

# **Application Submission Requirements and Guidance for Reclamation Certificates for Well Sites and Associated Facilities**

**July 2025**

**Alberta Energy Regulator**

Specified Enactment Direction 002: Application Submission Requirements and Guidance for  
Reclamation Certificates for Well Sites and Associated Facilities

July 2025

Published by

**Alberta Energy Regulator**

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## Abbreviations

AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
CEP	coal exploration program
<i>CRR</i>	<i>Conservation and Reclamation Regulation</i>
EFR	environmental field report
<i>EPEA</i>	<i>Environmental Protection and Enhancement Act</i>
ESA	environmental site assessment
ESAR	Environmental Site Assessment Repository
GIS	geographic information system
<i>GRDA</i>	<i>Geothermal Resource Development Act</i>
LLD	legal land description
LOC	licence of occupation
<i>MRDA</i>	<i>Mineral Resource Development Act</i>
MSL	mineral surface lease
OSE	oil sands exploration
<i>REDA</i>	<i>Responsible Energy Development Act</i>
ROE	right of entry



## 1 Introduction

The Alberta Energy Regulator (AER) regulates energy and mineral resource development activities as mandated by the *Responsible Energy Development Act (REDA)*.

*Specified Enactment Direction 002: Application Submission Requirements and Guidance for Reclamation Certificates for Well Sites and Associated Facilities (SED 002)* sets out the information requirements for reclamation certificate applications for energy resource development and brine-hosted-mineral resource development, including associated facilities and pipelines under *EPEA*. This SED also provides guidance on how to comply with these requirements.

### 1.1 What's New

The document has been updated to address commonly asked questions through clarifying expectations, requirements, processes, and terminology. For example, the term “licensee” has been replaced throughout with the term “operator,” which is defined in *EPEA*. The role of the “land manager” has also been clarified to reflect specific responsibilities. Additionally, *SED 002* has been reorganized to improve its flow and align with the application sequence in OneStop.

## 2 Regulatory Overview

### 2.1 Requirements

The AER is responsible for ensuring that land used for energy and mineral resource development is reclaimed in an environmentally sound manner. This is directed under *EPEA* and the *Conservation and Reclamation Regulation (CRR)*. Under *EPEA*, operators must apply for a reclamation certificate after an energy resource development facility (e.g., well site, battery, gas plant, pipeline, borrow pit, temporary workspace, geothermal facility) or mineral resource development facility has been decommissioned, remediated (if necessary), and reclaimed.

Section 137 of *EPEA* sets out the requirement for an operator to conserve and to reclaim specified land (as defined by the *CRR*), which includes obtaining a reclamation certificate unless exempted by the *CRR*. The *CRR* defines “specified land” as “land that is being or has been used or held for or in connection with” the construction, operation, or reclamation of a listed activity, including a well, an industrial pipeline, or a battery. Operators need to make sure that activities undertaken during the various project phases (e.g., construction, operation) are appropriate for ensuring that specified lands (see 3.2.1) will be reclaimed to an “equivalent land capability.” As defined in the *CRR*, equivalent land capability “means that the ability of the land to support various uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, although the individual land uses will not necessarily be identical.”

Reclamation certification is assessed against applicable criteria, standards, guidelines, directives, and codes of practice established by the Government of Alberta, requirements of *EPEA* and the *CRR*, approval terms and conditions, and environmental protection orders. Other regulatory requirements may apply, including directions set by the AER.

Section 138 of *EPEA* outlines that an application for a reclamation certificate must be made to the AER in accordance with the regulations. Regarding what a reclamation certificate application must contain, section 12(1) of the *CRR* states the following:

**12(1)** An application for a reclamation certificate must

(a) contain the information in respect of the specified land that is required in a form provided by the Director for that purpose, or

(b) contain the following information in respect of the specified land, where the Director does not provide a form under clause (a):...

This SED sets out the information required for a reclamation certificate application submitted using the AER's online application submission tool (OneStop) and guidance on how to adequately prepare the application.

The Government of Alberta, through Alberta Environment and Protected Areas (AEPA), retains the responsibility to establish and set reclamation standards, criteria, guidelines, and directives for conservation and reclamation of specified land. The AER will review reclamation applications against the current standards, criteria, and guidelines, and directives to ensure that outcomes have been achieved. The current reclamation criteria are the *Reclamation Criteria for Wellsites and Associated Facilities for Cultivated Lands, Forested Lands, Native Grasslands and Peatlands*.

## 2.2 Regulatory Process and Decisions

Once the AER receives an application for reclamation certification, a public notice of application is posted on the AER website, [www.aer.ca](http://www.aer.ca). The operator must provide a copy of the reclamation application package, which includes the public notice of application, to the persons identified in section 6. Proof of notification must be retained and provided to the AER upon request. If a person has concerns about the application, a statement of concern can be filed with the AER. The EnerFAQs [Expressing Your Concerns – How to File a Statement of Concern About an Energy Resource Project](#), available on the AER website, provides information about how to file a statement of concern.

In accordance with section 33 of *REDA* and the *Alberta Energy Regulator Rules of Practice*, once the AER decides on an application for a reclamation certificate without a hearing, a notice of the decision is provided to

- the operator,

- the registered owner of the land that was reclamation certified,
- any person whom the AER considers directly and adversely affected by the prior activity on the land that was certified, and
- any other person whom the AER considers appropriate.

Under *REDA*, an eligible person may appeal decisions that meet certain criteria. “Eligible person” and “appealable decision” are defined in section 36 of *REDA* and section 3.1 of the *Responsible Energy Development Act General Regulation*. A request for regulatory appeal must be submitted in accordance with the AER’s requirements. Filing requirements and forms can be found on the AER website under Applications and Notices > [Regulatory Appeal Process](#).

For reclamation certificate applications, the AER has two levels of review:

- **Baseline** – The baseline review ensures that the application meets validation rules (e.g., confirming the well has an abandoned status) and assessment rules (e.g., confirming that there are no outstanding complaints). All applications go through this process, and a notice of application is posted. If no statements of concern are received during the notice period, then the certificate will be issued.
- **Additional review** – Applications that trigger any of the assessment rules will be subject to additional review. Examples of these triggers include but are not limited to the following:
  - unresolved complaints
  - statements of concern filed
  - requests for variances from the standard criteria that have not been preapproved by the AER
  - Tier 2 guidelines are applied

AER staff will undertake a more detailed review of the application, which may include conducting field inspections, before issuing a decision.

OneStop assigns applications to the applicable stream based on assessment rules. For examples, see [aer.ca > Regulations and Compliance Enforcement > Site Closure Requirements > Reclamation > Oil and Gas Sites Reclamation Requirements > Reclamation Certification Assessment Rules](#).

## 2.3 Environmental Assurance Following Certification

To ensure compliance with legislation, standards, criteria, guidelines, and policy, the AER conducts audits on previously certified sites. Audits are separate from the complaint process. Sites are either randomly selected for audit or targeted for audit based on risk. Audit types include the following:

- 1) **Desktop audit** – This type of audit is to ensure that the correct information was available to support reclamation certification. Any risk factors identified may result in a more comprehensive desktop audit. This may include a review of the Phase 1 environmental site assessment (ESA), Phase 2 ESA,

remediation and confirmatory sampling, or the detailed site assessment. Based on the findings from the desktop audit, a certified site may be subject to a surface or subsurface field audit.

- 2) Surface reclamation field audit – This type of audit includes a file review and site visit to assess whether the site is compliant with the criteria. The assessment may include vegetation quality and quantity, soil quality and quantity, site topography and landscape, evidence of remaining facilities, visual indicators of contamination, and any other applicable parameters.
- 3) Subsurface contamination field audit – This type of audit includes a file review and site visit to collect soil samples for laboratory analyses.

Certificates may be upheld or cancelled. Reasons for cancellation might include but are not limited to any of the following:

- Application was incomplete or inaccurate or contained inconsistent information.
- The site was not assessed for contamination where required or the site was not compliant with the remediation guidelines.
- The site was not compliant with the remediation guidelines or reclamation criteria or adequate justification was not provided in the application.

### **3 Application Submission Requirements**

This section describes what information needs to be included in the reclamation certificate application. For survey plans or sketches, the most recent one used to apply for, amend, or renew the surface rights for public lands may be used.

OneStop is available on the AER website. It was built around the AER's approach to regulating energy development in an efficient and effective manner and was founded on five main principles: integrated decision making, standard risk-based process, life-cycle approach, performance monitoring, and communication. The AER approach to energy development activities considers all aspects of development, from initiation and construction through to operation and closure.

#### **3.1 Asset Information**

A reclamation certificate must be obtained for specified lands. All energy or mineral resource-related assets within the area to be certified must be included in the OneStop asset information table, including dispositions and licences. Do not list assets that are not to be included on the reclamation certificate or assets managed by the Government of Alberta.

##### **3.1.1 Asset/Authorization Number**

The AER authorization number for all assets (e.g., the well, facility, or pipeline licence number) within the area to be certified (regardless of operator) is required unless an overlapping exemption has been approved. Be sure to include the public land disposition number (e.g., mineral surface lease [MSL],

licence of occupation [LOC], pipeline agreement [PLA], etc.). Please note that ROE, CEP, OSE, and special areas dispositions cannot be populated to the asset information table or through the GIS layer, so they must be entered in the “Associated Activity” section.

Prepopulated information cannot be edited in the reclamation certificate application. Any discrepancy must be corrected at the data source. For example, if a well has been abandoned in the field but the well licence status is not showing as “abandoned,” the applicant must submit the surface abandonment information data through OneStop before initiating the reclamation certificate application. If this is not complete, the asset will not show up in the asset table search results.

### 3.1.2 Primary Asset

One primary asset must be identified from the list of assets. Generally, the primary asset is the well or any physical asset for which the reclamation certification is being requested. The primary asset will be used to repopulate fields in the site information tab. In some cases, the area being reclaimed will not have a licensed asset, such as built but not drilled well sites; however, a disposition on public land would then be considered the primary asset.

As set out in [\*Certification Requirements for Wellsites with No Surface Disturbance \(Surveyed Only\)\*](#) (C&R/IL/94-3), the operator is not obligated to obtain a reclamation certificate for well sites that have not been entered (surveyed only). “No entry” means that the land has not been used in **any way, even for a temporary purpose**, for construction, operation, or reclamation of a well site, and that the land is not cleared, and soil has not been broken, damaged, or contaminated. For sites on public land, a request for “no entry” must be submitted through OneStop to cancel the disposition.

## 3.2 Associated Activities

Any facilities and infrastructure associated with an asset require a reclamation certificate and must be included in the reclamation certificate application for the well site. Associated activities with a disposition or licence are populated to the asset information table. All others are manually entered in the associated activity table. This includes coal exploration program (CEP), oil sands exploration (OSE), right of entry (ROE), and special areas dispositions.

Examples of associated facilities and infrastructure include the following:

- access roads (on private land)
- pipeline rights-of-way (on private land)
- temporary access roads
- temporary workspaces
- borrow sites

- campsites
- remote sumps
- remote cement return pits
- log deck / storage areas
- land treatment areas
- CEP approval number
- OSE program number
- ROE number

Single remote sumps and land treatment areas must be included in the application for the affiliated well site. Multiwell sumps must be tied to one of the well sites that contributed drilling waste to the sump.

When applying for a reclamation certificate for an associated facility or infrastructure, it is important to complete all applicable assessments. For example, a land treatment facility or a remote sump will require the same information and level of detail as a well site, including a Phase 1 environmental site assessment (ESA) or compliance option checklist for drilling waste disposal, a detailed site assessment completed in accordance with the reclamation criteria, and a Phase 2 ESA (if applicable). If images of the well site do not capture the associated facility, a separate image of the associated facility must be provided when available (e.g., aerial, satellite, and site photos). See section 10.6 for further information.

Pipelines are associated infrastructure (as are remote sumps, batteries, etc.) since they are used in connection with the operation of the well and therefore are considered an integral part of the well for reclamation certification purposes. As a result, they are specified land and require a reclamation certificate. The portion of the pipeline inside the lease boundary should be removed at the time of reclamation. For minimal disturbance sites on native grasslands, it may be beneficial not to remove the portion of the pipeline inside the lease boundary to avoid further disturbance to the site.

If the associated facility or infrastructure is away from the well site and is not covered on the survey plan of the well site, a separate survey plan of the associated facility or infrastructure must be submitted when available. If a survey plan is not available, a sketch is required. The content requirements for survey plans and sketches are set out in [\*Content Requirements for Survey Plans and Sketches for Disposition, Reservation and Notation Activities Affecting Public Lands\*](#). Although this document specifically references activities affecting public lands, the AER recommends applying it to private land for reclamation certificate applications.

