

Oversight of Contamination Management

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AER Disclaimer

This presentation is an overview of AER's requirements/processes and does not contain information on all AER requirements and expectations related to the specific subject matter.

Presentations are intended for education/information purposes only and must not be used as a substitute for the applicable regulatory requirements.

Overview

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EPEA Part 5 – Release of Substances

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EPEA Substance Releases

Roles & Responsibilities

- **AER:** Ensure safe, efficient, orderly, and environmentally responsible energy & resource development. Make risk-informed, evidence-based decisions.
- **Regulated parties:** Ensure applicable legislation and requirements met. Appropriately set the EP scope of work.
- **Environmental Professionals:** Practice within competence; apply due diligence. Duty to protect the public interest.

EPEA Substance Releases

Why the AER needs information

- To ensure risk is adequately characterized and managed such that public and environmental safety are ensured.
- To enable the efficient delivery of risk-informed regulatory oversight using IDA.
- To support alignment and efficiency of contamination management with closure and liability reduction programs
- Provide transparency and assurance to Albertans that companies are meeting their obligations under EPEA.

EPEA Substance Releases

Substance Release Discovery

Assessment for adverse effect is an ongoing process of diligence that can and should occur throughout the life cycle. There are various ways that a company can know or become aware of a substance release, including:

- Physically observing a substance release, such as oil on the ground
- A laboratory test that shows an Alberta Tier 1 Soil and Groundwater Remediation Guideline exceedance, such as benzene concentrations in soil that may cause adverse effect

Both scenarios would trigger Duties to Report (EPEA S110) and Take Remedial Measures (EPEA S112)



Known Release

e.g. during a loss of containment incident



Suspected & Confirmed

e.g. as discovered during a Phase 2 Environmental Site Assessment

EPEA Substance Releases

Remedial Measures

Contaminated Sites Policy Framework

Remedial Measures (per *EPEA* S112) include:

- source control,
- environmental site assessments,
- risk assessment, and
- contamination management, including remediation.

i.e., all steps to assess and manage a substance release will be included in Remedial Action Plans.

EPEA Substance Releases

Remediation Regulation: Highlights



New Information

Section 2.1: Where there is new information about the impact of a released substance...there is a duty to report the information to an affected person and the Director [the AER] at the time of discovery.



Phase 2 ESA Remediation Report

Section 2.2(1): When the person responsible becomes aware of...a release...the person must as soon as possible, submit a Phase 2 ESA... or, complete remediation and submit a report...



Remedial Action Plan

Section 2.2(2): If the site cannot be remediated ...within a 2-year period... a remedial action plan acceptable to the Director must be immediately submitted...

