

Abandonment Cost Estimate geospatial data filing requirements

Last updated: April 2026

The CER requires companies to submit geospatial data describing their pipeline systems (both pipelines and above-ground facilities) to calculate an Abandonment Cost Estimate (**ACE**). These filing requirements explain what should be included in the submitted geospatial data, the format of that data, and provide instructions for filing geospatial data with the CER. If a company's geospatial data submission does not meet the outlined criteria, a re-submission may be required.

The CER uses commonly available geographical information system (**GIS**) tools and software to calculate companies' ACEs in accordance with the 2021 ACE Calculation Method. Many of the specifications noted in this document relate to Esri's geospatial data formats. Further information about Esri's geospatial data formats is available on Esri's [website](#).

Note: *These filing requirements are an update to the filing instructions that were provided by the Commission to CER-regulated companies in Procedural Direction No. 4 (15 May 2022, [C19143](#)) during the 2021 ACE and SAM-COM Review. The updated requirements reflect various decisions the Commission has made since 2022 which supercede some of the initial instructions provided. As well, additional detail and guidance have been included based on the CER's experience with using companies' submitted geospatial data to calculate ACEs during the 2021 ACE and SAM-COM Review.*

The 2021 ACE Calculation Method remains unchanged. Updated geospatial data filed by a company using these filing requirements will not result in a change to an approved ACE unless a company updates its data to reflect a change in the infrastructure in its pipeline system.

1. Geospatial data

This section describes how pipeline and above-ground facility locations and their associated attributes must be represented in companies' geospatial data submissions.

Pipeline and above-ground facility geospatial data are to be submitted as [Esri polyline and point features](#), respectively. Companies must file the data using the spatial reference system of North American Datum of 1983 of the Canadian Spatial Reference System (**NAD83(CSRS)**)/Canada Atlas Lambert (as described in [EPSG:3979](#)).

If a pipeline is decommissioned or already abandoned, and remains in place, include it in the data submission. Similarly, include any above ground facilities that are decommissioned in-place in the data submission. Do not include pipelines or above-ground facilities that have been removed.

1.1 Pipeline data

1.1.1 Pipeline segments

An Esri's polyline feature represents a pipeline segment's centerline location and attributes. Pipeline segments should be delineated based on lengths of pipeline that have unique values for the pipeline attributes listed in Table 1 below. If any pipeline attribute value changes along the length of the pipeline, the pipeline should be segmented at that point. **To avoid unnecessary segmentation, the attributes of adjacent pipeline segments should differ by the value of at least one attribute.**

1.1.2 Pipeline attributes

Table 1 describes the pipeline attributes that must be included and stored with each polyline. Pipeline attribute data is stored by field name, and allowable values and the required data type for each attribute are listed in the table. Only allowable values may be used.

Table 1 Pipeline Attributes

Field name	Field description	Data type	Esri Data Type	Allowable values	Value description
PL_NAME	Name of the pipeline segment, as defined by the company	Text (256)	Text (256)	Text String	Unique name for a pipeline segment
OP_STATUS	The operational status of the pipeline segment	Text (5)	Text (5)	OPER	Operating
				DCMSD	Decommissioned
				ABD	Abandoned in Place
PROD_TYPE	The primary product type contained within the pipeline segment for the purpose of transportation	Text (3)	Text (3)	OIL	Oil
				GAS	Gas
				COM	Other commodity
MATERIAL	Material from which the pipeline segment is manufactured	Text (5)	Text (5)	STEEL	Steel
				PEPVC	Polyethylene or polyvinyl chloride
				COMFG	Composite / fiberglass
OD	The nominal outside diameter of the pipeline segment, excluding the manufacturing tolerance provided in the applicable pipe specification or standard, in millimetres (mm) to one decimal place	Number (9,1)	Float	N/A	N/A

1.1.3 Other pipeline attribute rules

The following rules also apply when storing attributes for polylines:

- pipeline spatial data must be provided with the best known positional accuracy, with a minimum accuracy of at least ±30 metres of the pipeline segment’s known geographic location;
- pipeline segments must not self-intersect or self-overlap;
- pipeline segments must not extend beyond the boundary of Canada;
- ensure no extra spaces are included with the “allowable values”;
- each field must have a value – no null values are allowed; and
- for the PL_NAME attribute, no punctuation may be included in the text string except periods (.), backslashes (\), colons (:), commas (,), and hyphens (-).
- a status of “operating” must be applied to all deactivated pipelines and for any pipeline that has yet to begin operating, but that is constructed or is in the process of being constructed.

