

**Statement of
Tony L. Ferguson,
Director of Minerals & Geology Management
For the National Forest System
U.S. Forest Service**

Before

The SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

**Concerning
The Forest Service Hardrock Abandoned Mine Land Reclamation Program
For the Hearing on
Hardrock Mining: Issues Related to Abandoned Mine Lands and Uranium Mining**

March 12, 2008

Mr. Chairman and members of the Committee, 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.

In 2007, the Forest Service and the Bureau of Land Management (BLM) celebrated 10 years of successfully reclaiming federal lands disturbed by abandoned mines, including abandoned hardrock mines. Both agencies issued a report in September 2007, *“Abandoned Mine Lands: A Decade of Progress Reclaiming Hardrock Mines”* that highlights some of the accomplishments that have been achieved with the support and help of State and Federal Agencies, concerned citizens and organizations. I am pleased to be able to provide copies of that report for the members of the Committee, and will summarize the key points of the Forest Service AML Program in my testimony.

The BLM and Forest Service hardrock AML programs operate to improve the quality of public lands placed in our care through similar missions. Elements of these missions include protecting public health and safety by mitigating abandoned mine hazards; restoring land and water contaminated or disturbed by abandoned mines; and enhancing fish and wildlife habitat through reclamation of abandoned mines.

Abandoned Mines on National Forest System Lands

Various estimates exist for the total number of abandoned mines on National Forest System (NFS) lands. All estimates are based in large part on abandoned mine data collected by the former USDI Bureau of Mines, that is now part of the Mineral Resources Data System (MRDS) which is managed by the US Geological Survey. Analyses of that data by the Forest Service¹ in 1995 indicated there are approximately 27,000 to 39,000 abandoned mines of all types on NFS Lands, of which 18,000 to 26,000 of the total are abandoned hardrock mines. The data also indicated that 9,000 to 13,000 of the abandoned hard rock mines were past producers of mineral commodities, and therefore more likely to require cleanup of mine waste or contaminated soil and water, or mitigation of mine safety hazards such as vertical shafts and underground mine workings.

In the mid 1990's, the Forest Service directed each of its Regional Offices to use existing State and Federal data to compile regional abandoned mine databases in order to begin identifying those which posed the greatest threat to human health and the environment, and scheduling them for assessment and cleanup. The Forest Service is currently developing a national AML database which will be used to consolidate the regional abandoned mine data, track discovery of new AML sites, and provide information on the cleanup status of sites on NFS Lands. Once this national database is complete, the Forest Service will be able to share data regarding the presence, priority and cleanup status of AML sites with states, other federal agencies and the public.

Prioritization of Abandoned Mine Sites for Cleanup and Mitigation

Beginning with historic information available on abandoned mines from the databases described above, Forest Service Regional Offices schedule field assessments of AML sites which appear to pose the greatest potential threat to human health and the environment. Based on these assessments, abandoned mine cleanup and safety mitigation cleanup projects, including the costs

¹ *"Distribution of Abandoned and Inactive Mines on National Forest System Lands*, Forest Service General Technical Report RM-GTR-260.

and benefits of each, are submitted to the Forest Service National Office to be considered for funding in outyear budgets.

Cleanup projects are prioritized for funding by a team of Washington Office and Regional Office representatives using the Choosing by Advantages (CBA) methodology. In the CBA process all proposed projects are evaluated and assigned scores based on potential benefits to:

- Human health and safety;
- Environmental factors such as water quality, threatened and endangered species etc;
- Economic and social factors including partnerships, public interest and overall cost.

The projects are then ranked on the basis of their scores and funded as money becomes available through the budget process.

Safety Mitigation Projects are prioritized by the Regions, and submitted to the National Office for funding. Criteria used for prioritizing safety mitigation projects are based on the severity of the hazard and accessibility to the public including:

- Sites where a death, injury or close call has occurred;
- Sites where complaints or concerns have been expressed by the public or others;
- Sites nearby developed recreation sites or other concentrations of people;
- Sites accessed by, or near forest roads or trails;
- Other sites based on the severity of the hazard and accessibility to the public

Each region receives a certain percentage of the national budget. This percentage is mutually agreed upon by the Regions, and is based on the number of abandoned mines in the region and the degree of public exposure risk.

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 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.

Currently no single source of funding alone can completely reclaim all impacted sites to applicable standards. To remediate a particular site, the Forest Service may work with Federal, State, and private partners who are able to apply funding from a variety of programs and authorities, including SMCRA; CERCLA; and the Clean Water Act Grant Program.

