

**Statement of  
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**Before**

**The HOUSE COMMITTEE ON NATURAL RESOURCES  
SUBCOMMITTEE ON ENERGY AND MINERAL RESOURCES  
Concerning  
The Hardrock Abandoned Mine Land Reclamation Program  
For the Hearing on  
H.R. 2262, the Hardrock Mining and Reclamation Act of 2007**

**October 2, 2007**

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to testify on the hardrock Abandoned Mine Land (AML) reclamation program. I am pleased to be here with you today.

This year, the Forest Service and the Bureau of Land Management (BLM) are celebrating 10 years of hardrock abandoned mine lands program success. The BLM and Forest Service hardrock AML programs operate to improve the quality of public lands through similar missions:

- To mitigate hazards present at abandoned mines;
- To restore watersheds for natural resources; and
- To protect public health and safety, recreation, fish and wildlife.

Over the last decade, both agencies' hardrock AML programs have grown and matured through the dedicated effort of many people.

**Scope of AML Issues on Federal Land**

The Forest Service and the BLM, using data compiled by the Bureau of Mines in 1995, estimated that approximately 38,500 abandoned mine sites are on National Forest System (NFS) land and 65,000 abandoned mines sites are on BLM. A mine site consists of one or more mine features, such as human-made objects or disturbances associated with

mining activities. These mine features include shafts or adits (vertical or horizontal opening), tailings, waste rock, machinery and facilities.

An estimated 20 to 30 percent of the abandoned mine sites on Forest Service and BLM lands have dangerous human safety hazards and as many as 10 percent may be releasing toxic heavy metals, acidity and radioactivity into rivers, lakes and streams. The Forest Service has estimated that approximately 2,500 mines would require cleanup of hazardous substances and more than 22,500 would require mitigation of non-hazardous pollution and safety hazards. Since the late 1990's, the Forest Service has inventoried 20,000 sites, mitigated more than 2,000 safety hazards and cleaned up hazardous substances at more than 400 sites, with hazardous substance cleanup at another 150 sites in progress.

The BLM AML reclamation program supports core BLM programs by addressing degraded water quality, hazardous materials, and other environmental impacts on or affecting lands administered by the BLM, and mitigating physical safety hazards of abandoned mine sites on public lands. Between 2000 and 2007, the BLM has inventoried 5,500 sites and remediated physical safety hazards at more than 3,000 sites. The BLM also restored water quality at over 280 sites through FY 2003 and on more than 3,000 acres between 2004 and 2007.

The BLM and Forest Service efforts to clean up abandoned mine lands have many worthwhile outcomes. Visitors to public lands are better protected from health and safety hazards, and neighboring communities enjoy cleaner water. Onsite soil and water quality is often returned to pre-mining conditions resulting in restored habitat for plants and wildlife. Significant cultural and historic resources are preserved.

### **Inventory of Abandoned Mine Sites**

At the time the BLM and Forest Service began to address AML reclamation, the sheer number of abandoned mining sites across the United States was daunting, with estimates ranging from tens of thousands to hundreds of thousands. In the early 1990s, the BLM and Forest Service began to inventory abandoned mine sites, focusing on hardrock and

non-coal abandoned mines. This inventory built on data previously compiled by other governmental agencies, including the U.S. Bureau of Mines and the U.S. Geological Survey (USGS).

Inventory work performed by the Forest Service, the BLM and State agencies has varied among agencies and over time. The Forest Service is in the process of putting the regional inventory data into a national database. The BLM is developing a national mine lands inventory that will show AML and mine site locations on all Federal lands. States with access to Surface Mining Control and Reclamation Act (SMCRA) funds and those with pilot watershed reclamation projects have more comprehensive inventories. Some discrepancies between various inventories are a result of the protocols used to develop them. Inventories are dynamic and continue to be refined, supplemented and amended.

### **Prioritization of Sites**

Each year Forest Service national priority project lists for the out year budget are developed from projects submitted by the National Forest Regions. Projects are prioritized for funding by a team using the Choosing By Advantages (CBA) method, which ranks projects by various criteria including benefits to human health and safety, environmental protections, public/private partnerships and public interest. Funding is allocated directly to the projects in order of their priority.

In March 2006, the BLM released its Cooperative Conservation Based Strategic Plan for its AML program. The plan sets out both a national strategy and state-specific multi-year work plan. More specifically, the plan identifies priority watersheds and high-use areas where AML funds will be directed through FY 2013 given current funding levels. State-specific plans were developed in consultation with the BLM's Federal and State partners.

