



ASTM Standards for Coal Mining Geospatial Data



SMCRA Geospatial Data Stewards

Joe Ritchey

Chairman of D-18.01

Subcommittee on Surface and
Subsurface Characterization

Denver, Colorado

June 27-28, 2006



Outline Issues & Solutions

- ASTM International as a standards organization
- Standards development process
- Standards in GIS
- Discussion on geospatial standards
- Moving forward



The ASTM Structure

- 30,000 Members
 - 104 countries represented
 - 90 industry sectors represented
- 132 Technical committees
- 2,200 Subcommittees
- Thousands of task groups



ASTM Standards are Voluntary

■ They are:

- Developed voluntarily
- Used voluntarily

■ Mandatory only when:

- Cited in a contractual agreement
- Referenced by a government body



U.S. Government Use and Participation in ASTM

- U.S. Government Use of ASTM standards
 - Over 2400 citations of ASTM International standards (excluding Department of Defense)
 - Or 26% of private voluntary consensus standards cited by U.S. federal agencies
- U.S. Government Participation in ASTM
 - 750 participants from federal agencies



Principles of ASTM Standards

■ Neutrality

- Provision of an open forum for interested stakeholders
- ASTM does not certify product or accredit organizations

■ Openness and Balance

- All who are interested or affected may join
- One vote per voting interest; no one interest dominates

■ Consensus

- *Regulations* require a high degree of agreement



Committee Components

■ Task Groups

- Informal
- Basic level of standards development with five to seven “expert” individuals

■ Subcommittees

- Larger group of individuals with a specific title and scope approved by the committee’s Executive Subcommittee
- Formal rosters are maintained
- First level of formal balloting

■ Main Committee

- Large group with broader interests
- Title and scope are approved by the ASTM Board of Directors
- Formal roster is maintained
- Consists of all related subcommittees, administrative subcommittees, and an executive subcommittee.



Standards Development

- Standards are developed using a ballot process to achieve consensus
 - Subcommittee Ballot
 - Main Committee Ballot
 - Society Review
 - Committee on Standards



Six Types of Standards

- Guideline
- Test Method
- Practice
- Classification
- Terminology
- Specification



