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Abandoned Mines and Mercury in California

Testimony
Before the House Subcommittee on Energy and Mineral Resources

Statement of the Northwest Mining Association
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November 23, 2009

Introduction

My name is Julian Isham. I am the Geology Manager at Shaw Environmental in Concord, California. I am testifying today on behalf of the Northwest Mining Association (NWMA) on abandoned mines and mercury in California. NWMA would like to thank you for the opportunity to speak today about reclaiming abandoned mines and to offer our suggestions for policies that will accelerate the pace of this process.

NWMA is a 114-year-old nonprofit mining industry trade association headquartered in Spokane, Washington. Our 1,800 members reside in 35 states and 6 Canadian provinces and are actively involved in exploration, mining, and reclamation operations on BLM- and USFS-administered public lands in every western state. Our broad-based membership includes many small miners and exploration geologists, as well as junior and major mining companies, environmental firms, and suppliers of equipment and services to the domestic and global mining industry. More than 90 percent of our members are small businesses or work for small businesses. Many of our members have extensive knowledge of the scope of the hardrock abandoned mine lands (AML) problem and first-hand experience in remediating AML environmental impacts and abating AML safety hazards.

NWMA asked me to testify because I have extensive experience with AML and mercury issues. In my experience outside of Shaw, I have acted as a regulator of the mining industry (California State Mining & Geology Board), a consultant to both public and private owners of mined lands, and a responsible party (Jamestown Gold Mine), which has allowed me to view all sides of this issue. I was appointed to positions of regulatory responsibility by both Democrat and Republican administrations, which shows that I am politically impartial. I have been involved with mercury issues since 1972 while I was performing research at Michigan State University, which has allowed me to observe changes in science and industry. I was present for the 1st Earth Day Rally in May 1970 at the University of Wisconsin. I have been solving environmental problems for more than 35 years.

All stakeholders in the dialogue about mining and its impact on the environment agree that cleaning up historic AMLs to eliminate safety hazards and to minimize environmental impacts is

an important and necessary public policy goal. The NWMA, along with other members of the hardrock mining industry, have long supported the development of policies to encourage AML cleanup. NWMA presented testimony to this Subcommittee in 2006 and 2007. As we have stressed in previous testimony and as we will emphasize today, the key to expediting cleanup of AMLs is to provide additional funding and to enact Good Samaritan liability relief for voluntary AML cleanup efforts. I will focus my testimony on the following points:

- AML issues predate environmental laws
- AML reclamation can be accelerated
- Need for Federal funding to accelerate cleanups
- Need for Good Samaritan liability relief

120 Years of Mining Precede the Enactment of Environmental Laws

Table 1 shows a temporal history of mining and corresponding regulation in the western U.S. The left side of the table gives the history, and the right side gives the evolution of the environmental laws and regulations that affect mining. As you can see in the yellow top part of Table 1, mining in the western U.S. started almost 170 years ago in about 1840. The enactment of federal and state environmental laws, shown in green, did not start until the 1960s, which is roughly 120 years later. As is readily apparent from Table 1, environmental regulations did not apply to hardrock mines before the 1960s. This unregulated era of mining created the abandoned mines that are the subject of this hearing.

The pre-regulation mining districts shown in the yellow part of Table 1—such as the California Mother Lode Gold Rush and associated coast range mercury mining; the Comstock Lode in Nevada; Central City, Colorado; Butte, Montana; the Black Hills of South Dakota; Socorro, New Mexico; and the Klondike in Alaska—tell the story of the developing West. These and countless other mining districts helped build, settle, and protect America. Although we cherish the history and heritage they represent, we are now left to deal with a difficult legacy of the safety hazards and environmental impacts this history has left behind.

The wastes produced by mining and ore processing were usually deposited adjacent to the operating facilities or directly down-gradient in the nearest valley or low spot. Much as domestic wastes of the time were sent to the nearest moving water body. Gravity was considered the best friend of miners and other industrial waste generators of the time. Once the commercial ore was exhausted or market prices fell below the cost of extraction and processing, operators commonly abandoned sites with little, if any, thought to reclamation or reuse of the land.

