Mine Waste Inventory Entity Relationship Diagram

Points Feature Class
Site ID
Site Name
Feature ID
Feature Name
Other Names
Feature Type (D)
Commodity
State
County
Topo Name
Longitude
Latitude
Land Management
Mine Name
Mining District
Reclaimed (D)
Superfund (D)
Remarks
Primary Citation
Secondary Citation
Entry By
Last updated

Polygons Feature Class
Site ID
Site Name
Feature ID
Feature Name
Feature Type (D)
Feature Type Degree of Certainty (D)
Location Description
Remarks
Primary Citation
Secondary Citation
Entry By
Last Updated
Area Square Kilometers

⊢—⊣ Linking field
(D) Domained field
▢ USGS entry
▢ Public domain references are cited throughout

Resources Table
Site ID
Site Name
Feature ID
Feature Name
Reported Volume — Reported Volume Units (D)
Calculated Volume — Calculated Volume Units (D)
DEM Date
Tonnage Factor — Tonnage Factor Units (D)
Material
Material Type (D)
Material Amount — Material Units (D)
Grade — Grade Units (D)
Contained — Contained Units (D)
Reported Volume SI — Reported Volume SI Units (D)
Tonnage Factor SI — Tonnage Factor SI Units (D)
Material Amount SI — Material Units SI (D)
Grade SI — Grade Units SI (D)
Contained SI Commodity Amount — Contained SI Commodity Units (D)
Contained SI Commodity
Resource Classification (D)
Resource Code (D)
Resource Date
Resource Method
Remarks
Primary Citation
Secondary Citation
Entry By
Last Updated

Geology Table
Site ID
Site Name
Feature ID
Feature Name
Deposit Type 1 (D)
Deposit Type 2
Commodity
Ore Minerals
Gangue Minerals
Remarks
Primary Citation
Secondary Citation
Entry By
Last Updated

References Table
Citation
Reference
Entry By
Last Updated

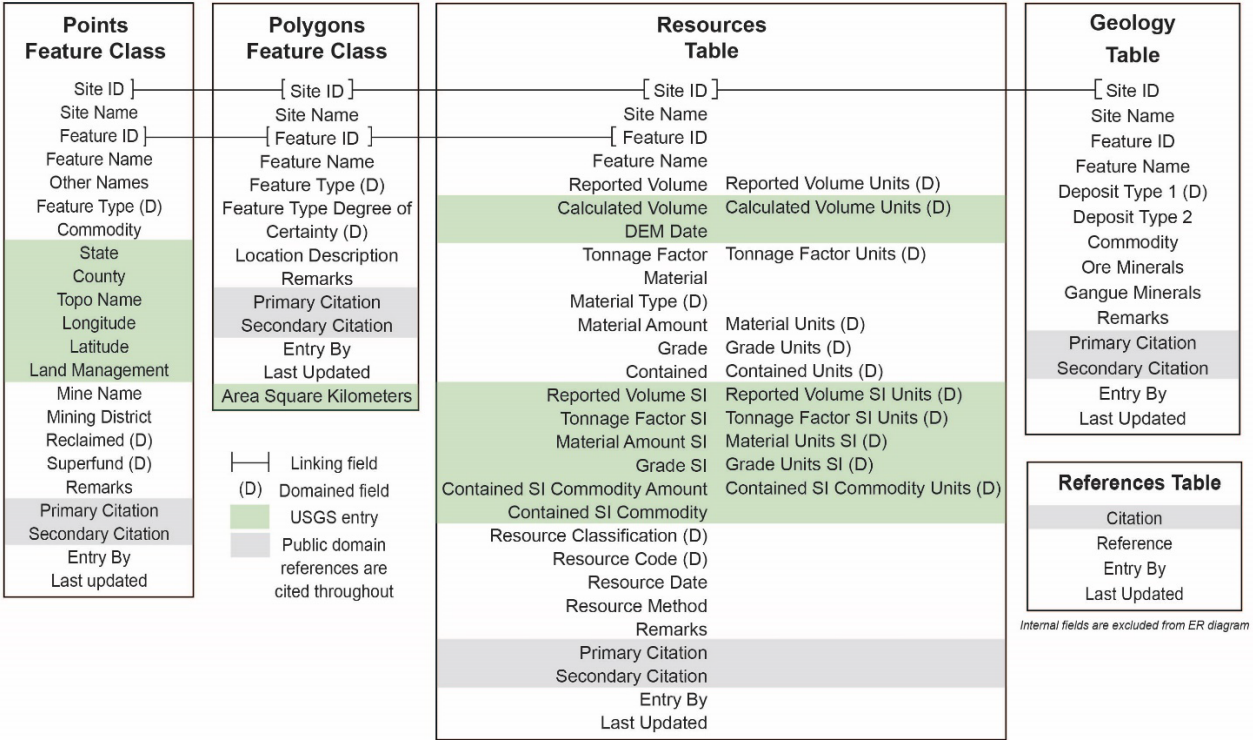*Internal fields are excluded from ER diagram*

