historical spill records, water well records and maps.**
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## Conclusions

- ◆ **A site visit is conducted to verify the results of the desktop review.**
  - ◆ **Interviews with landowners/occupants and current and former facility operators provide additional information and verify desktop results.**
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## Conclusions

- ◆ **Approximately 10% of WRCAs will be audited for the Phase 1 ESA.**
  - ◆ **Operators will have 30 calendar days to supply the Phase 1 ESA.**
  - ◆ **If information is missing, lacks detail or clarity, operators will have 30 calendar days to provide requested information.**
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## Conclusions

- ◆ **If the Phase 1 ESA or requested information is not provided, the Director can refuse to accept WRCA or if inquiry has been held, Reclamation Inspector can refuse to issue a Reclamation Certificate.**
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