Welcome to the CLU-IN Internet Seminar!

EPA Office of Research and Development's Office of Science Policy

Mine and Mineral Processing Virtual Workshop

Session 1 - Site Characterization

Sponsored by: US EPA Office of Research and Development (ORD)'s Office of Science Policy

Live Webinar: Wednesday, October 2, 2019, 1:00 PM-3:00 PM EDT (17:00-19:00 GMT)

Instructors:

- David Williams, EPA Office of Research and Development (Williams.davidj@epa.gov)
- Dale Werkema, EPA Office of Research and Development (werkema.d@epa.gov)
- Robert Ford, EPA Office of Research and Development (ford.robert@epa.gov)
- Kirk Scheckel, EPA Office of Research and Development (Scheckel.kirk@epa.gov)

Moderators:

- James Rice, ICF International Inc. (James.Rice@icf.com)
- Jean M Balent, US EPA Technology Innovation and Field Services Division (Balent.jean@epa.gov)

Visit the Clean Up Information Network online at www.cluin.org

Welcome to the Mining and Mineral Processing Workshop Series

Session 1	October 2	Site Characterization
Session 2	October 9	Emergency Management
Session 3	October 16	Innovative Technologies and Strategies
Session 4	October 23	Big Data

Today!

About the Series

Each session in the virtual workshop series will include a short lecture by various subject matter experts in their respective fields but will also allow ample time for the presenters to interact with the audience, including time for questions and answers as well as brainstorming and identifying concerns from stakeholders participating in each virtual workshop.

Webinar Objectives

- Describe the latest conceptual approaches to each technical area
- Offer methodologies and tools, and case study illustrations that address each of these concepts
- Solicit participant input to how these approaches can be revised to produce better, faster and cheaper outcomes

Question 1: Where are your mining sites located (states and countries)?

Question 2: What are your challenges in dealing with mine and mineral processing sites?

Use the blank space at the bottom of your screen to enter a word or short phrase.

You can click on the "+1" button if you want to agree with someone else's response

The responses will be ranked by popularity (# of respondents selecting this choice)

Why are mining and mineral processing sites challenging?

Mining sites present unique challenges

- Complex arrangements of sources above and below ground
- Large areas and large waste volumes
- Interactions between groundwater and surface water
- Unstable conditions and potential for releases
- Higher remediation costs

Systematic and coordinated efforts are needed to address mining related sites effectively

- Robust CSMs require innovative characterization tools
- Response actions must address unique issues like wildfires and impoundment releases
- Effective remedial actions involve adaptive management and innovative approaches
- Large and complex data sets must be managed for effective use

Today's Topic: Site Characterization Tools

Remote Sensing for Characterizing Mine Waste Mineralogy, Mine Drainage Geochemistry, and Site Assessment and Monitoring

- David Williams, EPA ORD

Geophysical Applications for Mine Waste Investigations

- Dale Werkema, PhD., EPA ORD

Characterizing Contaminant Flux at the Groundwater-Surface Water Interface

- Robert Ford, EPA ORD

Techniques to Understand Source Attribution and Exposure Risks at Impacted Sites

- Kirk Scheckel, EPA ORD