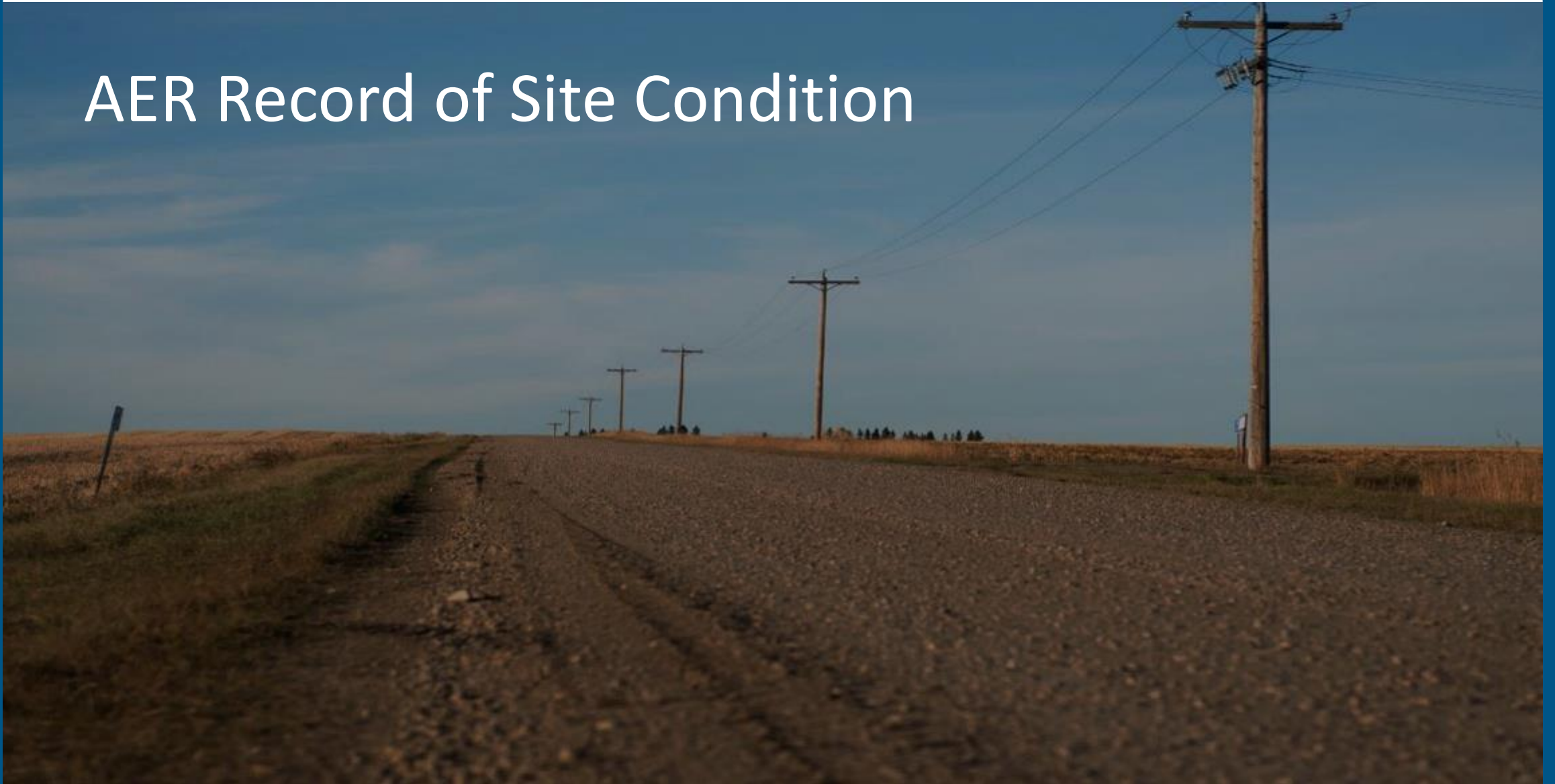
Section 2.2(5): must take remedial measures within the period of time specified in the RAP.



Closure Options

Outlines options and requirements for Tier 2 Compliance Letters, limited and site-based remediation certificates

AER Record of Site Condition



RoSC

Purpose of RoSC

- **Consistent summary of the known environmental condition of a site.**
- **Tracking progress over time**
- **Data-driven, risk-informed regulatory oversight**
- **Multiple “Intents of Submission”**
- **Reliability (Authorized Representative and Environmental Professional Declarations)**
- **Compliance Assurance**
- **AER “Enterprise Coordination”**

RoSC

The RoSC “Site”

For the RoSC, a site can be defined as a single

- licence,
- approval,
- registration,
- substance release, etc.,
- or as a combination of multiple licences, approvals, registrations, substance releases, etc.