### **Cleanup of Abandoned Mine Sites**

In 1994, an interagency task force was formed consisting of Federal land management agencies, including the BLM, Forest Service, National Park Service and Department of the Interior (DOI) science bureaus, including USGS and the former Bureau of Mines.

This task force worked closely with the Environmental Protection Agency (EPA) to develop a “watershed approach” for the cleanup of hardrock mines on public lands. The goals of the watershed approach are to foster coordination and collaboration across Federal and State agencies, facilitate solutions to address mixed ownership issues on sites, address important problem sites first and reduce costs through fund leveraging and avoiding duplication of efforts.

The Forest Service and the BLM launched formal AML programs in 1997. Two top priority watersheds were selected as pilot projects for remediation: the Animas River watershed in Colorado and the Boulder River watershed in Montana. A third top priority pilot, Cottonwood Wash in Utah, was selected in 1998. I’d like to highlight the Animas River watershed as an example of the success of the pilot projects.

#### Animas River Watershed, Colorado

The Animas River Watershed reaches across 186 square miles of Colorado’s San Juan Mountains. Communities within the watershed have a long history of mining that dates back to the late 1800s. Over the years, the impacts of contaminants including aluminum, cadmium, copper, iron, lead, and zinc emanating from historic mines and natural sources became environmentally and economically visible with acidity levels in the water rising to levels that impair many fisheries and leave some streams devoid of fish.

The communities are in the process of transitioning from a mining economy to one based on tourism and recreation, and reclamation of these historic sites is an important part of that effort. Approximately 50 mining remediation projects have been successfully completed within the Animas River watershed, eight are underway and plans are ongoing for 40 additional projects. Of the completed projects, remediation activities for 19 priority sites have been completed with the mining companies addressing approximately one-half, Federal land management agencies addressing approximately one-quarter, and the Animas River Stakeholders Group addressing approximately one-quarter of the activities.

The community is now reaping the benefits of these cleanup efforts, including overall increased water quality and two successfully reproducing species of trout in the watershed. This, in turn, is beginning to entice more visitors to seek recreation opportunities in the area. As the community continues to work together to address the remaining sites, a collaborative initiative among six federal agencies is helping to revitalize a two-mile stretch of the Animas River corridor through Silverton, recognizing the community's value on tourism as it promotes aesthetic and quality-of-life improvements to the area.

The positive outcomes of early AML partnerships and commitment to reclamation efforts in the pilot watersheds resulted in Federal funds that were specifically directed at AML programs. Since then the BLM and Forest Service have continued to fund the cleanup of abandoned hardrock mines using a variety of approaches designed to meet multiple objectives, including addressing physical safety hazards as well as hazardous substances and non-hazardous sources of pollution and contamination. The following are examples of successful AML reclamation projects on National Forest System lands.

Stibnite Mine (near Yellowpine, Idaho), Payette NF, Valley County, Idaho

The Stibnite Mine site is mixed ownership of Forest Service and private. The Forest Service, EPA and the State of Idaho worked closely and cooperatively on reclaiming and remediating the mine site through a Memorandum of Understanding. Remediation began in the late 1990's and included stabilization of a large mill tailings pile in and around Meadow Creek, stabilization of the Meadow Creek diversion, design of a new channel through the tailings area and placing Meadow Creek into the new channel, and shaping and revegetating the spent ore pile. Much of this work was completed by Mobil Oil Corp. The Forest Service completed the clean up of tons of trash and abandoned equipment as well as covering and capping ponds from a cyanide leach pilot test plant. The State of Idaho removed milling facilities and chemicals located on the private lands.

Garnet Dike Mine, Sierra NF, Fresno County, California

The Garnet Dike Mine is located in the Kings River Special Management Area of the Sierra National Forest. This is an area of the wild and scenic portion of the Kings River. This cleanup project included removal of explosives, installation of two bat-friendly gates, foam closures of a shaft and adit, and two wire-rope warning fences with signs on a 40 ft. diameter daylighted slope. This was the first phase of an on-going project that will include removal of structures, debris and abandoned equipment in future years. The cleanup completed has provided for improved public safety and protection of critical bat habitat.

El Portal Barite Mine, Sierra NF, Mariposa County, California

The El Portal Mine site is located on the Sierra NF near Yosemite National Park. During the mid 1990s the Forest Service completed a CERCLA removal action at this mine site to address heavy metal contamination. In 2005, additional work was completed to improve public safety, protect bat habitat and allow continued bat occupancy of mining features. The project included installing bat-friendly angle iron gates at two adits and foam closures at another adit and tunnel portal. Yosemite National Park personnel played an integral role in assisting the Forest with this project. One of their administrative sites was made available for a staging area; they assisted with traffic control, made a forklift and operator available and provided other logistical support.

