OFFICE OF SURFACE MINING COAL COMBUSTION BY-PRODUCT INITIATIVES

BY

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HISTORY
OSM CCB INIATIVES

- 1994 – PUBLIC OUTREACH ON TECHNICAL ISSUES
- 1995 – INTEREST SURVEY ON HOLDING A CCB TECHNICAL FORUM
- 1996 – ESTABLISH A CCB MULTI-INTEREST GROUP STEERING COMMITTEE

HISTORY
OSM CCB INIATIVES

- 1996 – 1ST TECHNICAL INTERACTIVE FORUM ON CCBS AND MINING/CARBONDALE
- 1997 – PUBLISH PROCEEDINGS OF 1ST FORUM
- 1997 – DEVELOP CCB INFORMATION NETWORK WEBSITE
- 1998 - COMBUSTION BY-PRODUCTS RECYCLILNG CONSORTIUM **NATIONAL STEERING COMMITTEE**

HISTORY
OSM CCB INIATIVES

- 1999 - COOPERATIVE AGREEMENT BETWEEN OSM AND NATIONAL ENERGY TECHNOLOGY LABORATORY
- 1999 & 2001 - INTERNATIONAL ASH UTILIZATION SYPOSIUM/LEXINGTON **TECHNICAL STEERING COMMITTEE**
- 2000 – 2ND CCB & MINING TECHNICAL INTERACTIVE FORUM/MORGANTOWN

HISTORY
OSM CCB INIATIVES

- 2000 - INTERAGENCY ADVISORY GROUP TO EPA CONCERNING "LISTING CCBS AS HAZARDOUS"
- 2000- JOINT EPA/OSM FACT FINDING EFFORT ON CCB USE AND DISPOSAL AT MINE SITES PRIOR TO EPA RULEMAKING IN 2003

HISTORY
OSM CCB INIATIVES

- 2000 - TECHNICAL ASSISTANCE TO ASTM ON CCB USE AT MINE SITES
- 2001 - PUBLISH AND DISTRIBUTE MORGANTOWN FORUM PROCEEDINGS
- 2002 – 3RD CCB & MINING/WESTERN REGION TECHNICAL INTERACTIVE FORUM/GOLDEN

QUESTIONS???

- DO WE NEED ADDITIONAL FEDERAL REGULATION OF THE USE OF CCBS AT COAL MINES?
- IF NOT, WHY NOT?
- IF SO, SHOULD THEY BE:
  - EPA REGULATIONS UNDER RCRA? OR
  - OSM REGULATIONS UNDER SMCRA?

IT HAS BEEN SAID THAT NEW SOLID WASTE REGULATIONS MAY BE NECESSARY BECAUSE:

- APX 2 % OF **UTILITY DISPOSAL SITES HAVE TOXIC LEACHATE**
- MINES SITES ARE JUST AS LIKELY TO PRODUCE TOXIC LEACHATE AS UTILITY DISPOSAL SITES
- SMCRA WATER MONITORING MAY BE INADEQUATE TO DETECT TOXICITY
- SMCRA PERFORMANCE BONDS MAY BE OF INSUFFICIENT DURATION

THE **EXISTING SCIENTIFIC DATA DOES NOT SUPPORT NEW REGULATIONS** UNDER RCRA OR SMCRA

- UNAWARE OF ANY SCIENTIFIC DATA WHERE CCB FILLS AT ANY SMCRA MINE SITE HAVE RESULTED IN TOXICITY
- 15+ YEARS OF SCIENTIFIC RESEARCH INDICATES THAT MOST CCB USE AT MINE SITES IS ENVIRONMENTALLY BENEFICIAL
- SMCRA PERMITTING, BONDING, & WATER QUALTITY PROTECTION REQUIREMENTS ARE ADEQUATE TO PROTECT THE PUBLIC AND THE ENVIRONMENT