as one “site” if

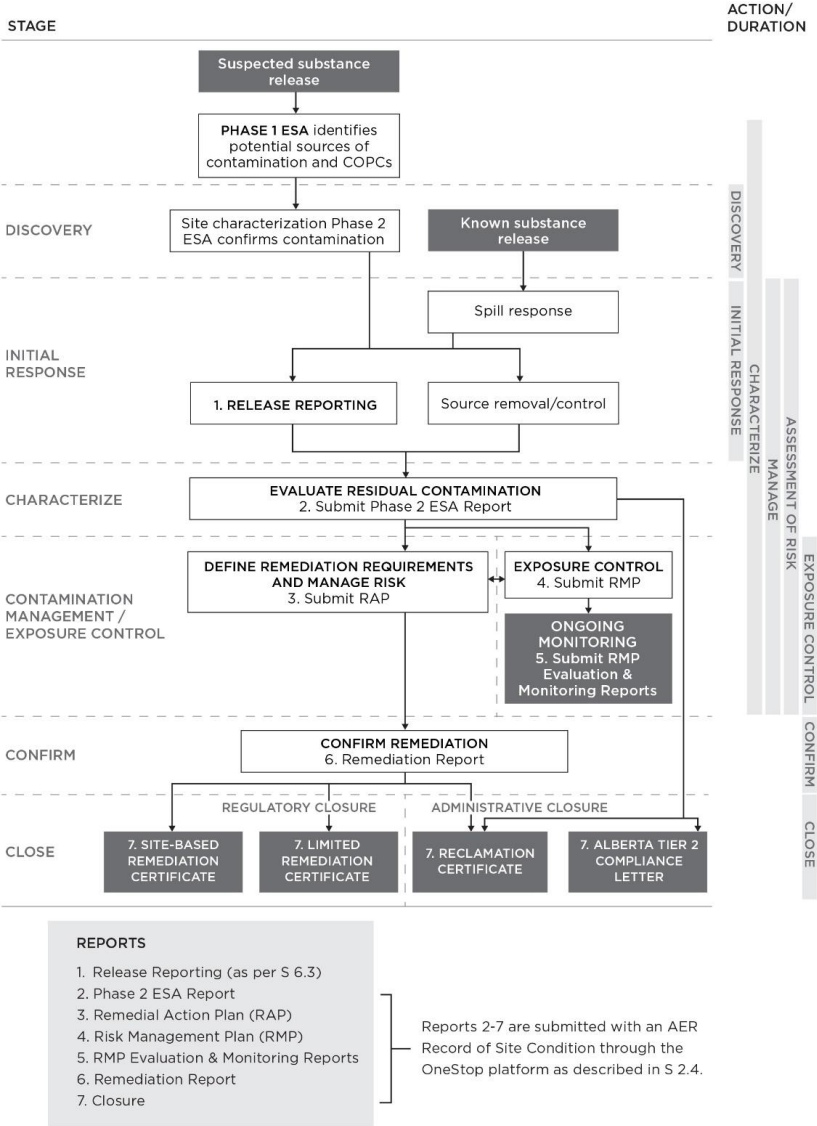
- they share a common footprint
- with a single licensee.

Can attach as many professional reports as necessary to support current known state of a site

EPEA Substance Releases

Figure 1 from Manual 021

Stages of contamination management



RoSC Intents of Submission

What is the intent of submission? *

Notice of Contamination

Contaminant Identification and Characterization

Contamination Management

Regulatory or Administrative Closure of Contamination

RoSC Information and Submission Intent inform AER Review and Audit Process

RoSC

RoSC Notice of Contamination - Conditions

For unreported lower-risk situations where there is no ongoing incident resulting in substances being released to the environment, licensees may use the OneStop Notice of Contamination for reporting released substances to the AER.

If any of the conditions below apply, the substance release must be reported using the AER 24 hour Energy and Environmental Response Line 1-800-222-6514.

- The situation involves an emergency.
- The substance release is ongoing or uncontrolled (steps or procedures are required to minimize, control or stop the release).
- There is a risk to public safety (e.g. an evacuation is underway or drinking water is affected).
- There are observed or known impacts to waterbodies or wildlife.
- Oilfield waste has been released.
- The substance release is at a mine site.
- The substance release is associated with an activity that does not have a current AER licence number.
- The situation is happening on Military, International Airport, First Nations or National Park Land, or may cross the Alberta border.
- The situation is a release to air or involves transportation of dangerous goods.
- There is uncertainty as to whether any of the above points apply to the situation.