Anatomy of a Standard

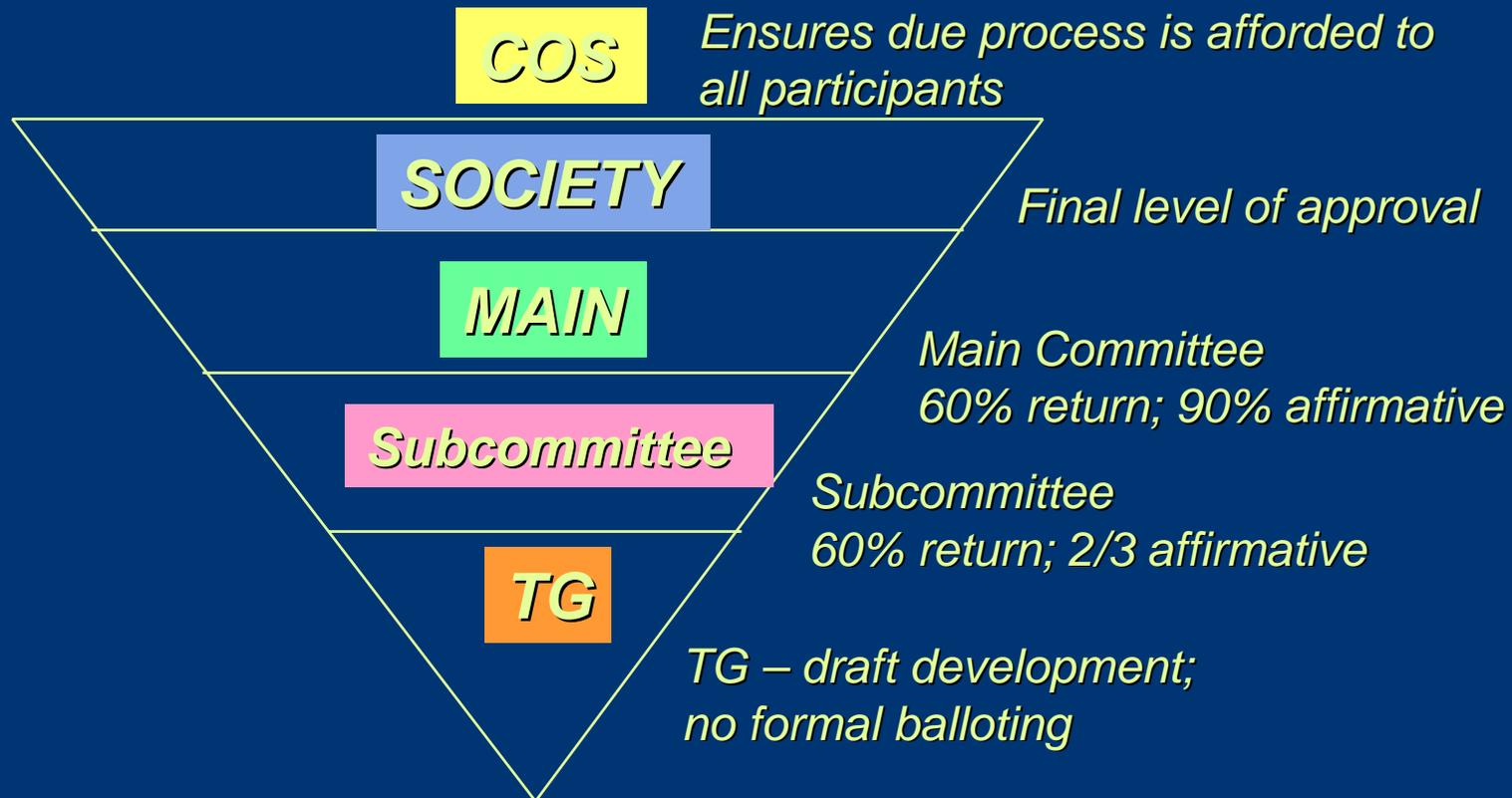
- Scope
- Referenced Documents
- Summary of Guide
- Significance and Use
- Terminology
- Procedure
- Key Words



Electronic Tools for Participation

- Digital path
- Templates for standards development
- Electronic files to facilitate revisions
- Interactive Standards Development Forums
 - Password protected sites for developing draft documents
 - Tracking tool which enables

ASTM's Balloting Process





Subcommittee Balloting

- Authorization of Subcommittee Letter Ballots
 - Subchair or Designee
 - Motion at Meeting
- Ballot Open for Minimum of 30 Days
- Qualifications for Valid Subcommittee Letter Ballots – 60% return and 2/3 affirmative
- Late Ballot Returns



- ASTM Home
- My Standards
- Society Review
- Forums
- Change Password
- Update Your Information
- Invite A Colleague
- Help

Logout Site Map Online Support Contact Web Policies IP Policy
Site Search GO View Shopping Cart
Standards Search



MyASTM / All Ballots

Support Desk | View Closed Ballots/Closing Reports | Return to MyBallots

Member#: 000107680 Sub Committee: E50.05
JOSEPH RITCHEY Letter Ballot: E50.05 (06-02)
ritchey1@p2s.com Issue Date: JUNE 14, 2006
Closing Date: JULY 14, 2006
Society Review:
Staff Manager: DANIEL G SMITH
E-Mail: DSMITH@ASTM.ORG

PROZSERVE
4712 QUEMAZON

LOS ALAMOS, NM 87544

Note: Any negative vote shall be given consideration by the Subcommittee in accordance with ASTM Regulations. It is expected that negative votes will be considered in conjunction with the next meeting of the Committee unless a Special subcommittee meeting is called. Negative voters may wish to confirm the exact date and time with the Staff Manager or on the posted meeting schedule on the ASTM website. For a list of all ASTM Committee meetings, click [meetings](#).