DIFFERENCES BETWEEN SMCRA SITES AND UTILITY SITES

- THERE IS NO SCIENTIFIC BASIS FOR EQUATING LEACHATE POTENTIAL FROM UTILITY DISPOSAL SITES WITH SMCRA MINE SITES

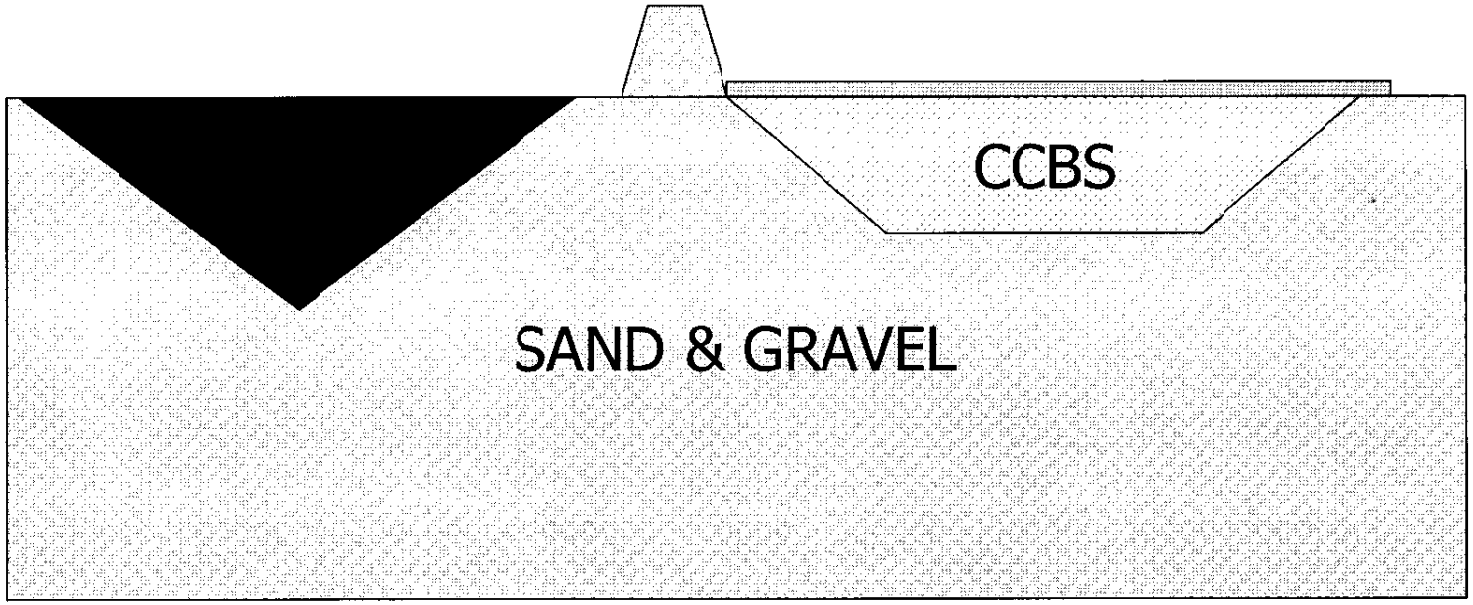
DIFFERENCES BETWEEN UTILITIES & MINES

FEATURE	UTILITY	MINE
GEOGRAPY	FLOODPLAIN	UPLAND
GEOLOGY	ALLUVIAL SAND & GRAVEL	BEDROCK SANDSTONE, SHALE & LIMESTONE
GROUND WATER	LARGE VOLUME HIGH QUALITY	SMALL VOLUME POOR QUALITY

