

Mines Act Permit

Annual Reclamation Report Format Requirements Addendum

Shapefile Submission Data Standards

The Ministry of Energy, Mines and Petroleum Resources (EMPR) has established an initiative to develop spatial data capabilities for permitting and tracking of mine activities. As part of this initiative, EMPR is requesting that digital spatial files be submitted with all Annual Reclamation Reports. As this has been a requirement since 2015, EMPR expects that the spatial data submitted as part of prior year's reporting will be updated to reflect any new disturbance and/or reclamation in the current reporting year. EMPR would like to receive spatial data for the following:

- disturbance areas; and,
- revegetated areas and areas where reclamation activities are ongoing

These layers should be submitted with the Annual Reclamation Report for each mine, which is due by March 31, following the reporting year. The information below provides guidance on how to construct the shapefiles with the attributes that EMPR requires.

Disturbance area shapefiles should include all areas disturbed in the past or present due to any mining activities covered by the *Mines Act* permit. This includes areas cleared of vegetation and any roads that are currently active or have not yet been deactivated and reclaimed. For this exercise, EMPR requests that the disturbance is classified by "Disturbance Type", where the type should match the categories tabulated in Table 1 of the Annual Reclamation Report (Summary of Areas Disturbed and Reclaimed to December 31 of the reporting year). Please **DO NOT** include reclamation or disturbance information that is not associated with your Mines Act Permit.

Revegetated areas/ongoing reclamation shapefiles should correspond to areas reported in tables and maps provided in the Annual Reclamation Report. To simplify reporting, EMPR asks that you indicate the status of reclamation activities by using "none", "ongoing" "re-vegetated" or "exempt". In order for an area to be recorded as "re-vegetated", it must have supported vegetation that will lead to the designated land use objective for at least one year. Note that the "re-vegetated" classification does not mean that EMPR has accepted or signed off on the reclamation.

The reclaimed areas should correspond to the total reported in Table 1 of the Annual Reclamation Report (Summary of Areas Disturbed and Reclaimed to December 31, of the reporting year). The "exempt" status should be used to identify areas exempt from reclamation. A second classifier, 'Disturbance Type', should be included in the shapefile attribute table that corresponds to the type categories in Table 1. If you enter "ongoing", please include the date that reclamation activities began in the "Reclamation Date" field. If you enter "re-vegetated", please include the date that reclamation activities were last completed in the "Reclamation Date" field. The date field may be a null value for polygons with the "exempt" or "none" status. If you wish to include additional details, please do so in the comments field.

What is a Shapefile?

A shapefile is a simple format for storing the location and attribute information of geographic features. A shapefile can only store one type of geographic feature (e.g., points, lines, polygons), but a single shapefile can hold multiple shapes, with a corresponding record to contain the attributes for each shape.

A complete shapefile consists of the following:

Mandatory Files

- .shp – shape format; the feature geometry itself
- .shx – shape index format; a positional index of the feature geometry to allow seeking forwards and backwards quickly
- .dbf – attribute format; columnar attributes for each shape, in dBase IV format

Other Files

- .prj – projection format; the coordinate system and projection information, a plain text file describing the projection using well-known text format

Shapefiles submitted with 2018 Annual Reclamation Reports must follow the data standards below.

Geometry

The shapefile must be a **POLYGON** feature type.

Coordinate System Required

The shapefile must be in BC Albers.

Naming Convention

Mine Permit, underscore, Year, underscore, Mine Name, underscore, Data Type (e.g., Permit Boundary, Reclaimed Area, Disturbance Area)

e.g., M_300_2016_GoldMine_PermitBoundary

Attribute Table Data Standards

Each shapefile's attribute table must conform to the standards below.

Disturbance Fields and Descriptions:

Shapefile Field Description:	Shapefile Field Name:	Data Type:	Example:	Example Description:
Mine Number	MINE_NO	Text – 10	000001	
Mine Permit	PERMIT_NO	Text – 10	M-999	
Mine Name	MINE_NM	Text – 50	Gold Creek	
Mine Type	MINE_TYP	Text – 6	M	Mineral
Annual Reclamation Report Year	YEAR_	Short Integer – 4	2018	
Disturbance Identifier	DSTB_ID	Text – 6	1	
Disturbance Type	DSTB_TYPE	Text – 6	Road	
Disturbance Year	DSTB_YEAR	Short Integer - 4	2014	2014
Comments	COMMENTS	Text – 255	Using same camp area in 2018, no need to reclaim this year.	

Reclamation Fields and Descriptions:

Shapefile Field Description:	Shapefile Field Name:	Data Type:	Example:	Example Description:
Mine Number	MINE_NO	Text – 10	000001	
Mine Permit	PERMIT_NO	Text – 10	M - 999	
Mine Name	MINE_NM	Text – 50	Gold Creek	
Mine Type	MINE_TYP	Text – 6	M	Mineral
Annual Reclamation Report Year	YEAR_	Short Integer – 4	2018	
Disturbance Identifier	DSTB_ID	Text – 6	1	
Reclamation Area Identifier	RECL_ID	Text – 6	1	
Reclamation Activity Status	RECL_ACT	Text - 6	Ongoing	Reclamation activities are ongoing.
Disturbance Type	DSTB_TYPE	Text – 6	Road	
Reclamation Year	RECL_YEAR	Short Integer – 4	2014	Activities conducted in 1998, 2002, 2005, 2014
Comments	COMMENTS	Text – 255	Using same camp area in 2018, no need to reclaim this year.	

Attribute Table Fields Data Standards:

The shapefile attribute table for the mining annual summary activities must use these codes:

MIN_TYPE	Mine Type	<i>Codes for Mine Type:</i> P, M, C, S&G, Q
MIN_DESC	Mine Type Description	Placer, Mineral, Coal, Sand and Gravel, Quarry
RECL_ACT	Status of Reclamation	None, Ongoing, Re-vegetated
DSTB_TYPE	Disturbance Type	<i>Codes for Disturbance Type:</i> WD - Waste Dumps CCR - Coarse Coal Rejects TP - Tailings Pond WTP – Water Treatment Plant and Ponds Pond – Seepage / Sediment Pond PS - Plant Site RD - Roads ADMIN - Administration PIT - Pit SP - Stockpiles LI - Linear O - Other

PLEASE NOTE: If you have modified the Table 1 Disturbance Type categories, you will need to include a description of the codes used if they differ from those provided above.