A diagram can be used to supplement a survey plan or sketch to show any additional reclamation information required under *SED 002* in relation to the facility (e.g., locations of multiwell sumps, vegetation data, soil data). See appendix 3, Attachment Site Information – Lease Diagrams, for examples.

On public land, all facilities or infrastructure, whether held under disposition or not, must be acknowledged in the application and assessed as required. This includes all documentation indicating if the facilities or infrastructure was used and reclaimed, prepared but not drilled, or not used at all must be submitted in the application package.

To ensure that operators have all available historical information about a site and its associated facilities and infrastructure, the AER offers a search service of its files. Submit an information request, as outlined at [www1.aer.ca/ProductCatalogue/ordering.html](http://www1.aer.ca/ProductCatalogue/ordering.html), to [InformationRequest@aer.ca](mailto:InformationRequest@ aer.ca). The AER strongly encourages requesting the information well in advance. A fee may be charged for the service.

### 3.2.1 Construction Practice (Degree of Disturbance)

Operators are legally responsible for the reclamation of specified land. This includes any and all land that is being or has been used or held for or in connection with the construction, operation, or reclamation of a well, facility, battery, pipeline, or other listed activity type (see section 3.3). Operators must highlight on the survey plan or sketch all areas to be certified.

Operators must indicate whether the site has experienced full disturbance, minimum disturbance, zero disturbance, or staged/progressive reclamation, defined as follows:

- Full disturbance: The soil has been disturbed across the entire site.
- Minimum disturbance: Construction practices were used that minimized the level of disturbance on the lease resulting in two different management zones (i.e., undisturbed and disturbed).
- Zero disturbance: No soil disturbance has occurred (e.g., stripping, compaction [such as due to equipment storage], or rutting) that would result in damage.
- Staged/progressive reclamation: A site with areas that have been previously reclaimed following construction (i.e., areas outside of the teardrop). These areas must not have been re-disturbed during the final reclamation to qualify for a different reclamation date, as per the criteria.

Although soil may not have been stripped, traffic may have caused compaction, pulverized soil, rutting, or clodding to the extent that the native community (i.e., species or layers) has been altered or removed. Areas with these impacts are considered disturbed and must be assessed as such.

Operators must provide information on the type of access built and used to access the site, regardless of the level of disturbance. This applies to all access routes (surveyed and non-surveyed).

### 3.2.2 Legal Land Description

The legal land description (LLD) for the assets added to the asset information table are prepopulated but are not prepopulated for the associated activity table. All LLDs that are being certified must be checked in the LLD column because this is what is displayed on the reclamation certificate. If the applicant would like to include the access road (on private land and in special areas), then the LLD for the entire access road should be added in the associated activity table, otherwise it will not be certified. If the LLD is incorrect, the reclamation certificate will be cancelled. (See section 4.5 on partial reclamation certificates on public lands.)

### 3.3 Related Submission

OneStop will access previously submitted information related to the assets for which a reclamation certificate is being applied.

Examples of related submissions include the following:

- Phase 1 ESA
- Phase 2 ESA or remediation and confirmatory sampling reports (also referred to as Phase 3 ESA)
- remediation certificate
- Tier 2 compliance letter
- reclamation certificate variance (professional judgement)

A reclamation certificate application that includes a variance in response to assessment parameters failing to meet the applicable reclamation criteria or guidelines may still be submitted if the application is accompanied by a variance request. A variance request may be submitted for regulatory approval prior to applying for a reclamation certificate (see section 8.2 for additional information). Reclamation certificate applications containing variances for failed parameters will result in additional review by the AER unless approval of the variance is provided before application submission.

Reclamation certificate applications that include Phase 2 or remediation and confirmatory sampling reports in addition to a Phase 2/3 summary module submission require an accepted record of site condition submission under a “contamination review for reclamation” intent. Refer to “Guides for Contamination Management” on the AER’s OneStop Help page, *Manual 021: Contamination Management*, and other AER webpages on remediation for more information on the record of site condition.

Reclamation certificate applications containing Tier 2 guidelines (which includes minor exceedance justifications) may result in additional review by the AER unless related to a Tier 2 compliance letter or remediation certificate.

### 3.4 Disposition Cancellation for Public Lands

As part of the reclamation certificate application, disposition holders are required to indicate whether the public land disposition should be cancelled once certified. If the disposition can be cancelled, the AER will complete the cancellation process and a separate intent to cancel is no longer required. A disposition cannot be cancelled if the cancellation leads to dead-ending other dispositions or an amendment is required (e.g., a partial reclamation certificate). Operators will receive confirmation that the disposition has been cancelled from the OneStop auto-email system.

Special areas dispositions are not AER jurisdiction and must be cancelled by the [Special Areas Board](#). If there are concerns regarding special areas disposition cancellations, contact the Special Areas Board.

## 4 Site Information

### 4.1 Jurisdiction

There are several administrative jurisdictions within the province. These include public lands, parks and protected areas, special areas, private lands, and Métis settlements. If the site or some of the associated facilities cross multiple jurisdictions, check the appropriate boxes. Special areas leases are administered by the [Special Areas Board](#).

The AER issues reclamation certificates for sites where the right of entry is administered under the *Surface Rights Act* for both private and public land. However, AER is not responsible for the cancellation of the associated right-of-entry order or surface lease.

#### 4.1.1 Public Land

Public land is Crown land administered under the *Public Lands Act*.

#### 4.1.2 Parks and Protected Areas – Alberta Environment and Protected Areas

Parks and protected areas are Crown lands administered under the *Provincial Parks Act*, the *Wilderness Areas, Ecological Reserves, Natural Areas and Heritage Rangelands Act*, and the *Willmore Wilderness Park Act*.

To identify which category of protected area, check the [Land Reference Manual](#).

AEPA's staff (land use officers) must be contacted before developing the reclamation plan to determine the desired end state for the reclamation within the park or protected area (e.g., natural state versus perennial park facility development).

The applicant must send a copy of the reclamation application to [ppa.referrals@gov.ab.ca](mailto:ppa.referrals@gov.ab.ca) or to Parks Land Use and Dispositions, 2nd Floor, Oxbridge Place, 9820 – 106 Street, Edmonton, Alberta T5K 2J6.

#### 4.1.3 Special Areas 2, 3, or 4 – Special Areas Board

All public lands within Special Areas No. 2, 3, and 4 are administered by the [Special Areas Board](#) under the [Special Areas Act](#). For the remainder of this document, the term “special areas” refers to Special Areas 2, 3, and 4. Industrial activities on public lands within the special areas are assigned dispositions and administered by the *Special Areas Disposition Regulation*. The most common disposition type encountered in reclamation is a mineral surface lease (MSL), and special areas dispositions are identified with an “SA” suffix when doing a general public lands disposition search.

The Special Areas Board disposition search shows the ownership of a parcel of land as well as the rate payer and all dispositions issued for the location. The Special Areas Board is considered the landowner for land parcels that show anything other than “Titled” under the disposition column in the Special Areas Board disposition search. Private lands are also present within the special areas and will be indicated by “Titled” in the disposition column. Private land within the special areas is treated the same as private land in other areas of the province.

#### 4.1.4 Private Land

Private land is primarily governed by the *Municipal Government Act*. Private land includes land administered by municipal governments, Métis settlements, and titled Freehold land.

### 4.2 Site Identification

Site identification refers to the physical location and size of the site for which the reclamation certificate application is being applied.

#### 4.2.1 County / Municipal District / Improvement District / Special Area / Métis Settlement

Identify the county, municipal district, improvement district, special area, or Métis settlement in which the primary asset is located.

#### 4.2.2 Total Land to Be Certified (Hectares or Acres)

Identify the entire area to be certified, including all associated facilities and infrastructure that are being certified in conjunction with the application. This includes areas that are to be left in place as a landowner improvement. For example, if the well site is 2.47 acres and the access road is 0.75 acres, but the landowner has signed a release to leave the access road in place, the full acreage of area to be certified is 3.22 acres. However, a detailed site assessment is not required for the access road remaining in place.

#### 4.2.3 Total Wetland Disturbed and Area Reclaimed to Wetland

Include the area of the wetland disturbed and the area that was reclaimed to a wetland. This information aligns with the *Alberta Wetland Policy*.

### 4.3 Additional Certificates

Other certificates (e.g., reclamation or remediation) may have been issued for the well site or associated facilities or infrastructure. If this is the case, provide the certificate number and date in the application package. (For example, if a disposition was previously certified as partially reclaimed, provide the reclamation certificate number and any relevant information clarifying the remaining uncertified land.) If a reclamation certificate was issued as part of the lease reduction pilot program, the reclamation certificate information must also be included. The Environmental Site Assessment Repository (ESAR) ([www.esar.alberta.ca](http://www.esar.alberta.ca)) can be searched to determine whether AEPA has previously issued a reclamation certificate for the site on private land. ESAR does not contain reclamation certificates for sites on public land. For more information on historical and existing certificates, see the following:

- For certificates issued before April 2014 for private land, see ESAR.
- For certificates issued before April 2014 for public land, contact the AER at [InformationRequest@aer.ca](mailto:InformationRequest@aer.ca).
- For certificates issued between April 2014 and June 2016, contact the AER at [InformationRequest@aer.ca](mailto:InformationRequest@aer.ca).
- For certificates issued after June 2016, see the OneStop [reclamation certification public map viewer](#).

If a previously certified area is being applied for under a subsequent reclamation application, include the original reclamation certificate number with the application.

### 4.4 Previously Refused Applications or Cancelled Certificate

Applications may have been previously refused (referred to as “denied” in OneStop) or reclamation certificates previously cancelled. Operators need to identify the reason for the previous decision using the selections in OneStop: administrative reasons (e.g., incomplete application) or technical reasons (e.g., deficient reclamation). If a previously submitted application was deficient or contained contradictory information, operators must provide detailed information on how the deficiencies noted in the previous application were corrected, including the work conducted at the site and results of site assessments.

Operators must exercise due diligence in finding the appropriate files and checking with all available information sources (see section 4.3) to determine whether AEPA has previously cancelled a reclamation certificate or refused a reclamation certificate application for the site or a portion of the site.

### 4.5 Partial Reclamation, Multi-Regulator Assignments, and Overlapping Exemption

When a portion of the site is overlapped by another activity and the remainder of the site is certified, it is considered partial reclamation if on public land. On private land, it is referred to as an overlapping exemption. Partial reclamation on public land and situations where dispositions are transferred to a non-

energy-related disposition holder, such as an access road being assigned to a forestry company (also known as multi-regulator assignments), must be submitted in a reclamation certificate application via OneStop. Overlapping exemption requests should be submitted through [RecRemQuestions@aer.ca](mailto:RecRemQuestions@aer.ca).

#### 4.5.1 Partial Reclamation Certification on Public Land

**Pipelines:** Pipelines that end at the well site or edge of the well-site lease are considered “dead ended” and should be reclaimed and certified at the same time as the well. Such pipelines are associated infrastructure as they are used in connection with the operation of the well and are therefore specified land and require a reclamation certificate.

**Well sites:** On public land (including parks and protected areas), well sites cannot be left without access, and access routes cannot be left dead-ending (defined as an access road that does not lead to another well site or facility or that doesn’t connect with another access road).

In some cases, the access road or portion of the access road runs through the well site and is required to access another disposition. On public lands, the portion that runs through the well site must be covered under a licence of occupation (LOC). This can be done by making an amendment or applying for a new LOC disposition.

**Access roads:** When a well site and a portion of the access road are certified, an amendment must be made under the *Public Lands Act* or *Parks Act* to delete the certified portion of the road from the disposition. The remaining portion of the access road must be held under the appropriate disposition type. The certified area must be clearly identified and highlighted on the survey plan or sketch for the amendment. When applying for a partial reclamation certificate, use the map search to select the disposition from the GIS layer, and the LLD will autopopulate. The portion of the LLD that is still in use must be deselected to ensure there is no dead-ending.

The survey plan or sketch must clearly show the location of the portion to be certified and the portion to remain in place and reference the facilities associated with the activity. The disposition will remain active until the remainder of the disposition is fully certified and no dead-ending exists. A partial reclamation certificate is not required when pipelines overlap roads or well sites or when roads overlap well sites or other types of leases on public land. Every holding approved on Crown land is placed there by a legal document under the *Public Lands Act*. If an authorization is issued, then that holding already has its own built-in “overlapping exemption,” also known as “double coverage.”