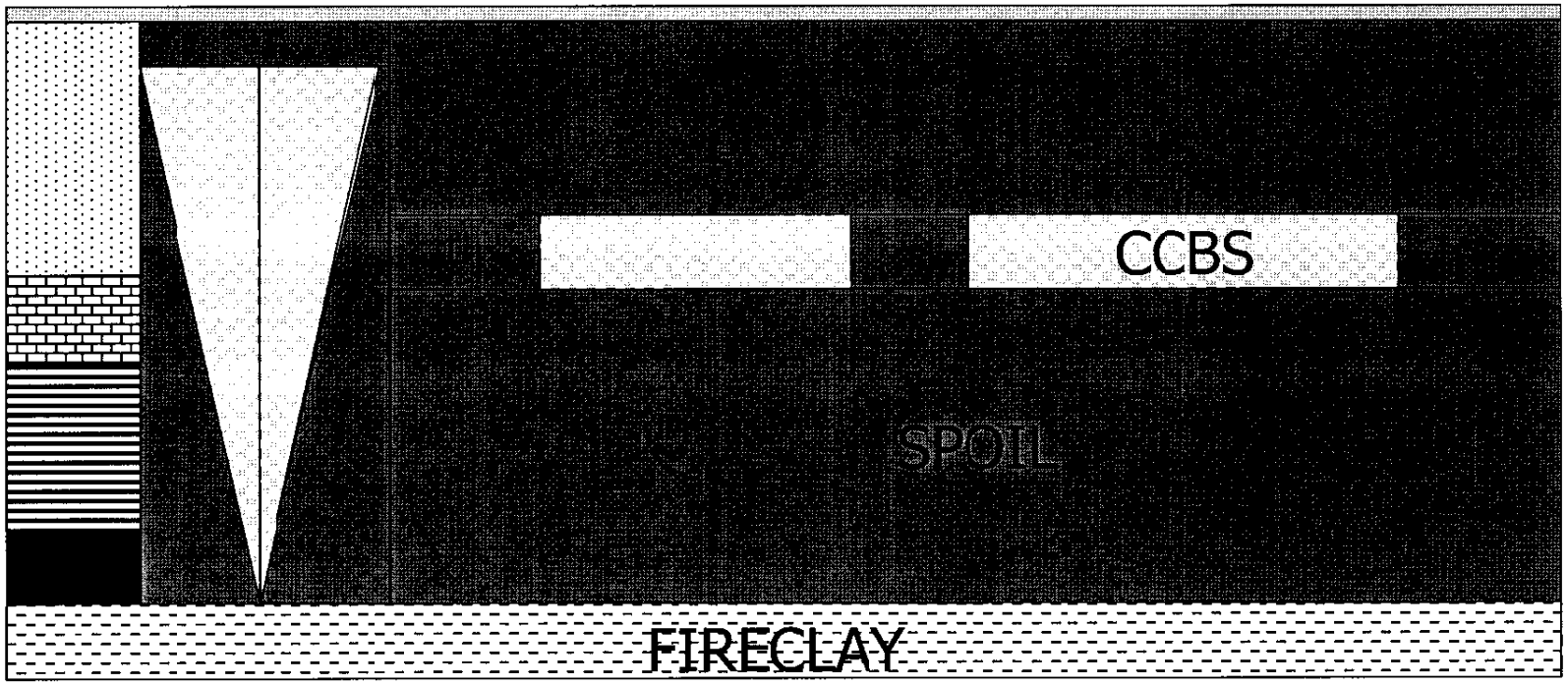
DIFFERENCES BETWEEN UTILITIES & MINES

FEATURE	UTILITY	MINE
CCB TYPE	WET SLURRY ALL TYPES	DRY - ONLY PERMIT APPROVED
RECLAMATION	SMALL AMOUNT OF COVER OVER POND	DEEP COVER OVER MONOFILL OR SPOIL LAYER
REGULATION	CLEAN WATER AT OPERATION SOLID WASTE AT DISPOSAL	SMCRA & CLEAN WATER & SOLID WASTE ALL PHASES

TYPICAL UTILITY CCB STORAGE/DISPOSAL AREA



TYPICAL CCB FILL AT MINE



CCB USE AT MINE SITES

- ARIPPA STATISTICS
  - 1999 – 5.1 MILLIONS TONS OF FBC USED TO RECLAIM ABANDONED MINES AND CONTROL ACID MINE DRAINAGE
- **ACAA** STATISTICS
  - 1999 – 1.9 MILLION TONS (1.8% of total non FBC materials) USED AT MINE SITES

IMPACTS ON BENEFICIAL USE

- ADDITIONAL FEDERAL REGULATION OF CCBs ON MINE SITES COULD REDUCE THEIR BENEFICIAL USE

CCB USE AT MINE SITES

- NON TOXIC FILL
- CONTROL OF ACID MINE DRAINAGE
- CONSTRUCTION MATERIAL
- INJECTION INTO UNDERGROUND MINES FOR SUBSIDENCE AND AMD CONTROL
- SOIL AMENDMENTS FOR AML PROJECTS

SMCRA PERFORMANCE BOND

- 30 CFR 800.13 (a)(1) Performance bond liability shall be for the duration of the surface coal mining and reclamation operation and (the extended revegetation liability period) or until achievement of the reclamation requirements of the Act, regulatory programs, and permit, whichever is later.

DURATION OF PERFORMANCE BOND

- BOND RELEASE IS NOT DETERMINED BY TIME BUT BY ACHIEVING THE PERFORMANCE REQUIREMENTS.
  - In the case of Acid Mine Drainage, the bond can not be released until the conditions that produce the AMD have been corrected.

SMCRA PERFORANCE STANDARDS

- 30 CFR 816.41 Minimize disturbance of hydrologic balance by protecting ground & surface water from pollutants.
  - Includes requirement for replacement of water supply impacted by contamination.
  - Requires monitoring based on probable impacts.

SMCRA PERMIT REQUIREMENTS

- 30 CFR 780.21 Probable hydrologic consequences determination
  - Detailed information on potential for pollution of ground or surface water
  - Detailed hydrologic reclamation plan
  - Ground & Surface water monitoring plan

CONCLUSION

- DO WE KNOW EVERYTHING WE NEED TO ON POTENTIAL ENVIRONMENTAL EFFECTS? NO
- DO WE NEED MORE RESEARCH? YES

FINAL QUESTIONS

- IF ADDITIONAL FEDERAL REGULATIONS ARE TO BE PROPOSED,
  - WHAT IS THE PROBLEM?
  - WHERE IS THE SCIENCE?