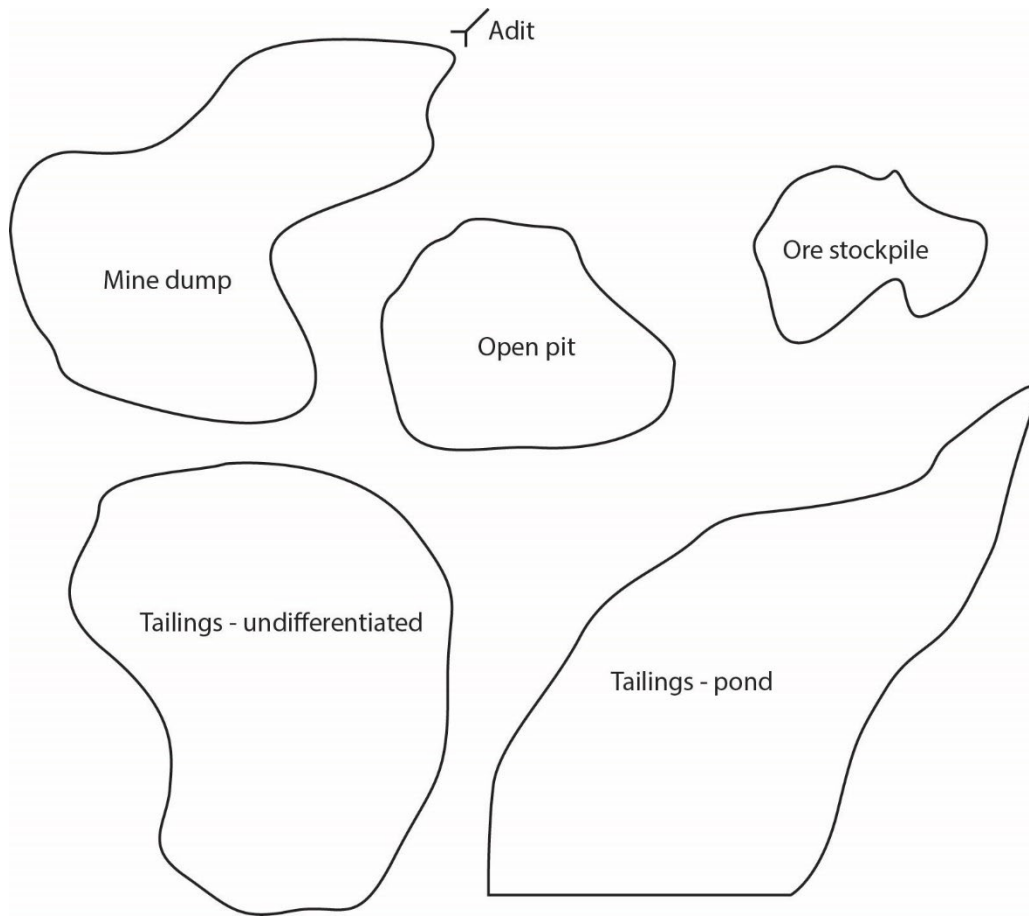Figure 1. Entity relation diagram showing the structure of the mine waste database.

Figure 2. Schematic illustration, not to any scale, showing the relationships between a site and mine features. The site is the cluster of features. As drawn, the site contains six features: one adit, one mine dump, one open pit, one ore stockpile, one tailings – undifferentiated, and one tailings – pond. Only the four mine waste features (i.e., one mine dump, one ore stockpile, one tailings – undifferentiated, and one tailings – pond) would be entered into the mine waste database. Each of those features would have their own point and polygon feature class records, as well as their associated records in the reference and resources tables. If the geology in the open pit and underground workings is similar, the geology records can be populated at the site level, and only one record is needed that documents the geology for all four mine waste features.