RoSC Audit Observations

RoSC Audit

Satisfactory with Feedback

AER Feedback Provided includes:

- Remedial Action Plan Requests
- Technical information inconsistent between Report/s and RoSC
 - Distances to receptors
 - Discrepancies in maximum values
 - Data gaps
- Background information not included in RoSC
 - e.g. Where background exceeds Tier 1, information is to be included in RoSC summary tables
- Administrative issues
 - Attached Professional Reports not signed
 - Asset / related entities information missing
 - Inappropriate Intent of Submission

RoSC Audit

Distance to Potential Receptors

Distance

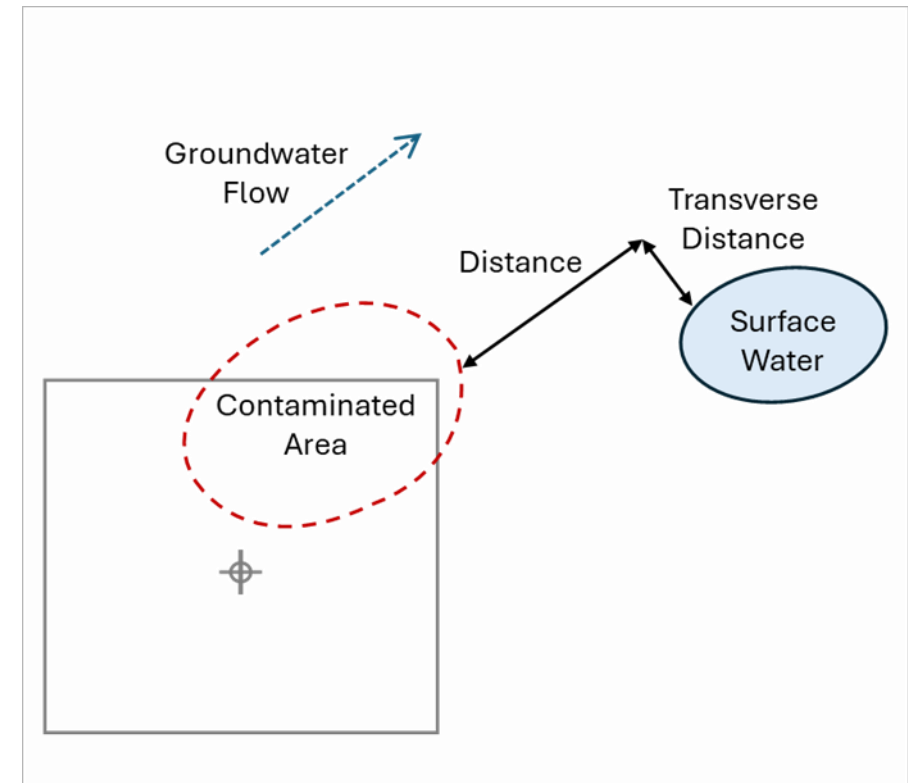
Lateral distance between contaminated area and receptor in the direction of groundwater flow.

Transverse Distance

Distance to receptor perpendicular to the groundwater flow direction

If groundwater flow direction is unknown:

- Assume receptor is immediately downgradient
- Distance – shortest in any direction
- Transverse Distance - input 0 m in RoSC



RoSC Audit

Returns

RoSC Submission Returns Rationale:

- RoSC Declarations incomplete
- Incorrect Professional Report Attached
- RoSC not representative of Professional Report content
- Professional Report did not meet ESA Standard
 - Effective use of tables and figures
- Environmental Site Assessment not complete
 - e.g. APECs not adequately characterized, known impacts not delineated
 - CSM not adequate (consolidated, up to date figures and tables)
- “Guidelines met” questions answered incorrectly
 - Where background exceeds Tier 1, information is to be included in RoSC summary tables
 - A Minor Exceedance Justification does not meet Tier 1

