



<b>Title:</b>	<b>Coal and Oil Sands Exploration Reclamation Requirements</b>
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## Purpose

This directive provides the coal exploration program (CEP) and oil sands exploration (OSE), requirements for reclamation certification: criteria, assessment methodology, and sampling methodology. It applies to public and private land. It replaces the Directive SD 2010-01 Coal and Oil Sands Exploration Reclamation Requirements.

## Background

Coal Exploration Program and Oil Sands Exploration dispositions are regulated through the Government of Alberta “Code of Practice for Exploration Operations”. The Oil Sands and Coal Exploration Application Guide: Manual 08, provides the Alberta Energy Regulators application requirements.

## Policy

The aim of reclamation under the Environmental Protection and Enhancement Act is to obtain equivalent land capability. **“Equivalent land capability”** is defined in the Conservation and Reclamation Regulation as **“the ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical”**.

The *“Reclamation Criteria for Wellsite and Associated Facilities for Cultivated, Forested, Grassland and Peatlands”* (Wellsite Criteria) as outlined in this document are required for reclamation certification of CEP and OSE programs. These documents can be found at:

- [Alberta Environment and Parks](#)
- [Alberta Energy Regulator](#)

## Procedure

The following outlines the specific OSE and CEP requirements for assessment and reporting for reclamation certification:

- All corehole sites contained within the exploration program require either an aerial and/or ground assessment with recorded data to qualify for reclamation certification for the program.
- Ground assessments (landscape, vegetation and soils from the applicable Wellsite Criteria land use) are required wherever the following indicators of disturbance are present:
  - All sites where a minimum 25 per cent of the location has had soil disturbance (i.e. soils stripped, compacted, rutted or other soil structure alterations);
  - Peatland sites that do not pass the Undisturbed Assessment during aerial assessment;
  - Grassland sites where the ecological range site has changed in comparison to offsite or invasive species are present that are not found offsite; and
  - Cultivated sites being managed with the surrounding area, where the exploration footprint is evident. Vegetation must be present at the time of assessment.
- Ten per cent (10%) of all aerial assessed sites in the CEP or OSE program (undisturbed sites) requires a ground assessment (Landscape and Vegetation assessment) to verify corresponding aerial assessments.
- For assessment purposes CEP and OSE program sites must be classified based on slope position (upland, lowland and transitional) or eco-site type and a percentage of each eco-site is to be included in the ten per cent sample.
- Access roads are to receive an aerial assessment to verify removal of water crossings and culverts and to further identify potential erosion issues and/or third party impact (i.e. ATV's). Potential issues are to be ground assessed.
- For ground assessments on non linear sites with soil disturbance, the detailed grid layout must be a maximum of 40x40 meters. The sampling density from the applicable Wellsite Criteria applies.
- For ground assessments on linear sites with soil disturbance, assessment points are required at
  - ≤400 m: assessment points must be located at a maximum spacing of 100 m
  - >400 m: assessment points must be located to reflect different mapping units, (i.e., topographic, vegetation and/or soils variability) with a minimum of one (1) assessment point per map unit or a minimum of one (1) assessment point per 800 m. The minimum number of assessment points of five (5) applies for all land use types.
- For forested sites, the OSE tab in Wellsite Criteria Record of Observation must be used for reclamation certification applications. The Record of Observation for the other land uses (Cultivated, Grassland and Peatlands) were not developed for OSE's at the time this document was released. For these land uses, reporting for reclamation certification applications must still include the reporting requirements outlined in this document.
- The Alberta Energy Regulator reserves the right to request additional information as required to make the Pass/Fail decision for reclamation certification.

## Implementation

The requirement to use the Wellsite Criteria was issued through Directive SD 2010-01 Coal and Oil Sands Exploration Reclamation Requirements. The Reclamation Criteria for Wellsites and Associated Facilities for Peatlands produced in October 2015, come into effect on April 15, 2016. Prior to this date, Peatland sites assessed as per the Reclamation Criteria for Wellsites and Associated Facilities for Forested Sites are still acceptable.

## Appendix A – Aerial Assessments

The information below must be gathered during aerial assessments to verify that the Wellsite Reclamation Criteria have been met. For complex sites more information may be required. The Alberta Energy Regulator may have additional information and methodology requirements that must be adhered to.

- Landscape assessment as outlined in the applicable Wellsite Criteria;
- List of dominant species or genus by structural layer as directed by the applicable Wellsite Criteria;
- Average canopy height to the nearest 0.25 m;
- Total percent canopy cover by ground layer;
- Identification of areas where the plant community on and offsite (clearly in the same landscape unit) are different and justifications/and or approval provided;
- Aerial photographs including landscape surrounding the site and low level views of the vegetation cover, clearly annotated to the detailed site assessment data; and
- Aerial assessments on long access roads (>400m) must visually assess variability along the linear feature and adjacent impacts. Aerial photos and the location selection must at a minimum cover all landscape units in the exploration program (e.g., bog, circumneutral fen, alkaline fen, upland eco-sites, riparian areas). Assessment areas must be completed as outlined above and the assessment points be included on a corresponding diagram in the detailed site assessment.

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