THE ISSUES THAT STEER RESEARCH FOR THE RMRHSRC

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THE ISSUES

• COST
  – NO DEEP POCKETS
  – NO SITES OWNED BY THE FEDERAL GOVERNMENT

• GLOBAL ISSUE

• SOCIAL & POLITICAL ISSUES

• ACTIVE SITES VS. ABANDONED SITES

• AIR, WATER, OR EARTH?
RMRHSRC CHOICES

• HAVE TO SEEK OUT LOW COST SOLUTIONS
• INCLUDE ORGANIZATIONS SUCH AS MEND AND ADTI
• CONCENTRATE ON SCIENCE & ENGINEERING
• WORK ON ABANDONED MINE LANDS
• CONCENTRATE ON MINE DRAINAGE, WASTE ROCK, & TAILINGS
Research Focus Areas

- Site Characterization & Contaminant Transport/Transformations
  Leader: Macalady

- Surface Water & Sediment Transport
  Leader: Julien

- Treatment Processes
  Leader: Figueroa

- Technologies
  Leader: Shackelford

- Ecological & Human Health Toxicity
  Leader: Clements

- Fate & Transport

- Treatment & Technologies

- Risk Assessment

Projects:
- Project 1
- Project 2
- Project 3
- Project 4
MINE DRAINAGE

• Project 1: Redox Transformations, Complexation and Soil/Sediment Interactions of Inorganic Forms of As and Se in Aquatic Environments: Effects of Natural Organic Matter

REMOVAL OF INORGANICS IN THE AQUATIC ENVIRONMENT

OXIC
- Fe
- As

SUB-OXIC
- Fe
- Al
- Cr

ANOXIC
- Hg
- Ag
- Cd
- Pb
- Zn
- Ni
- Fe

UNKnown: As, Se, U
AEROBIC TREATMENT SYSTEM, NEVADA
MINE DRAINAGE

• Project 1: Redox Transformations, Complexation and Soil/Sediment Interactions of Inorganic Forms of As and Se in Aquatic Environments: Effects of Natural Organic Matter

LAB TESTS ON SUBSTRATES
WASTE ROCK & TAILINGS

- Project 2: Fate and Transport of Metals and Sediment in Surface Waters
- Project 4: Evaluating Recovery of Stream Ecosystems from Mining Pollution: Integrating Biochemical, Population, Community and Ecosystem Indicators
WASTE PILES NEAR KENOSHA PASS
ABANDONED MINE NEAR BLACKHAWK
RAIN EVENT AT ARGO WASTE ROCK 2
APPLIED RESEARCH

• MOVE LABORATORY RESULTS TO THE FIELD AS SOON AS POSSIBLE.
• CONCENTRATING DEMONSTRATIONS AT THE LEADVILLE, COLORADO SUPERFUND SITE.
• DEVELOP THE RESULTS INTO ENGINEERING PRESENTATIONS & WORKSHOPS AS SOON AS POSSIBLE.
IN CLOSING

IF YOU HAVE OTHER RESEARCH SUGGESTIONS OR IF YOU HAVE GOOD A DEMO SITE, PLEASE CONTACT US.

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