

A topographic map of the Alameda Mine area is shown on the left side of the slide. A yellow line runs vertically through the map, and a horizontal arrow points from the map towards the right. The background of the slide features a dark teal color with light teal contour lines.

# Alameda Mine Removal Action

BLM Medford Field Office  
National Science & Technology Center



Road →

Seep ↑







A vertical strip on the left side of the slide shows a topographic map of a river valley. The map features contour lines, a river channel, and a yellow line indicating a specific path or boundary. The background of the slide is a dark teal color with faint, light blue contour lines.

# Site Description

- Located on Rogue River 3 miles E. of Galice
- Wild and Scenic River – recreational use
- Important steelhead & salmon fishery
- Acid mine drainage flowing into Rogue
  - Less than reportable quantity
- Small quantities of rock dump and slag

# AMD Chemistry

- Quarterly sampling begun in 2001
- pH of seep averages 2.9; flow 6-12 gpm

## ● Typical chemistry:

● Iron	109 mg/L
● Manganese	1.24 mg/L
● Zinc	7.54 mg/L
● Copper	1.80 mg/L
● Cadmium	0.037 mg/L
● Lead	0.284 mg/L

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# Effect on Rogue Water Quality

- **Planned for sampling in June**
- **Mixing calculations indicate water quality standards are not exceeded**



SP6

11/2/01

# BLM CERCLA Removals

40 CFR 300.415

● Typical time critical procedure: (<6 mos.)

- PRP search
- Removal Site Evaluation
- Action Memorandum
- Implement Action

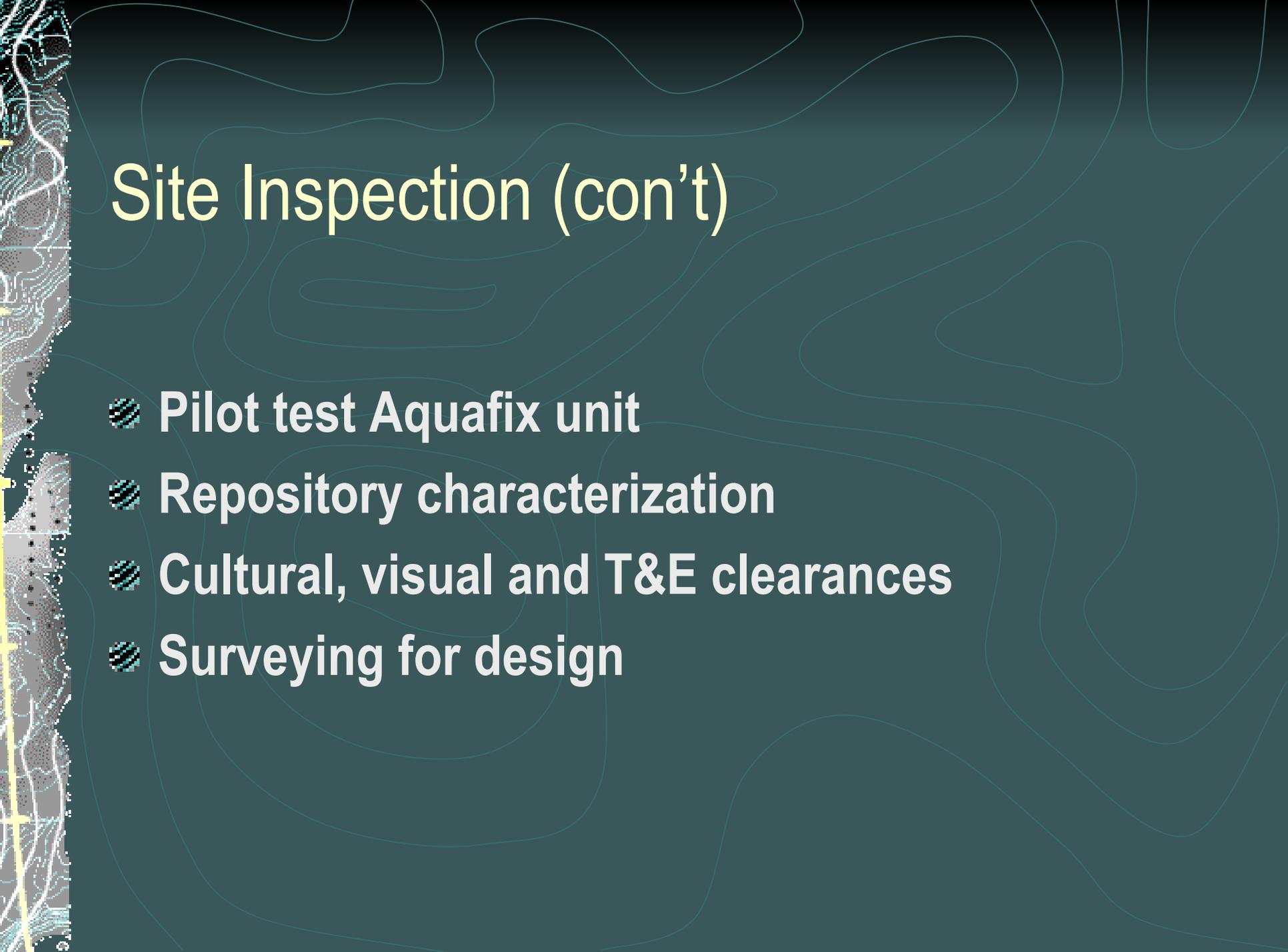
● Typical non-time critical procedure (>6 mos)

- PRP Search
- Removal Site Evaluation
- Engineering Evaluation/Cost Analysis
- Public Involvement
- Action Memorandum
- Implement Action

A vertical strip on the left side of the slide shows a topographic map of a river valley. A yellow line runs vertically through the center of the valley, indicating a cross-section for study. The map features contour lines and a river channel.

# Planned Site Inspection (6/02)

- **Map 100 year floodplain**
- **Sample river up and downgradient using cross-sectional area method**
- **Characterize rock dump and slag chemistry**
- **Underground hydraulic investigation**



## Site Inspection (con't)

- **Pilot test Aquafix unit**
- **Repository characterization**
- **Cultural, visual and T&E clearances**
- **Surveying for design**

# Water Treatment Approach

- **Limitations: remote location, no power, space**
- **Evaluate several passive treatment systems**
- **Pilot test Aquafix unit with settling pond**
- **Consult with DEQ concerning discharge limitations and mixing zone (ARARs)**
- **CERCLA does not require NPDES permits**
  - **Prefer to consult with DEQ**

# Aquafix Unit

*Smallest  
unit  
with  
bin for  
500 lbs.  
of lime  
pebbles.*



- **Passive dispenser of lime**
- **Dosing dependent on flow via water wheel**
- **Neutralized pH precipitates metals as sludge**
- **Settling pond collects sludge**
- **Sludge dried and disposed in onsite repository**
- **Sludge will not be RCRA hazardous**

# Aquafix installed in West Virginia





# Mining Waste Alternatives

- **Design and build onsite repository for slag and sludge from Aquafix**
- **Cap or stabilize rock dumps in place**
- **Install run-on controls above mine**
- **Install underground hydraulic controls, if feasible to reduce flows for treatment**

# Public Involvement

- Notice of availability of draft final removal reports, administrative record
- 30 day public comment period
- Copies to DEQ for comments
- Response to comments
- Public meeting if necessary