SUB COMMITTEE BALLOT

TO ACCESS SUPPORTING DOCUMENTATION:
Individual Documents: click on the hyper-linked item description on the ballot, below. For best results, use Adobe Acrobat 4.0 or higher.
All Documents: To download all supporting documents (EXE file), click [ALL DOCUMENTS](#) (Need help with an EXE file? Click [here](#).)

WHEN VOTING Negative, Affirmative with Comment, or Abstain with Comment, you will be prompted to add a statement.

TO SAVE YOUR VOTE and return at a later time, simply click the 'Save' button at the top or bottom of the ballot form. You may return up until the ballot closing date to alter your vote (unless you have submitted your ballot to ASTM).

TO VIEW YOUR VOTE AFTER SUBMITTAL:
Open Ballot: Click on appropriate committee ballot link on ballot page; you will be able to view but not change your vote.
Closed Ballot: Click on 'View Closed Ballots' link on ballot page. The supporting documents are posted for up to one year from the closing date. You will not be able to view your vote once the ballot has closed.

FOR BEST RESULTS, use Internet Explorer 5.0, Netscape 6.2 or AOL 7.0. If you have disabled Javascript within your browser's preferences or options, you will not be able to submit your vote online. This form does support Mac OSX using Safari 1.2.4 and/or OSX using Internet Explorer 5.2. Mac users experiencing problems should contact technical support at support@astm.org for assistance.

Item No.	Sub No.	Item	Aff	Aff with Comment	Neg	Abstain	Abstain with Comment
1	.21	REAPPROVAL OF D2361-95 Test Method for CHLORINE IN COAL (SEE VOLUME 05.06)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	.21	REVISION OF D5865-00 Test Method for Gross Calorific Value of Coal and Coke SECTION 15 (CONCURRENT WITH .2100)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	.21	REVISION OF D5865-00 Test Method for Gross Calorific Value of	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Registered Products



OGC's **compliance testing program** verifies compliant products built using OpenGIS® specifications.

- » **View** all Compliant or Implementing Products
- » **Apply** for Certification to use the OGC™ "Certified Compliant" trademark

Areas of Interest

- » **Critical Infrastructure Protection**
- » **Location Services**
- » **Sensor Web Enablement**

Not Yet a Member?

- » **View Benefits**
- » **Join OGC!**

OGC Discussion

Have a question or issue for the OGC community?

- » **Visit our Public Forum**

Welcome to OGC

The Open Geospatial Consortium, Inc. (OGC) is a non-profit, international, voluntary consensus standards organization that is leading the development of standards for geospatial and location based services. Through our member-driven consensus programs, OGC works with government, private industry, and academia to create open and extensible software application programming interfaces for geographic information systems (GIS) and other mainstream technologies. **Adopted specifications** are available for the public's use at no cost. [Learn More.](#)

Recent News [more detail](#)

- » [OGC\(R\) Web Services for GEOSS Demonstrated at Workshop in China](#)
- » [The OGC\(R\) Releases Basic Geometry Profile for Geography Markup Language \(GML\(TM\)\)](#)
- » [OGC News - June 2006](#)
- » [The OGC\(R\) Introduces New "OGC Network" and "OGC User"](#)
- » [OGC News - May 2006](#)
- » [More...](#)

[RSS](#) [XML](#)

Upcoming Events [more detail](#)

- » [2006 GeoTec Event](#)
- » [OGC Technical and Planning Committee Meetings: Edinburgh, Scotland](#)
- » [GeoWeb 2006](#)
- » [OGC Technical and Planning Committee Meetings](#)
- » [ISO/TC 211 23th Plenary](#)
- » [More...](#)

[RSS](#) [XML](#)

Current Requests and Initiatives [more detail](#)