#### 4.5.2 Multi-Regulator Assignments

In some cases, an access road needs to be assigned to a holder of non-specified land (e.g., a forestry company). This involves transferring the disposition from specified land to non-specified land. The specified landholder must obtain a reclamation certificate before transferring the disposition. If a feature is to be left in place (e.g., an access road), the application must be accompanied by a written acceptance

from AEPA acknowledging that they agree to the features remaining in place. Please note that the assignment/approval documents must be provided with the reclamation application as well as an indication that the disposition should not be cancelled when the reclamation certificate is issued.

After the AER reviews the application for accuracy and completeness, an email is sent to AEPA. This email notifies them that the disposition is no longer in use by the energy licensee and the disposition can be transferred.

#### 4.5.3 Overlapping Exemption on Private Land

In most cases, activities of one operator should not adversely affect another operator. If there have been no adverse impacts, both operators may apply for a reclamation certificate after their respective sites have been assessed for contamination, all contamination has been remediated (if required), and the sites meet the reclamation criteria.

Overlapping exemptions may be used in situations where there are two or more specified-land activities on an area of land. For example,

- two operators sharing a portion of an access road,
- a pit or a mine going through a well site,
- a re-entry well where the lease area is slightly different, or
- overlapping well-site leases with different operators.

Where overlapping activities prevent successful reclamation of a site, the operator whose area has been affected can request an overlapping exemption, which excludes the area still in use by the overlapping activity. The last remaining operator agrees that once the facility is abandoned, it will assume responsibility for obtaining a reclamation certificate on the remaining overlapping area.

An overlapping exemption form<sup>1</sup> is only required with an application for a reclamation certificate when a portion of a lease is being excluded from certification due to another operator's specified-land activity. Overlap exemption can only be used when there are two different operators.

When applying for an overlapping exemption on a portion of the lease, the overlapping exemption form should be completed by both operators and accompany the reclamation certificate application for the remainder of the site. The form must include a copy of the survey plan or sketch that clearly highlights the area excluded from the reclamation certificate. When submitting the reclamation certificate application for the remainder of the site, ensure that the survey plan or sketch in the application outlines only the area to be certified. *Do not* include the area exempted.

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<sup>1</sup> Application for Exemption from Requirement to Obtain a Reclamation Certificate Due to Presence of an Overlapping Activity.

Complete overlapping exemptions may be used when one company wishes to remove the AER liability assessment for a well licence that is on the same surface holding of another company's well. The second company must have its own well licence or another specified-land activity on the same surface holding. The first company holding the abandoned wellbore has the option of having its wellbore added to the reclamation certificate application (if it knows when or that it is being applied for) or using the overlapping exemption form to have the requirements for a reclamation certificate waived for its well licence.

For further information on overlapping exemptions, refer to the Government of Alberta [Guide to Certification for Site Reductions, Additions, Overlaps, Multi-Well Facilities, and Forced Lease Boundary Changes](#).

## 5 Environmental Site Assessment

An ESA is an investigation to determine the environmental condition of a site.

Phase 1 and Phase 2 ESAs have been developed as separate submission requirements. The intent is for operators to submit these ESAs throughout the life cycle of the activity as they are conducted (e.g., Phase 1 ESA conducted at abandonment of the wellbore should be submitted online at that time rather than at the time of reclamation).

The [Alberta Environmental Site Assessment Standard](#) should be used when preparing ESAs. Refer to sections 10 (Phase 1) and 11 (Phase 2) for further details on ESA submission requirements.

### 5.1 Phase 1 ESA Summary

The primary objective of a Phase 1 ESA is to determine whether a site is or may be contaminated.

The Phase 1 ESA information in the application is prepopulated from the Phase 1 ESA summary module submission unless a Phase 1 ESA is not required. A Phase 1 ESA is not required for sites that were prepared but not drilled, log decks, access roads submitted as a standalone application, pipeline right-of-way if the pipeline was not constructed, and borrow pits. A Phase 1 is not required for portions of the site where there is known contamination, remediation has been completed, and a remediation and confirmatory sampling report has been completed. Rationale for a Phase 1 ESA not being completed must be included in the application.

For OSE programs and CEPs, there will be only a single Phase 1 ESA, which includes all core holes and, at a minimum, the drilling waste disposal location and associated dispositions, as well as a search for any incidents or spills associated with the program.

The system will prepopulate the date and results of the Phase 1 ESA from the Phase 1 ESA summary module into the application. If more than one Phase 1 ESA was completed, applicants should enter the submission ID for the most current report.

## 5.2 Phase 2 & Remediation and Confirmatory Sampling ESA Summary

Where a site contamination status is not known, a complete Phase 1 ESA is critical for a successful Phase 2 ESA. A Phase 2 ESA is an intrusive assessment that provides information about the absence or magnitude and extent of contamination. The Phase 2 ESA and remediation and confirmatory sampling report information in the application is prepopulated from the Phase 2/3 ESA summary module unless the above submissions were not required.

## 6 Stakeholder Information

### 6.1 Operator and Consultant

#### 6.1.1 Name of Operator for Certificate

Confirm the full, legally registered name of the company that is to appear on the reclamation certificate. In most situations, this will be the applicant. However, in some cases, applicants may be applying on behalf of themselves and another operator, a defunct operator, or both.

The applicant's name on the application must be the registered holder of the public land disposition. The application must include all the licences regardless of who they are issued to.

For example, if operator 1 holds the disposition and the well (or facility) licence is held by operator 2, only operator 1 can apply for the reclamation certificate. However, the application must include all the licences held by operators 1 and 2.

#### 6.1.2 Consultant

The legal registered name of the consulting company must be provided. The consultant listed in this section does not necessarily have to be the same individual as the environmental professional that signs the professional declaration.

### 6.2 Land Manager

Land manager, as defined in the applicable reclamation criteria, includes staff responsible for stewarding public/Crown lands, parks, protected areas, the Special Areas Board, landowners (or designate), and occupants.

#### 6.2.1 Landowners

The following parties are considered landowners and must be provided a copy of the reclamation application package the same day the application is submitted to the AER (see figure 1 for more information):

- landowners (or designate)
- Special Areas Board

- contacts for
  - provincial parks
  - wildland parks
  - provincial recreation areas
  - natural areas
  - ecological reserves
  - heritage rangeland
- Métis settlements

On private land, “landowner” refers to all parties listed on the current registered land title. Operators must ensure that the current landowners’ names, addresses, and phone numbers are provided. Land titles should be current and dated within the last 60 days of the date of submission of the application to the AER. In some cases, a landowner may legally designate another party to act on its behalf. In the case where a life estate or absentee landowner is involved, documentation must demonstrate that the relevant party was contacted and the reclamation application package sent to them. Should the operator be made aware of any changes to the land title after the application is submitted and prior to the reclamation certificate being issued, it must forward the new information to the AER.

On public land outside of the special areas, the landowner is the Crown (AEPA). The applicant must provide a copy of the reclamation application package to all applicable occupants (grazing reserve manager or grazing leaseholder). Do not send copies of the application package to AEPA or AER regional offices or field centres unless they are listed as the managers of the grazing reserve.

On public lands within special areas, the Special Areas Board is considered the landowner. All other parties are considered occupants and must be provided with a copy of the application package.

If the site is within a Métis settlement, the applicant must complete a Métis Settlements Land Registry search and maintain a record of contact and discussion with the landowners and interest holders (“interest” being defined in section 1(h) of the Métis Settlements Land Registry Regulation). Operators must also provide a copy of the reclamation application package to the Métis settlement office, landowners (or designate), interest holders, and occupants.

Operators must ensure that the landowner (or designate) and interest holders are interviewed and their concerns addressed.

	Names, addresses and phone numbers	Interview Details (dates & times)	Concerns Addressed (if applicable)	Receive a Copy of the Application the same day the app is submitted to AER <sup>1</sup>	Retain Proof of Application Delivery	Land Title within past 60 days	Special Areas Board Search	Metis Settlements Land Registry Search	EnerFAQs Expressing Your Concern - How to File an SOC	Public Notice of Application from AER website
Land owner(s) private land*	Y	Y	Y	Y	Y	Y	N/A	N/A	Y	Y
Occupant(s) - private land	Y	Y	Y	Y	Y	N/A	N/A	N/A	Y	Y
Special Areas Board	Y	Y	Y	Y	Y	N/A	Y	N/A	Y	Y
Metis Settlements and Interest Holders	Y	Y	Y	Y	Y	N/A	N/A	Y	Y	Y
Provincial and Wildland Parks	Y	Y	Y	Y	Y	N/A	N/A	N/A	Y	Y
Provincial Recreation Areas										
Natural Areas										
Ecological Reserves	Y	Y	Y	Y	Y	N/A	N/A	N/A	Y	Y
Heritage Rangeland										
Crown (public land)**	N	N	Y	N	N	N/A	N/A	N/A	N/A	N/A
Occupant(s) (public land)***	Y	Y	Y	Y	Y	N/A	N/A	N/A	Y	Y

<sup>1</sup> - This starts the 30-day public notice of application countdown.  
 \* All parties listed on the current registered land title  
 \*\* Any concerns may be identified during the Routine Information Disclosure to be addressed  
 \*\*\* Trappers and Forest Management Agreement holders are not considered occupants of public lands

**Figure 1. Checklist for reclamation application package**

### 6.2.2 Occupants

On private land, “occupant” typically refers to the person who is renting or working the land and is not registered on the land title. On public land, “occupant” typically refers to the grazing leaseholder or grazing reserve manager. Forest management agreement holders and trappers are not considered occupants of public lands. On public lands that are within Special Area 2, 3, or 4, the landowner is considered the Special Areas Board, and all other parties are considered occupants.

Operators should make reasonable efforts to interview occupants and ensure their concerns are addressed. Operators must send a copy of the reclamation application package to the occupants the same day they submit the application to the AER (see figure 1 for more information). The current occupant’s name, address, and phone number must be provided in the application.

For land located within a provincial park, wildland park, provincial recreational area, natural area, ecological reserve, or heritage rangeland, staff from the Parks Division must be contacted prior to developing the reclamation plan to confirm the desired end state.

### 6.2.3 Stakeholder Contact

Operators must provide the reclamation application package to the parties identified in sections 6.2.1 (landowners) and 6.2.2 (occupants). The reclamation application package includes the following documents:

- the reclamation application
- EnerFAQs Expressing Your Concern – How to File a Statement of Concern About an Energy Resource Project
- the Statement of Concern About an Energy Resource Project form
- a copy of the public notice of application from the AER website

The applicant must retain proof of application package delivery to landowners, designates, interest holders, and occupants and provide it to the AER upon request.

An application is considered incomplete if the landowner, interest holder, and occupant did not receive a copy of the application. The material can be either hand delivered, mailed, or emailed. In the event that a landowner, interest holder, or occupant is not available, all attempts to contact them must be documented and a reasonable effort must be made to provide them the application package. This information must be provided to the AER upon request.

If there are unresolved landowner, interest holder, or occupant concerns and the operator intends to continue with the reclamation certificate application submission to the AER, the landowner, interest holder, or occupant has the ability to file a statement of concern. If the operator is aware of any unresolved concerns before submitting the reclamation application, it must indicate that in the application.

## **7 Reclamation Information**

Reclamation information includes the dates of construction and reclamation; the land use criteria used to assess the site; the revegetation approach, including fertilization, herbicide use, amendments, and soil additions; any written acceptances obtained as part of the reclamation; and the detailed site assessment information. The following is a summary of the information that is to be included.

### **7.1 Dates – Survey Plan or Sketch, Construction**

Enter the date of the most recent survey plan or sketch. Review the survey plan or sketch to ensure that any features, such as former access roads, have not been overlooked.

If the site has additional areas that were constructed during different time periods, include the construction date for each of the individual assets or associated facilities. For example, a temporary workspace may be constructed for remediation purposes after the well is abandoned.

For sites with more than one wellbore, enter the abandonment date of the last well.

Where progressive reclamation occurs or more than one reclamation assessment is done, enter the date for the final reclamation assessment.

### **7.2 Criteria Category Used**

The intended land use of a site will determine the applicable reclamation criteria used to assess the site (e.g., cultivated lands, native grasslands, forested lands, or peatlands).

In some cases, a change of land use at a site from the original use may require the applicant to apply using different assessment criteria from the original pre-existing conditions to the current surrounding or adjacent end land use (e.g., from forested lands to cultivated lands).