General Comments

AER General Comments:

- Be Purposeful – what is the aim of your RoSC submission?
- Scope Environmental Professionals to complete work to the ESA Standard
- Use RoSC Comments Fields
 - E.g. Support AER in identifying what elements of a RAP have changed.
 - E.g. Identify what elements of an SSRA are beyond prescriptive Tier 2 approaches
- Submit RAPs sooner rather than later
- The Remediation Regulation applies to sites with EPEA Approvals
- Risk must be managed while remediation is underway

Substance Releases

Adding Empirical Lines of Evidence

**EM or ERT Survey**

A survey that is calibrated, showing correlation to analytical results.

**Phase 1 ESA / Known History**

What is known vs. unknown (e.g. origin of release, timeline for response); what is likely for APECs, CoPC, site history etc.

**Chemical Properties**

How does it behave, degrade, migrate, site specific observations etc.

**Groundwater Information**

Groundwater flow direction, hydraulic conductivity, lateral and vertical gradients, depth etc.

**Soils and Stratigraphy**

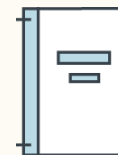
Grain size, soil classification, stratigraphy influence on fate and transport.

**Spatial and Temporal Trends**

Spatial trends or distribution of a chemical across a site. Using historical data, show and evaluate trends at a specific location or area.

**Field Screening**

Field screening which can be shown to correlate well with laboratory analytical results.

**Reference Sources / Publications**

Published information or peer-reviewed articles with relevant, applicable supporting evidence.

Compliance Assurance



Compliance Assurance

Remediation Regulation: Compliance



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Section 2.2(5): must take remedial measures **within the period of time specified** in the RAP.

Compliance Assurance

Remediation Regulation Compliance Assurance

Enforcement Tool e.g's

- Notice of Noncompliance
- Failure to Comply Notice
- Orders
- Administrative Penalties

Reliance on the work of Professionals

<https://www.aer.ca/regulations-and-compliance-enforcement>

Compliance Dashboard

[Home](#)[Incidents](#)[Investigations](#)[Noncompliance & Enforcement](#)

Access to Information



Access to Information

AppQuery

OneStop Application Query Tool

Search

ID

e.g.: Application ID, Notification ID, Submission ID

Activity ID

e.g.: 100123, 100*, *123

Authorization ID

e.g.: 100123, 100*, *123

Company Name

e.g.: ABC, AB*, *BC

Activity Type

Submitted Date

From

yyyy-mm-dd

To

yyyy-mm-dd

Decision Date

From

yyyy-mm-dd

To

yyyy-mm-dd

Location

QTR

LSD

SEC

TWP

RGE

W

M

M

Search

Reset

Access to Information

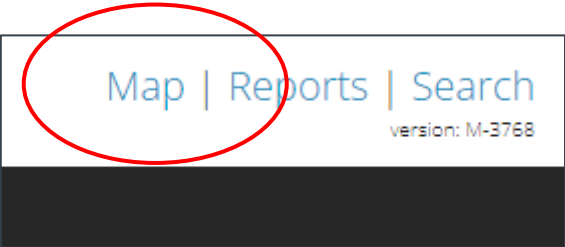
AppQuery

OneStop Application Query Tool

Results				
ID	Type ▼	Activity Type	Status	Received Date
31396463	Submission	Record of Site Condition	Accepted	10/25/2021
31453043	Submission	Record of Site Condition	Accepted	12/5/2021
32924759	Submission	Phase 1 Environmental Site Assessment	Received	5/8/2024
32936448	Submission	Phase 1 Environmental Site Assessment	Received	5/16/2024
32352741	Submission	Phase 2 Environmental Site Assessment	Received	6/16/2023
32032367	Submission	Phase 2 Environmental Site Assessment	Received	6/9/2023

Access to Information

OneStop Map Viewer



Map Viewer

Maps ✓

Interactive Maps, Map Viewers, and Other Spatial Tools ✓

Our interactive maps, map viewers, and spatial tools are designed to let you browse our data in an easy-to-use format. Built-in toolbars allow you to quickly locate an area of interest or an energy activity and find associated information.