- » [The OGC\(R\) Seeks Comment on Geospatial Catalog Application Profile](#)
- » [OGC Request 34: OpenGIS\(R\) Sensor Planning Service \(SPS\): Request for Public Comments](#)
- » [The OGC\(R\) Announces Call for Participation in OWS-4 Testbed](#)
- » [OGC Request 33: Transducer Markup Language \(TML\)](#)
- » [OGC Request 32: Sensor Observation Service \(SOS\)](#)
- » [More...](#)

[RSS](#) [XML](#)



Find a Document

Search by Metadata

All OGC Specifications

keywords - comma separated

Member Only Document Search

OpenGIS® in Action

View the recent **OWS-3 Demonstration**, check out some **user experiences**, or test drive one of our member's **product implementations**.

Join an Initiative

Help shape the future of geoprocessing in the OGC Interoperability Program testbeds, pilot projects, etc.!

[View initiatives](#)

Do you have a question or issue for OGC? Visit our Public Forum!
Policies, Procedures, Terms, and Conditions
© 1994 - 2006 Open Geospatial Consortium, Inc. All Rights Reserved



Initial Mining Datasets

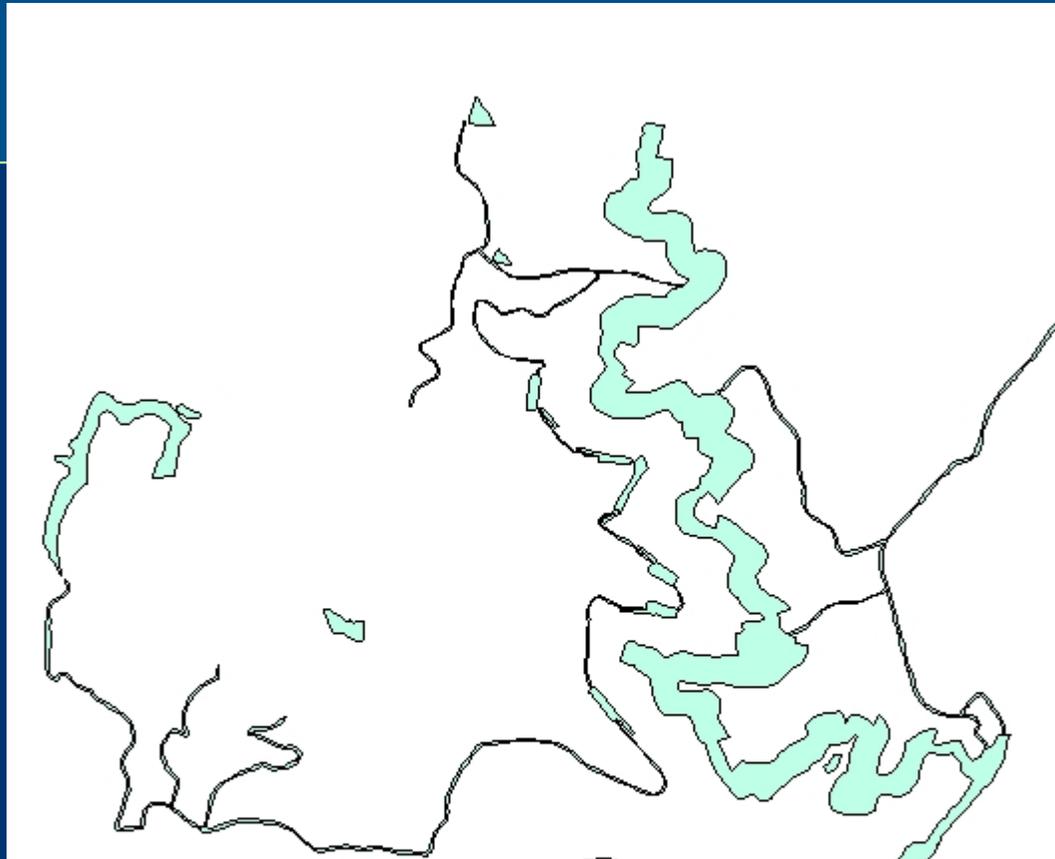
Definitions for First Two Mining
Data Standards After Review by
NCMGC March 1, 2006

Surface Mining Boundaries

Surface mining boundaries are polygons representing the boundary of the **permitted area** of a surface coal mining operation as described on the **most recent mining operations map** contained in a coal mining permit approved by the regulatory authority.

