Mine Closure, Financial Disclosure, and Financial Assurance

William Cobb
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Financial Disclosures

- SFAS 143 – Accounting standard regarding the accrual for regulatory-mandated asset retirement obligations (AROs)
  - Government-mandated closure and/or reclamation plans
  - Present-worth basis
- FIN 47 – Accounting requirement to address regulatory-mandated/compliance obligations associated with the closure of a facility (incorporated into AROs)
  - RCRA-compliant management of hazardous or solid wastes generated during the facility closure or demolition process
  - Regulatory-based management of materials generated during the replacement of structures (i.e. treated power poles)
- Environmental Reserves – typically associated with remediation of off-site releases, but can also include onsite issues not addressed through AROs
- Risk Factors
- Contingencies
What is in a Closure Plan

- General scope of closure – physical stability, chemical stability, ecological stability [legal obligations versus voluntary measures such as sustainable development]
- Specified contents
  - Description of mining facilities and operations
  - Environmental and social conditions
  - Stakeholders and community development
  - Description of reclamation and closure activities
  - Post-closure monitoring and maintenance
  - Closure schedule
  - Cost estimates
  - Assumptions, limitations, future data needs
Closure Activities

- Scope of closure/reclamation highly variable for stockpiles
  - Regrading of surface areas; leave at angle of repose
  - Regrading, capping of various units to drain storm water
- Scope of closure/reclamation highly variable for tailings impoundments
  - Control of dust
  - Limiting percolation of storm water through the tailings
  - Wet closure
- Demolition of structures
- Establishment of suitable land use
- Cleanup of impacted areas, groundwater, pit lakes
“Going out of business tomorrow”
- Example: New Mexico
- Regardless of length of mine life, assumes closure/reclamation cash flows start next year
- Typically present value (negotiated escalation and discount rates)
- Typically updated on a set schedule (i.e. every 5 years)

Life of Mine allocation
- Example: Peru
- Straight line allocation of total closure cash cost based on life of mine period
- Annual update on financial assurance; closure plan/cost update every 3 years

Total closure cash cost
Financial Assurance

- Provided to regulatory agency to cover the cost of a third-party implementing the required closure and/or reclamation activities
- Multiple forms are common
  - Cash/Trust
  - Insurance
  - Surety bonds
  - Letters of Credit
  - Collateral
  - Financial demonstration
  - Corporate guarantee
CERCLA 108(b) – financial responsibility requirements

Hardrock mining industry was first sector targeted (extract, beneficiate, process metals and non-metallic/non-fuel minerals)

Issues to be considered in rulemaking process [www.regulations.gov]
- Application to operating properties versus CERCLA sites [Reclamation, Remediation, or both]
- Overlap between proposed program and existing state/federal permits and associated financial assurance
- Perceived scope gaps in current closure requirements/plans
- Agency concern about accuracy of closure cost estimates
- How to implement the proposed program
- How to encourage improved environmental performance
- Form
EXAMPLE STRATEGIES
Design/Operate for Closure
Address Environmental Issues Via Operational Improvements

New tailing area
Remediate Legacy Issues
Tailings Capping Project BLM Award 2007

View from adjacent Tuzigoot National Monument
Remediate via Sustainability
Arizona ACEC Award - 2009
Reclamation Strategy Options

- Concurrent reclamation?
- Perimeter stockpiles
  - Accelerated closure - focus on entire mine perimeter while leaving center of mine area for operations
  - Reduce environmental exposure to potential Clean Water Act releases
  - Enhance public perception
- Tailings impoundments
  - Facilities needed for future mineral recovery?
  - Opportunity to assess different drainage designs
- Facility demolition/capping (i.e. – concentrator)
- Test plots
  - Multiple cover thicknesses, slopes
Accelerated Reclamation
Voluntary Reclamation

2008

2009
Strategic Questions

- Opportunity to revisit how to design, build, operate, and close
- Reclamation/Remediation issues to be considered to address potential rulemaking outcomes
  - Completion of work at operating properties versus “closed” facilities or both; role of voluntary efforts
  - Risk of currently completed work meeting future requirements (existing state/federal permits versus proposed program)
  - Perceived scope gaps
  - Track record of closure plan cost estimates versus actual costs for completed work
  - Demonstration of improved environmental performance (EMS, GARD, use of operating systems to address onsite/offsite issues, accelerated or concurrent reclamation and remediation work, sustainability opportunities, etc.)