Champion Mine, Umpqua NF, near Cottage Grove, Oregon

The Champion Mine cleanup project in Lane County, Oregon was completed by the Forest Service in 2006. Project work included the removal of waste rock, diesel and heavy oil contamination, treatment of acid mine drainage and encapsulation of hazardous mill tailings. These actions will reduce or eliminate contaminants in Champion Creek which is a tributary to Row River and Dorena Reservoir, a source of drinking water for the City of Cottage Grove, Oregon.

## Red River Area, Questa, New Mexico

The Red River area has had a history of mining but has now successfully transitioned to a tourism economy based on skiing and other recreational activities. The Forest Service helped promote this new economic base by ensuring the safety of Federal Lands. We worked closely with the State, EPA, U.S. Fish and Wildlife Service, Trout Unlimited and the ski resort owners to improve the safety of the area by consolidating contamination from abandoned mine sites into a single, capped repository. One of these sites was situated upstream of the City of Red River' water system. Other activities included closing exposed adits, minimizing erosion and stabilizing slopes.

### **Current Sources of Funding**

The Forest Service addresses AML reclamation primarily through two programs.

The Environmental Compliance and Protection (ECAP) program provides for cleanup of hazardous materials and restoration of natural resources damaged by hazardous materials at abandoned mines on NFS lands. ECAP cleanups are typically done to comply with CERCLA (Comprehensive Environmental Response, Compensation and Liability Act), RCRA (Resource Conservation and Recovery Act) and CWA (Clean Water Act) requirements.

The Abandoned Mine Lands (AML) program provides for non-CERCLA related cleanup (uncontaminated sediment, erosion), and mitigation of safety hazards at abandoned and/or inactive mines on NFS lands. The AML program is also responsible for the basic inventory of abandoned mines on NFS Lands.

In addition, the Forest Service also receives funds from the USDA hazardous material management account (HMMA). The USDA has also received approximately \$300 million in funding or work from potentially responsible parties (PRPs) since 1995. The majority of these funds were recovered from PRPs on NFS Lands.

Current funding for the AML program for the BLM comes from several sources, including the Soil, Water and Air program and the Department of the Interior's Central Hazardous Materials Fund. The BLM receives approximately \$12-14 million for the AML program each year. Finally, receipts from land sales around the Las Vegas area under the Southern Nevada Public Lands Management Act have provided additional funds for local AML projects.

Additional funds and/or support come from partnering with State and Federal agencies on mine cleanups and safety mitigation. In some cases, particularly for states that receive SMCRA (Surface Mining Coal and Reclamation Act) reclamation funds, cleanup of abandoned mine safety hazards is usually a joint effort.

More recently, partnerships have been developed with groups such as Trout Unlimited, Bat Conservation International and Tiffany and Company to successfully complete cleanup efforts. By forming partnerships during the reclamation process, project stakeholders collectively maximize and pool resources that would not have been readily available if only one entity was involved.

### **Looking to the Future**

Building on their existing AML inventories, the BLM and Forest Service can develop better program planning and prioritization of sites for reclamation. Additional data collection is necessary to ensure that all sites that pose significant health and safety threats are prioritized appropriately. In an effort to coordinate AML activities, the BLM has embarked on an effort to develop a National Mine Lands Inventory that will show AML and all mine site locations on Federal land. Additionally, the Forest Service is in the process of putting its regional AML data into a national database, making it available for land use planning and other resource management activities.

Past partnerships show that collaboration and coordination result in more efficient use of limited funding. Looking to private sector, academia and nonprofit alliances will tap new capabilities in technology transfer, funding sources and knowledge management. Future AML site successes depend on initiating and building long-term relationships with local

individuals and organizations that are in tune with the local wildlife, traditional culture and character of the community.

With many years of experience cleaning up mining sites, the Forest Service and BLM know that the greatest savings in cleanup costs come from technology improvements. To bring these technology advancements to bear on public lands, both agencies must partner with others in training and technical assistance. The next 10 years will certainly bring new and cost-effective tools to AML reclamation.

With the current estimates of AML sites on public lands in the hundreds of thousands, reclamation will not be completed in the near term. Preventing future AML sites is also a crucial goal of any land management agency's AML program. Sustainable mining practices, environmentally protective mine closure planning, optimal permitting requirements and financial assurances are all tools that land management agencies are using to encourage mining companies to operate under a sustainable business model that follows a mine's life from startup to clean closure.

Mr. Chairman, thank you for the opportunity to talk about the hardrock Abandoned Mine Lands program. I would be happy to answer any questions.