Each **approved permit** has a single record in a spatial database of surface mining boundaries. Each record in the spatial database identifies the **permit number** of the surface coal mining operation and contains one or more polygons identifying the areas for conducting surface coal mining operations **approved by the regulatory authority**.

Surface Mining Boundary



Attributes of kfogis.SDE.permits

OBJECTID ^a	FEATURE	PERMIT	ACRES	Shape ^a	SHAPE.area	SHAPE.len
192	permitbnd	2718	11.332179	Polygon	493629.718357	25699.209897
193	permitbnd	2721	355.434672	Polygon	15482734.300601	228991.593289
194	permitbnd	2722	36.652068	Polygon	1596564.099421	17935.032681

Record: 0 Show: All Selected Records (1 out of 875 Selected.) Options



Underground Mining Extents

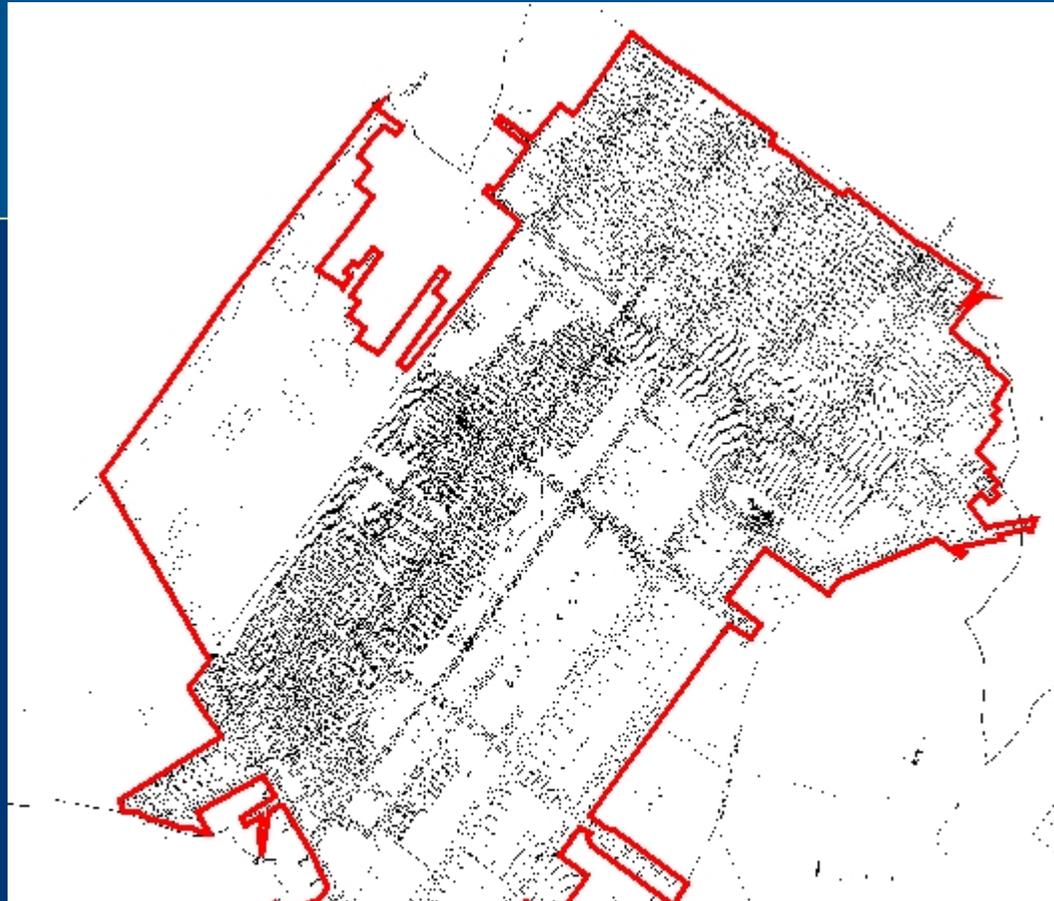
Underground mining extents are polygons representing the boundary of the underground mine workings of an underground coal mining operation as described on the best available **mine workings maps**.