1.2 Above-ground facility data

1.2.1 Above-ground facilities

Above-ground facility locations and attributes must be represented using [Esri point features](#). If multiple above-ground facility types or multiple above-ground facilities of the same type are co-located, a separate point feature should be created for each individual facility by type at that location. For example, if an oil terminal & storage facility and two pump stations are co-located, three separate points must be created to represent each facility individually.

1.2.2 Above-ground facility attributes

Table 2 lists the above-ground facility attributes that must be included and stored with each point feature. Above-ground facility data is stored by field name, and allowable values and the required data type for each attribute are listed in the table. Only allowable values may be used.

For the UNIT_COUNT attribute, the total number of units of that facility type (e.g., tank, pump, compressor, etc.) should be included. For example, an oil terminal & storage facility site with three storage tanks would be assigned a value of “3” for the unit count.

The “valve with above-ground appurtenances” facility type in Table 2 refers to sectionalizing valves along a pipeline and not facility piping valves. Only sectionalizing valves should be included in a company’s geospatial data as facility piping valves are considered to be part of the other above-ground facility types listed in Table 2 (e.g., compressor station, pump station, etc).

Table 2 Above-Ground Facility Attributes

Field Name	Description	Data type	Esri Data Type	Allowable values	Value description
FAC_NAME	The name of the facility as defined by the company	Text (256)	Text (256)	Text String	Unique name for the above-ground facility
FAC_TYPE	The type of facility	Text (4)	Text (4)	COMP	Compressor station
				METR	Meter station
				STOR	Oil terminal & storage facilities

Field Name	Description	Data type	Esri Data Type	Allowable values	Value description
				RISE	Other riser
				PROC	Processing plants
				PUMP	Pump station
				VALV	Valve with above-ground appurtenances
UNIT_COUNT	The total number of units (tank, pump, compressor, etc.) within the facility	Number (10)	Short	any non-zero integer	N/A
OP_STATUS	The operational status of the facility	Text (5)	Text (5)	OPER	Operating
				DCMSD	Decommissioned in-place

1.1.3 Other above-ground facility attribute rules

The following rules must be adhered to when storing attributes for above-ground facility points:

- above-ground facility points must be geographically located within the known boundaries of the above-ground facility site;
- above-ground facility points must not be located beyond the boundary of Canada;
- ensure no extra spaces are included with the “allowable values”;
- each field must have a value – no null values are allowed;
- for the FAC_NAME attribute, no punctuation may be included in the text string except periods (.), backslashes (\), colons (:), commas (,), and hyphens (-); and
- a status of “operating” should be applied to all deactivated above-ground facilities and for any facilities that are not yet operating, but that are constructed or are in the process of being constructed.

2. Geospatial file formats

This section specifies the file formats for storing the digital geospatial data.

Each company must submit to CER one geospatial data package of either:

- a [file geodatabase](#) containing one feature class with all pipelines and one feature class with all above-ground facilities; or
- two [shapefiles](#), one of which contains all pipelines and the other which stores all above-ground facilities.

Further information regarding file geodatabases and shapefiles is provided in sections 2.1 and 2.2 below.

In the instance where a parent company is submitting data for multiple subsidiary companies, each subsidiary company must have its own distinct geospatial data submission.

2.1 Esri file geodatabase

A file geodatabase is a folder-based file system that stores spatial and nonspatial data. It supports geometry, spatial reference systems, attribute data, and rules for data integrity. A file geodatabase can hold various geographic data types, such as feature classes, attribute tables, and topologies. Creation and modification of file geodatabases are supported by Esri's software or compatible third-party software.

2.2 Esri shapefiles

Esri's shapefile is a widely used geospatial vector data format for GIS applications. It is an open specification managed by Esri. Creation and modification of shapefiles are supported by Esri's software or compatible third-party software.

3. Submission package

Geospatial data must be submitted to the CER in a compressed .zip file, containing either an Esri file geodatabase or shapefiles.

For a file geodatabase, the feature layers should be clearly labelled as containing either pipeline or above-ground facility data. For a .zip collection of shapefiles, place the shapefile data for pipelines and above ground facilities in separate folders.

A Shapefile must contain subfiles of .shp, .shx, .dbf, and .prj. Other file types generated by the mapping application may be included in the file.

4. Filing instructions

The manner of filing geospatial data depends on the size of the file(s), as set out below. Geospatial data files should clearly be labelled with the company name and the CER's application file number.

Files smaller than 10 MB Filing may be made by email at secretary@cer-rec.gc.ca

Files larger than 10 MB Save the file to a USB drive and mail it to:

Secretary of the Commission
Canada Energy Regulator
Suite 210, 517 10 Avenue SW
Calgary, AB T2R 0A8