

ELIZABETH MINE CLOSURE

Peer Review
Vermont

Client:

US Environmental
Protection Agency

Contract Value:

\$35,000

Performance Period:

2008

Technical Areas:

- Remediation
- Solid Waste Management
- Geotechnical Engineering, Geology, and Hydrogeology
- Financial and Risk Management

Successes:

Assisted the EPA in refining a cost-effective closure design

Demonstrated the viability of the closure plans and designs to the public



BACKGROUND

The Elizabeth Mine is a historic copperas/copper mining facility in Vermont. The US Environmental Protection Agency (EPA) is managing the planning, designs and construction for closure of the facility. Key closure elements include an acid generating process waste pile, two acid generating tailings impoundments and restoration of the creek.

SES ROLE

SES was retained as one of three expert panel members to review the closure plans and designs. SES was instrumental in demonstrating the viability of the proposed plan to consolidate and cap the process waste and tailings. Furthermore, SES developed an approach to relocate the process waste pile in order to prevent increased acid runoff, provided the basis for establishing a geochemical and water balance model for the unlined tailings facility in order to predict and control toe seepage, and commented on the cap design details. The latter included dealing with issues such as liner type and protection, acid and temperature resistance, drainage layer requirements, and longevity. The results of this work were presented to the Vermont public at a town meeting.



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