Each **mine** has a single record in a spatial database of underground mining extents. Each record in the spatial database identifies the underground coal mining operation and contains one or more polygons identifying the areas of underground mine workings.



Underground Mining Boundary

Underground Mining Boundary



Attributes of Extents

FEATURE	PERMIT	NAME	COALSEAM	MAPTITLE	SOURCE
mined out underground works	prelaw	Unknown		None. Obtained in vector format	mining consultant
mined out underground works	prelaw	Wind Rock Coal and Coke Co.	Dean	Wind Rock Coal and Coke Co., Dean Mine	TDEC Division of Geology
mined out underground works	prelaw	Unknown		None. Obtained in vector format.	mining consultant

Record: 1 Show: All Selected Records (1 out of 29 Selected.) Options



Moving Forward

- Task Group Formation
- Establish Work Item
- Select Standard Type
- Obtain Standard Template
- Establish Roles and Responsibilities
- Draft Text, Share, and Discuss
- Prepare for Balloting



- Standards
- Books & Journals
- Technical Committees
- Membership
- Meetings
- Symposia & Workshops
- Training Courses
- Proficiency Testing
- Equipment Directory
- Lab Directory
- Consultants Directory
- About ASTM International
- Magazines & Newsletters
- Newsroom & Information
- ASTM Campus
- Global Cooperation

Product Information
[Get Product Updates](#)
[Request A Free Catalog](#)
[View Catalog](#)

Login Site Map | Online Support | Contact | Web Policies | IP Policy

Site Search

Standards Search



Welcome to ASTM International, an open forum for the development of high-quality, market-relevant international standards used around the globe.

Select Language (translated by Google®)
 English

Latest News	Recent Publications	New Initiatives
<p>Summer Season Fun Is Aided by New ASTM Water Slide Standard</p>  <p>State regulatory agencies and water slide manufacturers will benefit from a comprehensive new ASTM standard, F 2376, Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems. Consistency in the installation of water slides is an important aspect of the new standard, which was developed by Subcommittee F24.70 on Water Related Rides and Attractions, part of ASTM Committee F24 on Amusement Rides and Devices. More</p>	<p>New Edition! Building Codes ASTM Standards in Building Codes, 43rd Edition Available in Print, CD-ROM and Online More</p> <p>New Edition! Concrete STP 169D Significance of Tests and Properties of Concrete and Concrete-Making Materials More</p> <p>New Edition! ELECTRICAL PROTECTIVE ASTM Standards on Electrical Protective Equipment for Workers, Twelfth Edition Print or CD-ROM More</p> <p>REDLINED STANDARDS See all the changes made since the previous edition. More</p>	<p>Standard on Mold in Commercial Buildings Is Approved</p>  <p>Newly developed ASTM E 2418, Guide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Protocol, creates a common language for parties involved in mold assessment. E 2418 follows a four-part approach to standardize the mold and moisture intrusion assessment process, which is proactive, practical, and realistic. The guide was developed by Subcommittee E50.02 on Real Estate Assessment and Management, part of ASTM Committee E50 on Environmental Assessment, Risk Management, and Corrective Action. More</p>
<p>STANDARDIZATION News Monthly Issue in English Quarterly Spanish-Language Edition Trimestralmente Standardization News en español Semi-annual Chinese-Language Issue</p>		



For More Information

- ASTM web site – www.astm.org
- Robert (Bob) Morgan – rmorgan@astm.org
- Joe Ritchey – ritcheyj@p2s.com