



Designation: D7780 – 20

Standard Practice for Minimum Geospatial Data for Representing Coal Mining Features¹

This standard is issued under the fixed designation D7780; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice defines a set of terms, procedures, and data required to define the accurate location and description of the minimum geospatial data for surface coal mining operations (CMO), underground coal mining extents, land reclamation and performance bond statuses, lands unsuitable for mining petitions (LUMP) and designated areas, coal spoil and refuse features, coal preparation plants, environmental resource monitoring locations (ERMLs), and postmining land uses.

1.2 *Units*—The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulator limitations prior to use.*

1.3.1 This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the adequacy of a professional service, nor should this document be applied without consideration of a project's many unique aspects. The word “Standard” in the title of this document means only that the document has been approved through the ASTM consensus process.

1.4 *Surface CMOs*—As used in this practice, a surface CMO represents an area where coal removal, reclamation, and related supporting activities have occurred, is occurring, is pending authorization or is authorized by the Regulatory Authority (RA) within a defined surface CMO or any other unpermitted area that has been identified by the RA.

¹ This practice is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.01 on Surface and Subsurface Characterization.

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1.4.1 This practice addresses coal mining geospatial data, interim permits, and permanent program permits. Each RA shall be the authoritative data source (ADS) for coal mining geospatial data.

1.5 *Underground Coal Mining Extents*—This practice addresses underground coal mining extents that represent an area where coal removal has occurred within a defined underground CMO.

1.6 *Land Reclamation Status*—This practice addresses the land reclamation status of surface areas within a permitted CMO where coal removal, reclamation and related supporting activities has occurred, is occurring, or is planned and authorized by the RA.

1.7 *Performance Bond Status*—This practice shows the status of coal mine reclamation as outlined by each phase of reclamation. In addition to defining the status of individual areas covered by a performance bond, use of this standard will identify the changes of the reclamation and bond status to mined areas as they change over time. Reference to bond status means performance bond status.

NOTE 1—A single bond may cover multiple permits or multiple bonds may cover a single permit.

1.8 *Lands Unsuitable for Mining Petition*—This practice addresses boundary data pertaining to areas that have been petitioned and designated as unsuitable for mining. It also addresses those lands that have been found by the RA's process to be designated unsuitable for all or certain types of mining. These areas may be petitioned to be unsuitable for CMOs because they meet criterion that include, but are not limited to: fragile, historic, cultural, scientific, having esthetic values and natural systems such as aquifers that could be significantly damaged due to a CMO.

1.9 *Refuse Structures*—This practice addresses excess spoil and refuse features produced by CMOs. These features include excess spoil structures, coal refuse structures, and coal preparation plants.

1.9.1 *Excess Spoil Structures*—These structures are created when the total spoil produced during mining exceeds the volume of material that can be utilized for reclamation. This occurrence is common in steep slope areas, where the final grade of reclaimed slopes is limited by stability requirements.