This does not refer to a change in end land use with regard to the remediation guidelines (i.e., agricultural, residential/parkland, commercial/industrial, or natural area), but to a change from the predisturbance or off-site plant community as it relates to the reclamation criteria. Municipal zoning requirements and changes are the jurisdiction of the municipality. Zoning will affect the remediation guidelines used to assess the site.

A reclamation criteria change must be approved in advance by the AER and the land manager. A copy of the written acceptance must be submitted with the application. Documentation demonstrating discussions with the AER and land manager about the implications of the criteria change must be included, along with written acceptance of the criteria changes.

On public land, AEPA is the land manager following reclamation certification and thus must agree with any criteria change. Written acceptance by AEPA is required. Also, any occupant on public land must give written acceptance. A copy of the written acceptance from AEPA and the occupant must be submitted with the application.

Requests for changing criteria must be submitted through OneStop and include the following at minimum:

- rationale for the change in land use
- site diagram, photographs, survey plan or sketch of the site
- development plan for alternative development (e.g., industrial site)
- adjacent land use: distance to cultivation, grassland, Green Area boundary (as relevant)
- current vegetation community type and site photos

For requests for peatlands to forested lands, also include the following:

- peatland type
- presence/absence of subsurface or surface water impacts on vegetation
- absence/presence of locally common upland communities and type

For change in land use requests on grazing leases, also include a detailed description of the vegetation composition currently on site and the surrounding area.

Operators may provide the following information to support a criteria change:

- topography relative to adjacent developed land
- predisturbance or off-site community type (e.g., eco-site phase, ecological range site, agronomic community, or Alberta wetland classification)

- access: distance, topography, presence or absence of impact to hydrology and off-site vegetation
- soil: A horizon and subsoil colour, texture, acidity, electrical conductivity, sodium adsorption ratio, and stoniness
- agricultural capability class for cultivated lands (as appropriate)

### 7.3 Preconstruction Assessment

Preconstruction assessments are beneficial to planning construction and reclamation activities and are strongly recommended on private land and all native grasslands. A preconstruction assessment report must be dated and include the name of the company and the person who completed the report. For new developments within parks and protected areas, operators must consult with the Parks Division for requirements.

It is strongly encouraged to complete a preconstruction assessment when re-entering a well or re-using the same surface lease. A preconstruction assessment will document the conditions of the well site at the time and may be used to guide reclamation outcomes if significantly different from the control data.

Submit any preconstruction assessments with the application to the AER as part of the predisturbance information specific to the site. Predisturbance information may be especially relevant if the historical environmental field report (EFR) or preconstruction assessment showed anomalies or variations within the lease area prior to construction. (e.g., pre-existing trails, pre-existing disturbance, topsoil depth or texture variability). The presence of weeds, regardless of their classification under the *Weed Control Act*, must be noted on the EFR or preconstruction assessment, as well as any anticipated weed control measures.

If more than one preconstruction assessment has been completed, enter the date of the most recent assessment.

On public land, do not submit a copy of the EFR with the application for reclamation certification.

### 7.4 Revegetation, Fertilizer, Herbicides, and Sterilants

#### 7.4.1 Revegetation Approach

Indicate if natural recovery was used. Natural recovery involves long-term re-establishment of diverse native ecosystems (e.g., prairie, forest) by establishment in the short term of early successional species. This involves revegetation from soil seedbank or natural encroachment and no seeding of non-native agronomic species. Documents such as [Sites Reclaimed Using Natural Recovery Methods](#) and the [Recovery Strategies for Industrial Development in Native Prairie](#) by subregion provide direction on natural recovery.

Provide the date on which the site was seeded, if applicable. For sites that have been seeded to pasture or other perennial vegetation, attach a copy of the species mix written acceptance, seed certificates, and the date seeded if known. If this information is unavailable, provide a list of the species composition found on and off site. If the site is being farmed and is in annual vegetation, indicate “annual crop.”

Refer to [Problem Introduced Forages on Prairie and Parkland Reclamation Sites: Guidance for Non-Cultivated Lands](#) for guidance on allowable cut-off dates for sites seeded on prairie or parkland areas. Each jurisdiction may have different cut-off dates for seeding of non-native species.

Ensure that the landowner or land manager has been consulted prior to submitting an application to ensure that the plant species present on site are acceptable. All seed mixes within parks and protected areas must be preapproved by the land manager. Information on seed mixes in special areas can be found in the document [Reclamation Guidance for Public Land Dispositions in the Special Areas](#).

The landowner, interest holder, or occupant is not required to incorporate the well site into their farming practice before a reclamation certificate is issued for the site. The operator must maintain care and custody of the location until a reclamation certificate is obtained. It is the responsibility of the operator to ensure proper vegetation management on the location.

As per [2010 Reclamation Criteria for Wellsites and Associated Facilities for Forested Lands](#), “If the site has been planted to seedlings, a minimum of 2 growing seasons are required prior to conducting the Vegetation Assessment for the submission of a reclamation certificate application.” When trees are planted in the fall (September or October), that year does not count towards the two growing seasons.

#### 7.4.2 Fertilizer

If fertilizer was applied to the site, provide the date of application and type of fertilizer. If fertilizer is applied on lease and the controls are not similarly amended, the vegetation assessment must be completed a minimum of two years after the last fertilizer application. If fertilizer has been applied to the surrounding field and site as part of normal farming practices, then no waiting period is required.

On public land, native species must not be fertilized unless accepted by the land manager, including special areas. Any fertilizers within parks and protected areas must be preapproved by the land manager.

#### 7.4.3 Herbicide and Sterilant Use

Operators must provide the dates and information related to herbicide and sterilant use on site before site construction, during production, and after reclamation. Company files must be checked for sterilant and herbicide use during site construction and during operations. If herbicides have been applied across the field (including the assets being applied for) as part of normal farming practices, documentation of use is not required.

One full growing season after herbicide application or mechanical control (hand picking), including an overwintering period, must occur before completing a detailed site assessment for the purpose of reclamation certification to verify the effectiveness of the application and control of the undesirable vegetation. If the herbicide application or mechanical weed control is applied simultaneously to the site and surrounding adjacent lands as part of normal farming practices at the same rates, the waiting period is not required. Any herbicides and sterilants within parks and protected areas must be preapproved by the land manager.

#### 7.4.4 Soil Amendments

Soil amendments such as manure, gypsum, straw, and peat can provide physical, biological, and nutrient improvements to soils. However, manure and other organic amendments are not topsoil replacements. These improvements are more beneficial in the short term rather than the long term. In some cases, the amendment may affect the site's soil chemical properties, such as electrical conductivity. The following information is required if amendments are made to the site:

- amendment type
- volume
- method of incorporation
- date of application
- location on site where amendments are added as well as the physical and chemical properties of the amendments.

Soil quality deficiencies and amendment properties must be reported in the application.

Complete the vegetation assessment a minimum of two years after the last amendment application. This coincides with the two-year waiting period for fertilizer inputs to all land uses when on site and off site are managed differently.

If manure and other amendments are applied simultaneously to the site and surrounding adjacent lands as part of normal farming practices at the same rates, a two-year waiting period is not required. Operators must obtain the land manager's written acceptance before applying an amendment.

For public land, parks, and protected areas, land managers may have additional requirements or restrictions (e.g., manure is not allowed on White Area public land sites).

#### 7.4.5 Topsoil Additions

Topsoil additions may be required on sites due to improper soil conservation, topsoil loss, erosion, or to avoid re-stripping a site where desirable vegetation is already established. The topsoil must be described (e.g., source, texture, lab analyses, volume, weeds) and be comparable to the control topsoil quality (e.g., chemistry, structure, texture).

Where topsoil is added to improve soil quantity or quality (and controls are not similarly amended), the physical (e.g., texture, colour) and chemical (e.g., acidity, salinity, metals, and nutrient content) properties of the topsoil should be characterized prior to their use.

Although it is preferable to source the soil directly from the land manager, if the soil is to be imported, it must not be from areas with known weeds or diseases. It is strongly recommended that testing be done for weeds and problematic diseases (e.g., clubroot) before importation. The following information is required if topsoil additions are made to the site:

- volume of topsoil added
- location of topsoil addition
- date of addition
- written acceptance from the applicable land manager to import topsoil

If in a special area, written acceptance is required from the Special Areas Board to import topsoil. Within parks and protected areas, topsoil additions must be preapproved by the land manager.

If operators are unable to obtain written acceptance from the land manager, they may ask the AER to consider the use of “professional judgement” through a variance request.

#### 7.4.6 Non-Oilfield Waste

Companies are encouraged to use existing facilities, such as municipal landfills, for disposal of non-oilfield waste; this includes such things as garbage and domestic waste, cellulose material (e.g., trees, vegetation) and inert debris such as concrete. Volume minimization, including reuse, recycling, and recovery strategies should be used whenever possible.

Landowners and occupants must be contacted and provide written acceptance of burial of any material on lease. Typically, waste burial will not be approved within parks and protected areas.

Any known burial of non-oilfield material should be noted. [\*Burial of Material On-Lease\*](#) (C&R/IL/97-5) includes reference to other AEPA and AER documents that must be complied with before a reclamation certificate being issued.

Burial of brush and trees – Buried brush and trees may lead to decomposition, subsidence, and generation of methane gas, toluene, phenolic compounds (aspen wood leachate), etc. AEPA issued requirements that

all trees be salvaged or removed and disposed of by burning or other approved disposal methods with the exception of remnants of burn piles. If there is a disagreement between parties as to whether trees or brush were buried on site, the operator will be asked to provide a written declaration that trees or brush were not buried on site. Burial of trees or brush within parks and protected areas must be discussed with the appropriate government ministry.

Storage of topsoil in pits – Storage of topsoil in pits is not permitted, as it can affect the quality of topsoil and makes it difficult to track storage locations if the property is sold.

#### 7.4.7 Features or Facilities to Remain in Place

Features left in place as an improvement must be stable, nonhazardous, and non-erosive. See the reclamation criteria for further information.

Where features remain in place as an improvement, the application must be accompanied by a written acceptance signed by the parties as required in this section, acknowledging that they agree to the features remaining in place. If a land manager does not want the features left in place, they must be removed, and the site must be completely reclaimed.

A survey plan or sketch must be attached to the written acceptance indicating which portion of the site is being accepted by the landowner. If the land title has been transferred or sold before certification, the pre-existing written acceptance is no longer valid and will result in the application being refused or the certificate being cancelled. If the improvements are not legitimate or not required, or if they pose a potential liability or environmental risk, they will not be accepted by the AER, and the application will be refused or the certificate cancelled.

AEPA must approve any features left in place on public lands. Following AER reclamation certification, the land is returned to the Crown and is managed by AEPA. Well pads, access roads, and other permanent or semipermanent features left in place must have written acceptance from the land manager. Requests to AEPA for features left in place should include the disposition number, a survey plan or sketch, site photos, and the following:

- For occupants on public land, the occupant must be consulted and written acceptance is required for semipermanent features (e.g., fences).
- For the Special Areas Board, any features left in place require consultation and written acceptance from both the occupant and the Special Areas Board.
- For provincial parks, wildland parks, provincial recreational areas, natural areas, ecological reserves, or heritage rangeland, the land manager must agree to and sign the acceptance for the feature to remain in place.

Written landowner acceptances may only be used for facilities and features remaining in place as improvements for landowner use (e.g., road grade not being reclaimed to allow continued access). Situations in which written landowner acceptance cannot be used include the following:

- contaminated soil and groundwater are not remediated
- unreclaimed areas that are not improvements

Applications submitted with these types of acceptances will be refused.

Written acceptance for approaches from a municipal road must be obtained from both the land manager and the municipality. Written acceptance for approaches on numbered highways (Crown land) must be obtained from the land manager and Alberta Transportation.

### **Examples of When Written Acceptance Is Required**

**Existing trails:** If a trail existed prior to the operator entering the land and if the operator's activities have not caused further impacts, the trail does not need to be reclaimed. Any rutting, erosion, or compaction caused by the operation must be reclaimed to meet criteria, using a presite assessment or representative control on a portion of the trail not associated with well-site operations. If the land next to the original trail has been disturbed (e.g., the trail has been widened at corners), the disturbed area must be reclaimed and assessed, or the landowner must provide written acceptance of the wider trail. If the trail has been upgraded to a road that is being left in place, the landowner must provide written acceptance for the road, which must be included with the application.

