Key EPA Initiatives to Address Hardrock Mining Sites

Federal Remediation Technologies Roundtable

Key EPA Initiatives to Address Hardrock Mining Sites
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Outline

• OSRTI National Optimization Strategy
• Optimization Events to Date
• California Mine Exposure Based Algorithm (CalMEBA)
• Best Practices and other Technical Resources Development
• EPA Resources for Mining Sites Treatment Technologies

OSRTI National Optimization Strategy

Systematic site review by a team of independent technical experts...
Performed at any phase of a cleanup process...
Identify opportunities to improve remedy protectiveness, effectiveness and cost efficiency...
Facilitate progress toward site completion.

~250 optimization reviews performed since 1997
Mine Sites Optimization Initiative

Overview of Mine Sites Optimization Efforts

All Optimization Events to Date

Optimization Metric Total to Date

Locations
Events 52
Sites and Mining Districts 33
Individual Mine Workings and OUs 98

Type of Support
Optimization Reviews 24
Technical Support 12
Regional Consultation Reviews 16

Activity Status
Completed 28
In Progress 19
Pending 3

Overview of Mine Sites Optimization Efforts

All Optimization Events Historical & Active
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California Mine Exposure Based Algorithm (CalMEBA)

- Purpose: Rank 42,000+ mines located in California that are listed in the USGS Mineral Resources Data System (MRDS)
- Algorithm designed to precede CERCLIS entry
  - Applying the HRS will occur in subsequent site assessment activities
- Based on common mining waste exposure scenarios
  - Residential, recreational, ecological
- Uses 25 geo-data sets, focusing on receptor proximity/counts, ore deposit toxicity, past practices
- CalMEBA I and II are Excel tools that execute the algorithm for all 42,000+ sites and allow for rapid, iterative sensitivity checks
- Applications for other Federal Land Management Agency inventories and other State inventories.

Best Practices: Fluid Mining Wastes

- Presents best practices for preventing sudden, uncontrolled releases of mining-influenced water (MIW)
- Applies to investigation, rehabilitation and remedial activities
- Technical review:
  - EPA HQ OSRTI
  - Regions 1, 3, 6, 8, 9, 10
  - BLM, USACE, USFS, OSMRE
  - ASTSWMO
- Peer Review:
  - USGS
  - PADEP, WVDEC
  - NOVAGOLD Resources
  - Colorado School of Mines, U Nevada-Reno

Best Practices: Impoundments

- Will address technical best practices to prevent impoundment failures
- Best practices to help prevent sudden, uncontrolled releases of fluid and liquefiable mining wastes
- Steps to characterize impoundment stability and minimize risk of a failure
- Incorporates USACE and BOR best practices

Abandoned Mine Site Characterization and Cleanup Handbook Update

- Addition of best practices content
- Addition of uranium mine and mill tailings content
- Update Characterization and Cleanup Technologies
- Addition of mine sites and mine waste reuse content

EPA Resources for Mining Sites Treatment Technologies

- www.cluin.org/mining
- Mining Webinar Series
- Mining Site Case Studies
- Handbook on Treatment Technologies for Mining Influenced Water and Mining Waste
- Mining State of Play
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Currently Under Development

- Handbook on Treatment Technologies for Mining Influenced Water and Mining Waste
- Mining State of Play
- Case Study Documentation
- FRTR Mining Meeting Webinar Series

Questions and Discussion

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