An example of this kind of collaboration is the abandoned mine cleanup in American Fork Canyon Utah. Heavy metals from the mining wastes from historic sites prompted the State of Utah to issue a fish advisory in the American Fork River. Working with assistance from State of Utah and US Geological Survey, the Forest Service completed a \$793,000 cleanup of mine waste on National Forest Lands in 2003. However additional work remained. In 2005, Trout Unlimited, working with Snowbird Ski Resort and Tiffany & Co. Foundation, spearheaded the cleanup of

33,000 cubic yards of waste rock and tailings with elevated levels of heavy metals on private property. The cleanup by the Forest Service, Trout Unlimited, Snowbird, Tiffany's and others, has improved water quality to the point that the American Fork River now can support rare, native cutthroat trout in a 10-mile stretch downstream of the mines. This cleanup received national recognition by the Environmental Protection Agency in 2007.

Similar collaborative cleanups involving states, federal and private partners like Trout Unlimited are occurring across the country, including the Monday Creek Watershed in Ohio, Eustache Creek in Montana, the Animas Watershed in Colorado, Boulder River Watershed in Montana, and the Middle Fork of the Boise River in Idaho to name just a few. The Forest Service is committed to encouraging such collaborative cleanups and uses partnership potential as one of the criteria in its project selection process.

Forest Service AML Program

From FY 1998 to FY 2008 the Forest Service has spent approximately \$200 million of appropriated funds on abandoned mine environmental cleanup and safety mitigation. This is a net figure and does not include overhead and indirect costs. In addition, the Forest Service has competed for approximately \$160 million of USDA Hazardous Materials Management Account funds, and \$300 million of work or funding has been provided by potentially responsible parties (PRP).

Since 1998 the Forest Service has mitigated more than 2,000 safety hazards and cleaned up hazardous substances at more than 400 sites. Hard rock mine restoration work may involve closing mine adits and shafts; containing mine wastes in on-site capped and lined repositories; installing water source control and treatment systems; removing mine chemicals and trash; removing and stabilizing old mine buildings for historic interpretation; and reshaping and revegetating sites. These sites may range from one to over one hundred acres in size, cost \$10,000 to \$10 million or more and may, in a few cases, require decades to complete.

Abandoned Mine Cleanup

The following is just one of many examples of collaborative abandoned mine cleanup efforts that the Forest Service has participated in over the last 10 years.

The town of Red River, New Mexico and Red River Ski Resort are both located in the Red River Watershed. This area is visited by thousands of visitors and tourists year round, including fishermen, hunters, horseback riders, campers, hikers, skiers, bikers, and folks attending seasonal events such as running marathons, rafting competitions, & school events.

In 2007 the Forest Service completed the first phase of a nearly \$4 million dollar project to clean up contamination and mitigate safety hazards at abandoned mines located in the Placer/Pioneer and Bitter Creek portions of the Red River Watershed. The work completed thus far includes:

- Removal of 14,000 cubic yards of mine waste contaminated with lead and arsenic from the banks of Placer Creek and Pioneer Creek;
- Restoration of 6 miles of perennial stream;
- Closure of 8 hazardous mine openings.

This work has eliminated the human health and safety hazards posed by the contaminated mine waste and safety hazards and increased the supply of clean water to the town of Red River and Red River Ski Area, reducing the cost of water treatment. These are expected to be long-term benefits that will enhance the quality of life, and enjoyment of the areas natural resources for both residents and visitors.

The next phase of the Red River project will remediate 44,000 cubic yards of mine waste located in the Bitter Creek portion of the Red River Watershed which is adjacent to, and directly northeast of the town of Red River. The total cost of this remediation is estimated at \$2.8 million, and with \$1.3 million currently available the Forest Service is planning to initiate the project in May of 2008. The project will compete through the national project selection process for funding needed to complete the next phase.

In other work completed in 2007, the Cibola National Forest finished filling mining shafts and deep cuts over a mile in length in the Bonita Canyon Watershed, approximately 20 miles southwest of the town of Grants, New Mexico and north of El Malpais National Monument. The mine cuts and shafts part of the Zuni Mine, an historic mine and mining camp which was very active from 1940 on through the 1960's. Because the mine area was well-roaded and visible from a State Highway, weekend campers, off-road vehicles and rock hounders are very active in the area. Because of the risk to visitors exploring the mine area, the Forest Service completed the work of filling in the shafts and cut in 2007, at a cost of approximately \$250,000.

Looking to the Future

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.

Continued success of the Forest Service AML program depends on ensuring that cleanup costs are borne by potentially responsible parties, where possible, and partnering with other State and Federal Agencies, public interest groups, the mining industry and other interested third parties who do not otherwise have liability for abandoned or inactive mine sites. Historically, the threat or potential threat of liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Clean Water Act (CWA) may have discouraged third party partners or "Good Samaritans" from assisting in cleaning up abandoned mines. The Forest Service recently used its delegated CERCLA authority to provide Good Samaritans protection from CERCLA, and will do so in the future, as appropriate. However, the threat of liability for water treatment under provisions of the CWA continues to be a concern for potential Good Samaritans.

Finally, preventing future AML sites is also a crucial goal of any land management agency's AML program. Responsible mining practices, environmentally protective mine closure planning, optimal permitting requirements and financial assurances are all tools that land

management agencies are using to ensure mining companies 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.