The operator must provide evidence that the trail existed prior to development (e.g., landowner statement, aerial photo, or satellite imagery prior to drilling). On public land, if an existing trail was used, this must be documented.

**Power lines:** Power lines are considered an associated facility and must be removed prior to certification. Where the line is required for other uses (e.g., another well site, another industrial activity, or landowner use) another party must obtain a surface lease or disposition for the line prior to certification. If the other activity involves specified land, an overlapping exemption form must be used. Operators should discuss responsibility for removal and reclamation of the lines with the electric utility company prior to applying for a reclamation certificate.

**Fences:** Fences in grazing areas are often left in place to allow ungrazed vegetation to establish. Though not a requirement, it is beneficial to ensure on-site vegetation can withstand the same grazing pressure as off-site controls. Once the fence is removed, if the vegetation growth is not sustained, the reclamation certificate may be cancelled. For this reason, prior to certification and final site assessment, fences should be removed or opened to allow grazing pressure as would be found off lease. For example, on public land, fences must be removed before reclamation certification. Sites on private land where fences will be left in

place until after certification and then removed must be accompanied by written acceptance signed by the landowner.

**Public lands:** There may be instances where a well site is ready for certification, but a portion of the access road is still in use or required by another company. If only a portion of the access road is required to remain in use, an amendment must be made under the *Public Lands Act* to separate the reclaimed portion of the road from the portion still in use, creating two separate LOCs. The reclaimed portion of the road, under the original LOC, can then be certified with the well, and the portion in use will not lead to a dead end. In parks and protected areas, roads may be considered an improvement if they provide access to current or future public areas (e.g., recreational sites).

## 8 Detailed Site Assessment

### 8.1 Assessment Tool Information and Record of Observation

Landscape, vegetation, and soil assessment results must be entered in OneStop for all assets and associated activities included in the application. The record of observation data sheets must be uploaded. For more information on the data requirements, see the [Reclamation Criteria for Wellsites and Associated Facilities: Application Guidelines](#).

Aerial assessments will only be used in situations where sites are not accessible as outlined in section 9 of the [Reclamation Criteria for Wellsites and Associated Facilities on Peatlands](#). This standard applies for all aerial assessments on peatland sites.

The aerial assessment should be carried out via helicopter at a low elevation, and representative pictures of the entire well and associated facilities must be annotated and included in the record of observation. From the aerial assessment at low elevation, it can be determined whether the site is fully vegetated and stable and the general plant community characteristics can be quantified in regard to species composition and per cent cover by structural layer, along with the average canopy height. At this elevation, any anomalies can be identified in regard to both the general landscape and vegetation community. Detailed information must be included within a modified record of observation. The assessment data must include the following:

- landscape assessment
- list of dominant species or genus by structural layer (ground, field, shrub, tree)
- average canopy height to approximately 0.25 m
- per cent canopy cover by ground layer and identification of visibly evident plant species
- aerial photos including low level views of the vegetation cover and landscape shots
- clearly annotated detailed site assessment

The data must be less than three years old at the time the reclamation application is submitted.

## 8.2 Reclamation Criteria Variances

An operator may provide justification as to why a site should be permitted to vary from the reclamation criteria and still receive certification. This is done using the reclamation certificate variance submission process (see [Quick Reference Guide for Submitting a Reclamation Certificate Variance](#)). Operators should first discuss options with the AER prior to conducting the detailed site assessment. If a variance is being requested, the operator must provide the rationale for its decision, supported by acceptable references (e.g., soil surveys applicable to Alberta).

### 8.2.1 Preapproved Variances

Operators may request a preapproval for variances to allow the application to proceed with the baseline review. Variances preapproved by the AER must be included as a “related submission” within the application, and the notice of AER acceptance must be attached. If preapproval has not been obtained, the application will be subject to additional review.

### 8.2.2 Representative Controls

Operators should make every attempt to use adjacent lands as a representative control when applying the reclamation criteria. However, there may be situations where the use of representative controls is not an option, such as

- restricted access (e.g., the assessors have not been granted access off site), or
- representative controls are not available (e.g., tame pasture on the lease surrounded by forest or cultivated lands).

In these situations, the operator must request a variance to use alternative controls or reference communities (e.g., grasslands) to assess the site.

### 8.2.3 Two-Track Trails

For grasslands with two-track trails in place (typically <30 cm in width), operators can complete a detailed site assessment and request a variance if stones and compaction are not adversely affecting the site. Vegetation and soil criteria must still be met, but a variance for stoniness and compaction along the narrow strips of trail may be appropriate.

## 8.3 Professional Assurance Table

Provide in the appropriate area the required information for each of the assessments conducted (landscape, soils, vegetation) on the site.

## 9 Application Declaration

OneStop requires an electronic application declaration. Operators are ultimately responsible for their sites and, as such, are expected to review applications made on their behalf and declare that the application is accurate and complete. Providing false or misleading information to the AER may result in an enforcement response.

The representative of the operator who is authorized to provide the declaration must be a person with knowledge of the reclamation process (see the AER website for details, [aer.ca](http://aer.ca) > Regulating Development > Project Closure > Reclamation > Oil and Gas Site Reclamation Requirements > [Professional Sign-Off](#)).

## 10 Phase 1 ESA

Minimum requirements for ESAs are provided in the *Alberta Environmental Site Assessment Standard*. General guidance on conducting a Phase 1 ESA is available from the Canadian Standards Association ([CAN/CSA Z768-01: Phase I Environmental Site Assessment](#)).

A Phase 1 ESA is mandatory for all sites except for

- sites that were prepared but not drilled;
- log decks, campsites, borrow pits, access roads, or other associated facilities submitted as a standalone application;
- a pipeline right-of-way if the pipeline was not constructed; and
- areas of the site known to be contaminated and were remediated with confirmatory sampling provided.

If any of the above-mentioned activities take place on a site previously certified for reclamation, the current operator is responsible for ensuring that the site is remediated and reclaimed according to the current criteria.

The goal of the Phase 1 ESA is to have a sufficient information to estimate the likelihood that contamination may be present and whether a Phase 2 ESA is required. If there is insufficient information to complete the Phase 1 ESA and determine if contamination is present, a Phase 2 ESA is required.

For OSE programs and CEPs, there will be only a single Phase 1 ESA, which includes all core holes and, at a minimum, the drilling waste disposal location and associated dispositions, as well as a search for any incidents or spills associated with the program.

A complete and adequate Phase 1 ESA should either

- provide assurance that the reclamation certificate application is complete without a Phase 2 ESA because contamination is unlikely, or

- provide information that can direct a Phase 2 ESA or remedial activities at the site.

To ensure that the site information is adequate to complete a Phase 1 ESA, it is important to gather the requisite information at appropriate times in the life cycle of the site. During the life of a lease site, several milestone events occur that may inhibit assessment of indicators, such as surface staining from hydrocarbon spills or crusting from salts. When activities such as soil replacement and infrastructure removal (buildings, risers, wellheads, storage tanks, etc.) are occurring, documenting the condition of the surface prior to completion of the activity is highly recommended, including gathering photographic evidence or conducting confirmatory sampling. This ensures that information on the presence or absence of contamination on the site is available.

For sites that were constructed using minimum disturbance practices on grasslands and native prairie, and no drilling waste was disposed on site, a Phase 1 ESA should be conducted following abandonment prior to final reclamation. If the Phase 1 ESA is not undertaken until after final reclamation, the Phase 1 ESA site visit can be completed at the same time as the detailed site assessment.

An operations-phase site sketch is required (when available) with all applications, and a construction-phase site sketch is required for all sites built since 1994. If accurate sketches cannot be created from company records, Phase 1 ESA site visits, or aerial photos, efforts should be made to indicate the possible location of on-site facilities for the purposes of the Phase 2 ESA. Sketches must illustrate the features, facilities, and infrastructure and any spill locations on the site.

The professional declaration information can be found on the ESA submission online page. The AER will refuse any reclamation certificate applications that do not strictly adhere to the requirements for a professional declaration, as outlined in *Professional Declaration Requirements (R&R/12-05)*.

## 10.1 Asset Information

Activities covered under energy resource development or brine-hosted mineral resource development can fall under several categories, including but not limited to the following:

- Prepared but not used (built but not drilled) – site where soil was salvaged and preparation for drilling was completed, but drilling at the site did not occur. Also applies to remote sumps that were constructed but not used.
- Drilled and abandoned well site – site that was drilled, never put into production, and abandoned.
- Oil well site – site with well “that produces primarily liquid hydrocarbons from a pool or portion of a pool” (*Oil and Gas Conservation Rules*, section 1.020(12)(i)). On public lands, these are dispositioned as MSL or MLL.
- Sweet gas well site – site with well producing natural gas that does not need to be purified to remove sulphur-bearing compounds such as hydrogen sulphide (H<sub>2</sub>S).
- Sour gas well site – well producing natural gas that contains measurable amounts of H<sub>2</sub>S.

- Disposal well – a well site used for injecting fluids for purposes other than enhanced recovery or gas storage.
- Battery site – a site with “a system or arrangement of tanks or other surface equipment, together with associated infrastructure, for receiving or holding the effluent of one or more wells” (*CCR*, section 1(b)).
- Geothermal well site – a site with a well licensed under the *GRDA* that produces geothermal energy. On public lands, these are dispositioned as MSL or MLL.
- Mineral resource well site – a site with a well licensed under the *MRDA* that produces brine-hosted mineral resources. On public lands, these are dispositioned as MSL or MLL.
- Pipeline – a pipe for the transmission of any substance and installations in connection with that pipe.
- Pipeline riser / valve site – a location where the pipeline comes to surface. This location may contain a pig launch/receiver or block valve.
- CEP – a site used for coal exploration activities regulated under the *Code of Practice for Exploration Operations*. On public lands, these are dispositioned as CEP.
- OSE program – a site used for oil sands exploration activities regulated under the *Code of Practice for Exploration Operations*. On public lands, these are dispositioned as OSE.

It is possible that a well that originally produced one type of resource switches to producing another type of resource during its life (e.g., producing oil well from 1981 to 1986, producing gas well 1986 to 1988, injection well from 1988 to 1991). The current activity type of a well must be identified in the Phase 1 ESA section. If production on a well changes, all activity types conducted on the lease during the history of the well must be identified and a more detailed history must be provided in the Phase 1 ESA section (attach additional pages as necessary).

## 10.2 Drilling Information

Consult company well files for drilling information. Tour reports are another source of information on drilling activities and can be obtained from the AER Core Research Centre (see appendix 1 for contact information).

## 10.3 Re-entry of a Well or Site Re-drilled

If an application is for a previously certified site, provide the reclamation certificate number and the date certified.

For the purposes of section 10.2, re-entry of a well occurs when an existing wellbore is re-entered using drilling fluids containing additives. A re-drilled site is one where another well was drilled on the same lease, and as a result, more than one drilling waste disposal event has occurred. Drilling of wells on a

multiwell pad, where the drilling wastes are combined and disposed of at the same time, is not considered re-drilling for the purposes of section 10.2.

Whether or not a reclamation certificate has been issued, the operator on a re-entered or re-drilled well is responsible for remediating and reclaiming the lease site, including impacts from previous activities such as drilling waste disposal areas, flare pits, or spills. This liability extends to off-lease impacts associated with the operation of the re-entered well. Where a second well is drilled on the same site, the operator applying for a reclamation certificate must show that the entire site included in the application, including any areas affected by the previous well, has been assessed and remediated, if necessary. Consequently, it is strongly recommended that an operator conduct an ESA prior to re-entering a well or re-drilling a site to determine if contamination is present from previous operations. All ESAs should be listed in the Phase 1 ESA.

#### 10.4 Drilling Waste Disposal Information

Drilling waste disposal methods and locations for all drilling wastes associated with the drilling of the site must be provided. The AER recognizes that on older sites, where legislation was not in place for recording drilling waste disposal, the location of drilling waste disposal may be unknown. Operators are expected to exhaust all reasonable avenues to locate the disposal area. Where more than one disposal method or location was used, operators must ensure that detailed information is provided for each. All on-lease waste disposal locations should be shown on the appropriate construction- or operation-phase site sketches.

**On-lease sump:** Provide the location of the sump area on the lease using GPS coordinates, if available, and the sump dimensions, including sump depth and cover depth. This information must be provided in cases where off-lease methods were used, but other drilling waste materials (e.g., shale, cuttings, cement returns) in excess of 50 cubic metres (m<sup>3</sup>) were disposed of on the lease. All on-lease disposal locations must be shown on lease diagrams. If the drilling waste disposal information cannot be obtained and the compliance option checklist cannot be completed or indicates a Phase 2 ESA is required, the Phase 2 ESA must be included in the application.