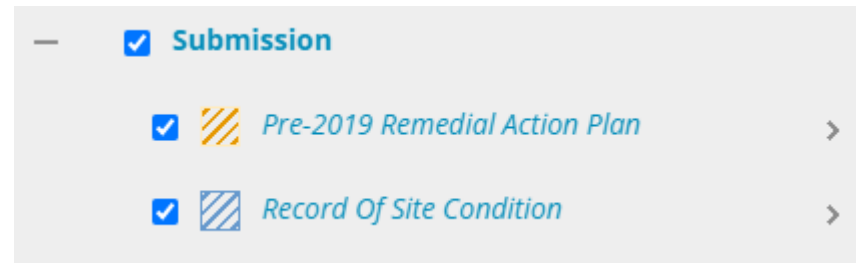
- [AER Order System Map Viewer](#)
- [Abandoned Well Map](#)
- [Base of Groundwater Protection Query Tool](#)
- [Coal Mine Map Viewer](#)
- [Core and Drill Cutting Map Viewer](#)
- [Dam and Pond Map](#)
- [Disposition Spatial Processing Tool](#)
- [Map-86: Significant Coal-Bearing Formations in Alberta](#) [Tableau]
- [OneStop Public Map Viewer](#)
- [Scheme Approval Area Map Viewer](#)
- [Water Conservation Policy Map Viewer](#)
- [Well Spacing Map Viewer](#)

Shapefiles and Other Spatial Data ✓

Access to Information

OneStop Map Viewer

Map Viewer



Access to Information

RoSC Summary Report

OneStop users can retrieve RoSC data via OneStop Reports – RoSC summary report

See the **confirmation** QRG for information on how to download



RoSC Submission Summary Report

ENTERPRISE

This report provides a summary of Record of Site Condition submissions.

Open



Current Status (All)	Submitted Date 7/12/2021	Submitter BA Name and ID (All)	Consultant (All)	Submission ID (All)	Authorized Representative (All)	
EPEA Approval ID (All)	CSU Number (All)	Accepted RAP identified? (All)	Asset/Activity (All)	Intent of Submission (All)	Submission Type (All)	
Fis Number (All)	QTR	LSD	SEC	TWP	RNG	MER

Coming Soon:

- **Continuous Improvements**
- **Further Information Sessions**
- **Updates to Manual 021**
- **Updates to remediation pages on aer.ca**
- **Updates to AER Release Reporting Requirements Brochure**
- **We welcome suggestions – please contact us at CSUsubmissions@aer.ca**

Resources

- **Manual 021: Contamination Management**
- **OneStop Help: Guides for Contamination Management (Quick Reference Guides)**
- **OneStop Application Query and Map Viewer**
- **www.aer.ca > Regulating Development > Remediation**

Help and Support

RoSC or Contamination Management Questions:

csusubmissions@aer.ca

Liability Assessment Questions

ssla@aer.ca

Reclamation Certificate Application Questions:

recremquestions@aer.ca

OneStop Web Help and Support

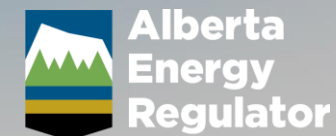
<https://www.aer.ca/regulating-development/project-application/onestop/onestop-help>

Release Reporting and OneStop Technology Questions Customer Contact Center (CCC)

inquiries@aer.ca 403-297-8311



Questions



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How can we serve you better?



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