**Remote sump:** Provide all the information as for an on-lease sump. If the sump has been previously certified with another well site, provide the certificate number and date of certification. On public land, provide only the disposition number (MSL) that the sump was certified under. If the remote sump is not being applied for at this time, provide the legal land location, the well licence number, and disposition number for the well site with which the sump will be certified. On public land, authorization from the AER is required to attach a remote sump to an unrelated well.

**No drilling waste disposed on site:** There may be cases where the drilling waste was not disposed on site. For example, a sump was constructed but not used because the waste was completely disposed of by landspray, landspray while drilling, or pump-off, or at an approved waste management facility. If this was

the case, provide detailed information on the disposal method or evidence that the waste was tanked and disposed of at a waste management facility. For example, list the waste manifest numbers in the Reference Document section of the compliance option checklist.

**Drilling mud (type, volume):** Operators must ensure that the volumes and types of all waste are provided, and that the information is consistent with the requirement set out in *Directive 50*, such as the Notification of Drilling Waste Disposal form or other documents. Ensure that any conflicting information is explained.

**Drilling waste disposal methods and locations:** Disposal methods and locations for all drilling waste associated with drilling of the site must be provided. If more than one disposal method or location was used, provide detailed information for each (e.g., fluids landsprayed while drilling; solids, shale cuttings, and cement returns disposed of on lease in the sump via mix-bury-cover). All on-lease waste disposal locations should be shown on the appropriate construction or operation-phase site sketches. If the compliance option checklist cannot be completed or indicates that a Phase 2 ESA is required and the waste disposal location is unknown, all reasonable efforts must be made to assess potential disposal locations on the lease.

### **Drilling waste disposal assessment options**

Provide with the application all the information required under the AER *Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification*.

The following drilling waste forms must be completed and submitted:

- Assessing Drilling Waste Disposal Areas – Checklist for Compliance Options 1 and 2
- Assessing Drilling Waste Disposal Areas – Calculation Tables for Compliance Options 1 and 2

The following information is provided in an effort to prevent common errors that have been observed while reviewing previous application checklists:

- Salinity guidelines: The *Directive 050*–equivalent salinity guidelines in [Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification](#) are restricted to drilling waste disposal areas. The rest of the site must meet the [Alberta Tier 1 Soil and Groundwater Remediation Guidelines](#) and [Alberta Tier 2 Soil and Groundwater Remediation Guidelines](#). Other contaminants in the drilling waste disposal areas, such as hydrocarbons and metals, must meet the Alberta Tier 1 and 2 guidelines.
- Landspray while drilling: For sites using compliance option 1, if drilling waste has been disposed of by landspray while drilling and greater than 50 m<sup>3</sup> of cuttings have been disposed of on site, the compliance option 1 checklist must be completed. If drilling waste material has been disposed of off

lease and less than 50 m<sup>3</sup> cuttings have been disposed of on site, only sections 1.0 to 1.3 of the compliance option checklist should be completed.

## 10.5 Production, Storage, and Environmental Information

### 10.5.1 Current and Historical Infrastructure

List all known infrastructure associated with the facility since the initial disturbance.

The *Alberta Environmental Site Assessment Standard* provides guidance on potential sources of contamination and possible contaminants that may be associated with specific infrastructure. However, some sources and types of contamination may not be listed.

Indicate associated activities on a site sketch. Note that any facilities and infrastructure remaining (e.g., access roads) will require written acceptance (see section 7.4.7).

### 10.5.2 Flare Pits

Indicate if a drilling or production flare pit was used on the site. This information should also be shown on the construction- or operation-phase site sketch for known locations. If a flare pit was built but not used, confirmatory sampling from the flare pit area is not required. If a flare pit was used, confirmatory sampling is required. If flare tanks were used, confirmatory sampling is not required unless there have been spills from the tank.

### 10.5.3 Storage Tanks

Indicate if above or belowground storage tanks were used on the site and their contents, if known. Document the material the tank was constructed from (e.g., steel, cement). The location of the tanks, if known, must be documented on the applicable construction- or operation-phase site sketch.

If there was no evidence of staining, submit this information with the reclamation certificate application. If staining or other indicators of a release were observed, a Phase 2 ESA is required in the tank area unless sufficient soil samples were collected for analysis during tank removal.

If the underground storage tank contained produced water, a Phase 2 ESA is required unless there were sufficient samples submitted for analysis during the tank removal.

### 10.5.4 Fluid Disposal

The fluid disposal method used must be stated, if applicable. If fluid was piped or trucked to or from the site, spills or releases may have occurred. Pipeline releases associated with the well-site lease must be remediated and confirmatory sampling analysis data included in the application. See section 10.5.6 for additional information.

### 10.5.5 Other Facilities or Infrastructure

Any other facilities or infrastructure remaining on site, such as a waste or chemical storage facility, a handling facility, buried pits, or landfills, must be included in the application. Indicate the location of these facilities on the construction- or operation-phase site sketch.

### 10.5.6 Spills and Releases

Provide a complete history of spills and releases associated with the site. On-site and off-site spills and releases associated with the area being applied for must be remediated and reclaimed. This includes spills and releases from associated facilities such as remote sumps or pipelines. Releases that have migrated off site from the lease or an associated facility must be remediated. Documentation must be provided to show spills and releases have been remediated to meet the applicable Alberta remediation guidelines. Company files and the AER spills and releases database must be searched.

For each spill or release, the following must be documented and submitted unless otherwise indicated:

- **Date (d/m/y):** Provide the date of the spill or release. If there is evidence of historical or cumulative contamination in an area, provide the date it was identified.
- **Reference or incident numbers:** Where applicable, the AEPA reference number (typically six digits) and AER incident number (e.g., 20041956) should be provided, along with copies of all related correspondence and documentation. AEPA and AER incident numbers are provided to the party reporting the spill or release at the time a spill is reported. Although it is preferable to have these numbers, applications will not be refused if they are unavailable. It is not necessary to contact AEPA or the AER for these numbers.
- **Type:** Provide information on the type of spill or release that occurred, e.g., release from aboveground storage tank or pipeline release, pipeline depth 1.2 metres, etc.
- **Product and volume (spilled and recovered):** Provide the product type and volume of material spilled and recovered, e.g., 100 m<sup>3</sup> release of crude oil, 98 m<sup>3</sup> free product recovered.
- **Diagram:** Where spills and releases have been identified, provide a schematic diagram showing all spill or release locations. The diagram must include at least the following:
  - exact locations of any spill or release with LLD and GPS coordinates, if possible, showing the size and extent of the spill
  - locations where soil and water sampling were completed
  - approximate location of lease boundaries, facilities, pipelines, etc.
  - location and distance of surface and groundwater receptors from spill or release

Where information is not available, the operator must conduct a reasonable level of assessment to ensure that spills or releases meet the [Remediation Regulation](#) and other applicable requirements.

#### 10.5.7 Previous ESAs

Any previous site assessments should be documented in this section. If there have been any previous ESAs conducted on the site, provide the name of the consulting company and consultant's name, report title, report date, and a summary of the report findings.

In some cases, company files may not be available. However, due diligence must be exercised in searching for the appropriate files and checking all available information sources.

### 10.6 Phase 1 ESA Site Visit

The Phase 1 ESA involves collecting information about past activities or events that may have resulted in contamination on a site. The Phase 1 ESA includes a site visit to identify visible evidence of contamination sources or actual contamination and to establish the need for a Phase 2 ESA. No intrusive sampling of soil or water is conducted during the Phase 1 ESA. The following are examples of information that must be collected during a site visit:

- **Date (d/m/y):** Provide the date of the Phase 1 ESA site visit.
- **Assessor:** Indicate the name of the person who conducted the site visit and their employer's name.
- **Surrounding land use:** Describe the land use surrounding the site in all four directions.
- **Topography:** Describe the topography across the site. Include any topographical changes in relation to the off-lease areas that may have occurred as a result of the well site.
- **Vegetation:** List the type of vegetation and plant species on the site and the surrounding area.
- **Proximity to neighbouring features:** List features such as residences, water wells, and surface water bodies (ponds, streams, rivers) and provide the distances from the lease. The Groundwater Information Centre website has a list of water wells registered in Alberta (see appendix 1 for contact information).
- **Visual indicators:** Document the type of facility present, its size, and location on the operations-phase site sketch. On-site equipment or tanks, along with visual signs of former facilities, or open or buried earthen pits may indicate potential contamination sources.
- **Evidence of past spills:** Provide information on any visual indicators of contamination identified during the Phase 1 ESA site visit. Indicators may include staining, presence of crusted soils (indicating salt spills), changes in soil characteristics, slumping, or depression areas. Areas where contamination is suspected require a Phase 2 ESA.

- **Adjacent land affected by operations on the site:** Any operational off-lease impacts originating from the site must be noted in this section. This may include off-lease vegetation impacts, rutting, and water ponding. Detailed information should be recorded during the site visit identifying the type of impact, the potential cause, area affected, etc. If any off-site impacts are identified, details of the remedial measures must be provided. All available, relevant information, including incident reporting, must be included with the application.
- **Vegetation stress:** Provide the location of any stressed vegetation and size of the affected area. Visual indicators of vegetation stress include bare soil or indicator plant species such as kochia or foxtail barley, which are typically associated with saline soils. A Phase 2 ESA must be conducted in these areas if contamination is suspected.
- **Prohibited noxious, noxious, or problem/volunteer weeds:** If weeds are present on the site, document the species, location, and number. Assessors must be familiar with the species of concern in the municipality they are working in. Some local authorities have raised individual species from one category to another. Assessors are encouraged to talk to the local weed inspector. All prohibited noxious weeds must be eliminated and noxious weeds must be controlled to at or below the density in the control fields. Problem or volunteer weeds must be controlled on site and do not require a different level of management than the control fields.

Public land managers may also have specific restrictions on species (e.g., downy brome and crested wheat grass on native prairie). Operators are encouraged to contact the public land manager regarding weed management and requirements under the *Weed Control Act*, *Public Lands Act*, and *Special Areas Act*. Parks Division staff must be contacted to discuss weed management for sites within parks and protected areas. Refer to *Weed Management on Industrial Sites (R&R/12-01)* for additional information.

- **Conflicting information:** The site visit should confirm or validate the findings from the file or imagery review. Indicate and clearly explain any conflicting information.
- **Photos:** Photos taken during the Phase 1 ESA site visit must be included in the application. The following must be included at the bottom of each photograph:
  - date of photograph,
  - where it was taken from,
  - orientation of image (e.g., northwest, southeast), and
  - description of image.

## 10.7 Aerial and Satellite Imagery Review

Aerial or satellite imagery can provide a visual chronological history of activities that occurred at a site when viewed at an appropriate scale. Imagery can provide valuable information about a site, especially when the company documentation is not available or incomplete. Information about the site, such as location of facilities and features, sumps and flare pits, spills and cleanups, can be obtained. If the results of the Phase 1 ESA indicate contamination is likely, imagery can be used to develop a soil sampling plan.

Aerial or satellite photos that provide sufficient detail must be submitted with the reclamation certificate application. Provide the photograph ID assigned by Aerial Photo Repository Search (APRS), the date the photograph was taken, type (aerial, satellite, infrared, etc.), and any comments or observations. Scale must also be documented on the photo.

### 10.7.1 Where to Obtain Imagery

There are several sources of imagery that should be reviewed for information. AEPA Air Photo Distribution has aerial photos of the province from 1949 on. Areas throughout the province have been photographed at various frequencies since that time and are held in the collection. The photos are catalogued and can be viewed at the Air Photo Distribution reference library. For more information on products and costs or to order aerial photos, contact Air Photo Distribution (see appendix 1 for contact information).

In cases where aerial photos are not available, other types of photos such as satellite photos or overview photos taken from an elevated height may be acceptable. Regardless of the imagery source, the expectations remain the same.

### 10.7.2 Scale Required

Photos must be obtained at a scale of 1:5000 or 1:7500 to show details of the site. Aerial photos obtained from Air Photo Distribution are generally taken at a scale of 1:30 000. However, Air Photo Distribution can make enlargements from contact prints to provide site detail.

### 10.7.3 Imagery Required

- **Producing wells and batteries:** Photos showing the chronological history of the site from predisturbance to post abandonment are required. Specifically, one photo of the site before disturbance, photos at regular time intervals (2–3 years) during operations, and one photo post abandonment are required in order to show site changes. Photos taken during the producing phase of a well site allows features that may be associated with contamination to be identified, even if they were not included in the file review, e.g., aboveground storage tanks.
- **Drilled and abandoned wells:** One image of the site while it was being drilled is required, if available. If images of the active site are not available, predisturbance and post-abandonment images are required.

- **Batteries, satellites, and other associated facilities:** Images of the site prior to disturbance, during operations at regular time intervals (2–3 years), and post abandonment are required.

#### 10.7.4 Imagery Information

Original or high-quality scanned images must be provided. The images must have the following information documented directly on the image:

- lease location
- identification of all visible features
- areas of potential contamination (e.g., possible sump, flare pit)

### 10.8 Interviews – Phase 1 ESA

People with knowledge about the operating site must be contacted during the interview stage as part of the applicant's due diligence, otherwise the application will be considered incomplete. This includes the operator, landowner, and occupant. Absentee landowners or their designate should also be contacted. Information regarding site history, location of facilities/structures, site spills, etc. can often be obtained only through interviews. In some cases, a landowner or occupant is the only knowledgeable source of events that occurred on the site.

Several attempts should be made to contact the landowner, their designate, or an occupant, and each attempt should be documented. A single unanswered phone call is not sufficient. If the landowner or occupant cannot be contacted after several attempts, proof of reasonable attempts by the operator, including the dates, times, and methods used (e.g., phone, email, letter, in person), must be provided.

On public land within a special area, the Special Areas Board is the landowner. Within provincial parks, wildland parks, provincial recreational areas, natural areas, ecological reserves, or heritage rangeland, the Parks Division is the landowner.

For a Phase 1 ESA, the operator must contact the AER to obtain the routine information disclosure for the public land file. There is no need to contact AER staff for an interview. If a landowner or occupant has a concern or complaint regarding the site, it must be addressed prior to submission of the application. The concern or complaint and the operator's response must be documented in the application.

### 10.9 Conclusion and Recommendations

Indicate within the Phase 1 ESA summary module the outcome of the Phase 1 ESA:

- The Phase 1 ESA showed contamination was not likely present, so no Phase 2 ESA or remediation was completed.
- The Phase 1 ESA showed contamination was likely present, so a Phase 2 ESA was completed.

- The Phase 1 ESA had insufficient information to determine if contamination was likely present, so a Phase 2 ESA was completed.

Submission of the Phase 1 ESA summary module in OneStop does not remove the requirement of completing and attaching the Phase 1 ESA professional report within the submission.

## 11 Phase 2 ESA

This section provides guidance on Phase 2 ESA requirements for well sites and associated facilities. AEPA defines a Phase 2 ESA report as a document that provides information on the initial intrusive site investigation through confirmatory data analysis. Remediation and confirmatory sampling closure reports may be included with confirmatory data analysis as a separate document from the Phase 2 ESA report.

Minimum requirements for ESAs are provided in the *Alberta Environmental Site Assessment Standard*. General guidance on conducting a Phase 2 ESA is available from the Canadian Standards Association (*CAN/CSA Z769-00: Phase II Environmental Site Assessment*).

Doing a Phase 2 ESA requires knowledge of oil and gas operations, an understanding of what contaminants may be present and their fate and transport, and experience in undertaking soil and groundwater contamination assessments. Site assessments must be carried out under the supervision of a qualified professional.

A completed Phase 2 ESA meets three objectives:

- determines if contamination is present,
- identifies the degree and horizontal and vertical extent of contamination prior to remediation, and
- provides post-remediation confirmation of soil and groundwater quality.

### 11.1 When to Provide a Phase 2 ESA

A Phase 2 ESA report must be provided if any of the following applies:

- There was insufficient information to determine the likelihood of contamination from the results of the Phase 1 ESA.
- The Phase 1 ESA indicated that there was a likelihood of contamination at the site.
- There is known contamination at the site.
- A Phase 2 ESA was completed after a Phase 1 ESA.

If a Phase 2 ESA is not completed when required, the application will be refused.

## 11.2 Phase 2 ESA Information

A Phase 2 ESA and remediation and confirmatory sampling report must be compliant with Alberta's remediation requirements as described in the Alberta Tier 1 guidelines or Alberta Tier 2 guidelines and must include the following if applicable:

- site information, including drainage (surficial and internal), slope, and slope position
- background information for soil and groundwater
- impacted site locations or spill areas identified in the Phase 1 ESA and any other spill areas associated with the area covered by the application, both on and off lease
- whether contamination is confirmed at the site
- all receptors and whether they are at risk
- details of the investigation of the site, including exact locations from which samples were collected
- sampling increments
- borehole logs
- the lateral and vertical extent of the contamination
- a site diagram or aerial photograph of the site indicating borehole locations and possible sumps, pits, wellbore locations, and other facilities
- depth to water table
- a table of lab analytical data highlighting concentrations that exceed the applicable guidelines (e.g., Alberta Tier 1 or Tier 2) with references to the borehole locations on the site diagram, as well as the lab data sheets
- a detailed description of remediation activities at the site (may be in the remediation and confirmatory sampling report)
- an estimate of the volume of contaminated soil remediated or excavated (may be in the remediation and confirmatory sampling report)
- a diagram or description of the confirmatory sampling locations (may be in the Phase 3 report)
- a table of discrete confirmatory samples from the base and walls of an excavation indicating that the applicable guidelines have been met, as well as the lab data sheets and supporting documentation for each remediated site

The submission of the Phase 2/3 ESA summary module in OneStop does not remove the requirement of attaching the Phase 2/3 ESA reports within the submission.

### 11.2.1 Record of Site Condition Form

The purpose of the record of site condition (RoSC) is to consistently summarize the current known environmental condition of a site based on information contained in pertinent professional reports. Any contamination management report submissions must be submitted through the RoSC in OneStop (with the exception of those related to *EPEA*-approved mining operations).

All reclamation certificate applications require an accepted RoSC submission under the “Contamination Review for Reclamation” intent. The Contamination Review for Reclamation Submission Checklist presents minimum expectations for a RoSC submission under this intent. Submissions that do not meet these expectations may be returned as administratively incomplete (as referred to in OneStop). The checklist is available on the AER website, under AER forms > Remediation and Reclamation. Attach a completed checklist to facilitate a timely review.

Reclamation certificate applications that involve specified lands in separate locations (e.g., a well site and a remote sump) may require more than one RoSC.

For more information on this intent and RoSCs in general, refer to [Manual 021: Contamination Management](#) (including section 11.5.1), the *Guides for Contamination Management* on the AER’s OneStop help page, and other AER webpages on remediation.



## Appendix 1 Contact Information

### Alberta Energy Regulator

#### Core Research Centre

3545 Research Way NW Calgary, Alberta T2L 1Y7

Phone: 403-297-6400

Email: [CRC.ServiceDesk@aer.ca](mailto:CRC.ServiceDesk@aer.ca)

### Alberta Energy Regulator Information Distribution Services

Suite 1000, 250 – 5th Street SW Calgary, Alberta T2P 0R4

Phone: 403-297-8311

Toll free: 1-855-297-8311

Email: [InformationRequest@aer.ca](mailto:InformationRequest@aer.ca)

Product Catalogue: <http://www1.aer.ca/ProductCatalogue/index.html>

### Environment and Protected Areas Groundwater Information Centre

Phone: 780-427-2770

Fax: 780-427-1214

Email: [gwinfo@gov.ab.ca](mailto:gwinfo@gov.ab.ca)

### Air Photo Library

2<sup>nd</sup> Floor East, Muriel Stanley Venne Provincial Centre

12360 142 Street NW

Edmonton, Alberta T5L 2H1

Phone: 780-427-3520

Email: [Air.Photo@gov.ab.ca](mailto:Air.Photo@gov.ab.ca)

### Environment and Protected Areas

2nd Floor, Oxbridge Place

9820 – 106 Street

Edmonton, Alberta T5K 2J6

Phone: 780-427-3582

Fax: 780-427-5980



## Appendix 2 Reference Documents

Below is a list of reference documents pertaining to reclamation and remediation in Alberta.

### Alberta Energy Regulator

The following are available on the [Reclamation Certificate Application Submissions](#) webpage:

- *Assessing Drilling Waste Disposal Areas: Compliance Options for Reclamation Certification*
- *Guide to Certification for Wellsite Reductions, Additions, Overlaps, Multi-Well Facilities, and Forced Leased Boundary Changes*
- [Manual 021: Contamination Management](#)

### Forms

- *Application for Exemption from Requirement to Obtain a Reclamation Certificate Due to Presence of an Overlapping Activity*
- *Assessing Drilling Waste Disposal Areas – Calculation Tables for Compliance Options 1 and 2*
- *Assessing Drilling Waste Disposal Areas – Checklist for Compliance Options 1 and 2*
- *Professional Declaration for Reclamation Certificate Applications*
- *Record of Site Condition (OneStop)*
- *Contamination Review for Reclamation Submission Checklist*
- *Subsoil Salinity Tool Assessment Checklist*
- *2010 Assessment Tool and Record of Observations Data Sheets*

### Government of Alberta

- *2010 Reclamation Criteria for Wellsites and Associated Facilities*
- *Alberta Environmental Site Assessment Standard*
- *Alberta Tier 1 Soil and Groundwater Remediation Guidelines*
- *Alberta Tier 2 Soil and Groundwater Remediation Guidelines*
- *Burial of Material On-Lease (C&R/IL/97-5)*
- *Certification Requirements for Wellsites with No Surface Disturbance (Surveyed Only) (C&R/IL/94-3)*
- *Competencies for Reclamation and Remediation Recommendations Report*
- *Conservation and Reclamation Regulation*

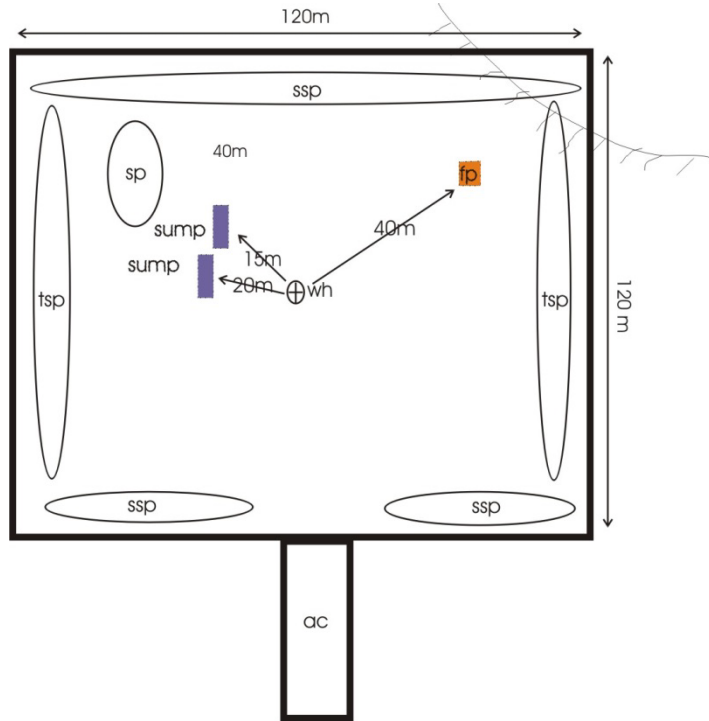
- *Conservation and Reclamation Guidelines (C&R/IL/97-1)*
- *Frequently Asked Questions on the Remediation and Reclamation of Soil and Groundwater*
- *Glossary of Reclamation and Remediation Terms Used in Alberta*
- *Native Prairie Protocol for Reclamation Certification of Salt Affected Wellsites (2019)*
- *Preconstruction Assessment Report for Wellsites (C&R/IL/00-8)*
- *Professional Declaration Requirements*
- *Problem Introduced Forages on Prairie Reclamation Sites (R&R/03-05)*
- *Remediation Certificates for Upstream Oil and Gas Sites (R&R/11-01)*
- *Salt Contamination Assessment and Remediation Guidelines*
- *Sites Reclaimed Using Natural Recovery Methods: Guidance on Site Assessment (R&R/03-06)*
- *Subsoil Petroleum Hydrocarbon Guidelines for Remote Forested Sites in the Green Zone*
- *Third Party Impact on Reclamation (C&R/IL/97-4)*
- *Weed Management on Industrial Sites (R&R/12-01)*
- *Wellsite Construction: Guidelines for No-Strip and Reduced Disturbance (R&R/03-07)*
- *Wellsite Reclamation Update for 2001 (C&R/IL/01-10)*

## Special Areas Board

- *Reclamation Guidance for Public Land Dispositions in the Special Areas (June 2023)*

### Appendix 3 Examples of Site Diagrams

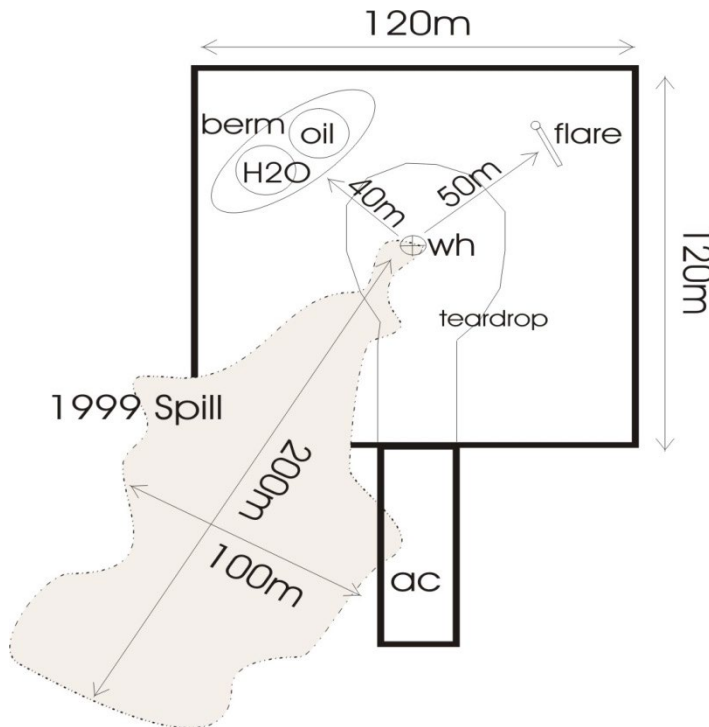
#### Construction Phase (mandatory for any site constructed since 1994)



At a minimum, indicate all of the following applicable information on both sketches:

Drainage/direction	
Wellhead	⊕ W/H
Berms	berm
Cut/fill	
Spoil	
Spills	
Trenches	tr
Access	ac
Topsoil Pile	
Subsoil Pile	
Sump	S
Flare Pit fp	
Tank Storage	
Teardrop	

#### Operations Phase



### Attachment Site Information-Lease Diagram

Operator		Soil Assessor		Vegetation Assessor	
Name(s): Operator - Gas Co		Joe Assessor		Mary Assessor	
ERCB Unique Well / Facility Identifier(s):		Disposition #:		Location	
04-13-024-07 WDM		DISPOSITION #		Well Center	
				Surface	
				Downhole	
Activity Dates (mm/dd/yr):		Soils		Vegetation	
Survey: 20-Jul-99		Construction: 20-Aug-99		Abandonment: 15-Jul-05	
		Reclamation: 17-Aug-06		15-Sep-06	
				20-Aug-07	
				Other: Vegetation 2: July 15, 2008	
Natural Sub-region:		Ecozone:		Soil Zone	
Central Parkland		N/A		Eluvial Black Chern.	
				Soil Series	
				Malmo	
				Construction Practice:	
				2 Lift	
				Reclamation Practice:	
				Full Disturbance	

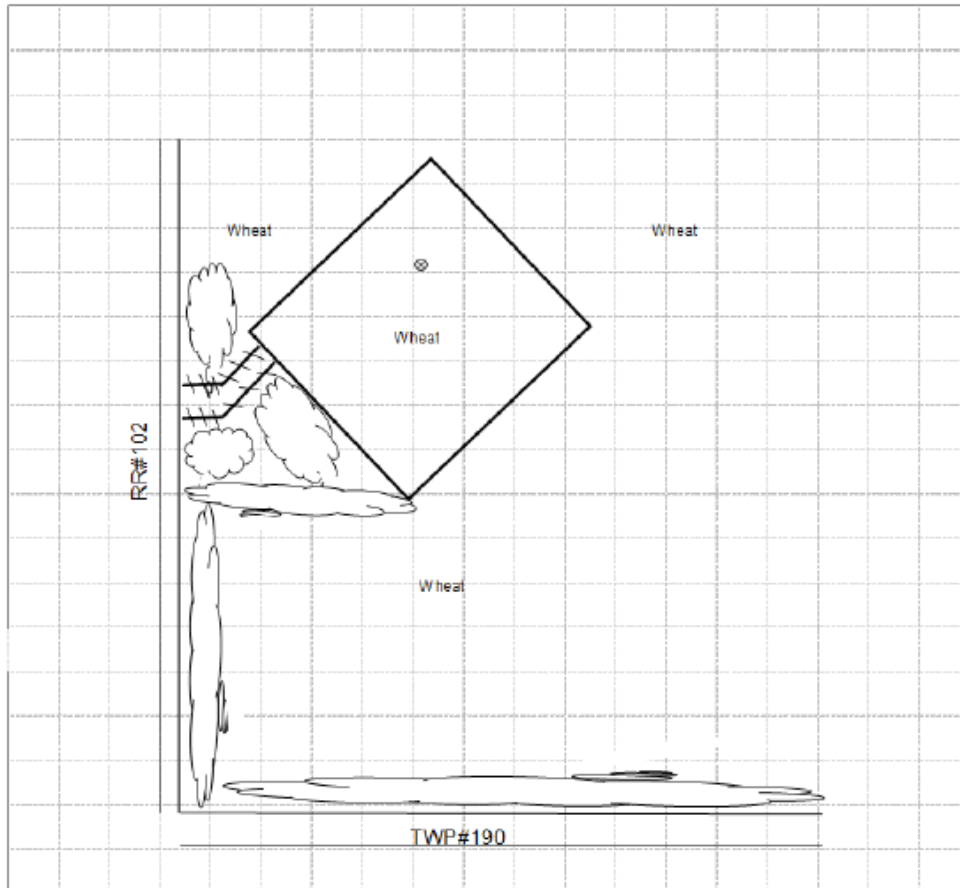
Environmental Setting

Legend						
Drainage:	Access Road Boundary:	Lease Boundary:	Former Wellhead:	Trees / Brush:	Step Out:	Control Point: <b>C#</b>
						Site Point: <b>S#</b>



Abbreviations	Landscape Criteria		Vegetation		Soil	
	E - Erosion	BA - Bare Areas	V - Site Vegetation Assessment Point	SS - Site Soil Assessment Point	T - Texture	
	C - Contour	PH - Poor Health Areas	VC - Vegetation Control Point	SC - Soil Control Point	G/R - Gravel / Rock	
	ST - Stability	G/R - Gravel / Rock	W - Weeds	AD - Admixing		
D - Debris	PD - Poor Drainage	PH - Poor Health Areas	SPR - Soil Profile Restriction			

Crop On-site:	
On-site:	Wheat
North:	Wheat
East:	Wheat
South:	Wheat
West:	Wheat
Topography:	
Gently Undulating	
Typical Slopes:	
1-2%	
Usual Soil Moisture:	
Dry, 150-200 mm during growing season	
Soil Assessment Date:	
September 15, 2006	
Veg. Assessment Date:	
August 20, 2007	
Lease Area:	
1.3 ha	3.2 ac
110 m	x 110 m
Inspection Spacing	
Lease:	27.5 m x 27.5 m
Access:	100 m



Notes:

### Attachments Site Information-Lease Diagram

Operator		Soil Assessor		Vegetation Assessor	
Name(s): Operator - Gas Co		Joe Assessor		Mary Assessor	
ERCB Unique Well / Facility Identifier(s):		Disposition #:		Location	
04-13-024-07 W4M		DISPOSITION #		NAD83	
Activity Dates (mm/dd/yr):		Soils		Vegetation	
Survey: 20-Jul-99		Construction: 20-Aug-99		Abandonment: 15-Jul-05	
Reclamation: 17-Aug-06		Soils: 18-Sep-06		Vegetation: 20-Aug-07	
Other: Vegetation 2: July 15, 2008					
Natural Sub-region: Central Parkland		Ecosite: N/A		Soil Zone: Elevated Black Chern.	
		Soil Series: Malmo		Construction Practice: 2 Lift	
				Reclamation Practice: Full Disturbance	

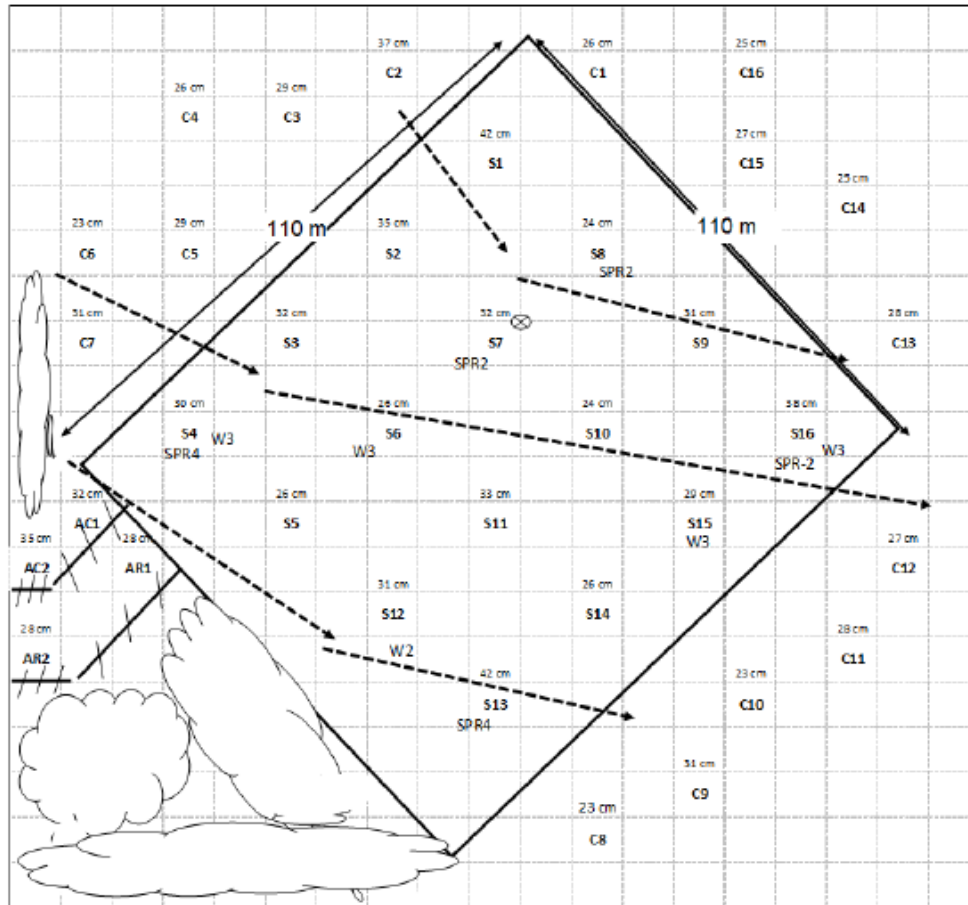
Environmental Setting

Legend:						
Drainage:	Access Road Boundary:	Lease Boundary:	Former Wellhead:	Trees / Brush:	Step Out:	Control Point: <b>C#</b>
						Site Point: <b>S#</b>



Abbreviations:	Landscape Criteria	Vegetation	Soil
	E - Erosion	BA - Bare Areas	V - Site Vegetation Assessment Point
	SS - Site Soil Assessment Point	T - Texture	
	G/R - Gravel / Rock		
C - Contour	PH - Poor Health Areas	VC - Vegetation Control Point	SC - Soil Control Point
ST - Stability	G/R - Gravel / Rock	W - Weeds	AD - Admixing
D - Debris	PD - Poor Drainage	PH - Poor Health Areas	SPR - Soil Profile Restriction

Crop On-site:	
On-site:	Wheat
North:	Wheat
East:	Wheat
South:	Wheat
West:	Wheat
Topography:	
Gently Undulating	
Typical Slopes:	
1-2%	
Usual Soil Moisture:	
Dry, 150-200 mm during growing season	
Soil Assessment Date:	
September 15, 2006	
Veg. Assessment Date:	
August 20, 2007	
Lease Area:	
1.8 ha	3.2 ac
110 m	x 110 m
Inspection Spacing	
Lease:	27.5 m x 27.5 m
Access:	Length: 100 m



Notes: measurements shown are for topsoil depth.