While this lack of environmental protection and reclamation measures seems unacceptable when viewed through the prism of our modern-day commitment to protect the environment, it is important to understand that mines of this bygone era were no different than other industries of the time. Environmental protection simply was not on anyone's radar screen, and the long-term consequences of these mining practices were not recognized or understood.

The environmental protection and bonding requirements for modern mines guarantee that today's mines will not become tomorrow's AMLs for two reasons. First, modern mines are designed, built, operated, and closed with the end in mind by using state-of-the-art environmental safeguards that minimize the potential for environmental problems to develop. Second, federal

and state regulators require adequate reclamation bond monies in the event a mine operator goes bankrupt or fails to perform the necessary reclamation. The amount of required financial assurance is based on what it would cost BLM, USFS, or a state agency to reclaim the site using third-party contractors to do the work. By law, these reclamation bonds are reviewed and adjusted on a regular basis to make sure they keep pace with inflation and on-the-ground conditions.

In 1975, the Surface Mining and Reclamation Act was passed in California requiring all mining operations and exploration projects that disturb more than one acre to provide a reclamation bond. Nationwide, a combination of reclamation bonds and environmental laws and regulations ensures that the AML problem is a finite and historical problem and not one that will grow in the future.

How Do We Accelerate the Progress of Current AML Reclamation Efforts?

Although the scope of the AML problem is large, state, and federal agencies in cooperation with communities, mining companies, and other private-sector interests are making steady progress in reclaiming AMLs. Thus, as we consider the best ways to tackle the AML problem, it is important to start from the perspective that *the glass is not half empty.* Progress is being made. The focus of the AML legislative dialogue should be to create policies that accelerate the pace of AML reclamation so that more sites can be reclaimed sooner rather than later.

It is apparent that some western states have undertaken a number of successful AML reclamation efforts. States with active mining typically have the largest and most productive AML reclamation programs. States like Nevada use mining fees to fund some of their AML reclamation program. States with little or no mining typically have very poorly funded programs. California has a very progressive and effective AML program. However, there is virtually no current hardrock mining in California and the Office of Mine Reclamation has identified thousands of AML sites that need to be reclaimed. My two terms on the California State Mining and Geology Board has given me exposure to AML issues throughout the State.

Federal Funding is Needed to Accelerate AML Cleanups

NWMA and other industry interests have long supported creating a federal hardrock AML fund using revenue generated from a net royalty on new claims to support, augment, and expand existing AML programs. To build the fund more rapidly, the fund should solicit donations from individuals, corporations, associations, and foundations.

NWMA believes that states should to take the lead in administering the AML program. As our research shows, many states already have effective AML programs. We see no need to re-invent the wheel by creating a new federal AML bureaucracy. This bureaucracy would be an inefficient use of the monies collected and would reduce the amount of money available for on-the-ground remediation and reclamation. Because each hardrock AML site has unique geology, geography, terrain and climate, a uniform, one-size-fits-all program will not achieve optimal results. The state AML programs are in the best position to prioritize where federal AML funds should be spent within the state. Bridget Luther, one of the speakers today, represents California's AML program.

Good Samaritan Legislation is Critical to Facilitating Voluntary AML Reclamation

Although more funding is a key component of solving the AML problem, funding alone is not the best way to accelerate the pace of AML reclamation activities. Enacting Good Samaritan liability relief is also essential. Concerns about liability exposure stemming from the Clean Water Act (CWA), Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund), and other laws are significantly chilling Good Samaritan AML cleanups.

Under these laws, any mining company, state or federal agency, individuals or other entities that begin to voluntarily remediate an abandoned mine site could incur "cradle-to-grave" liability under the CWA, CERCLA, and other environmental laws, even though they did not cause or contribute to the AML environmental problem.

Virtually every group who has looked at the AML issue has recognized and documented the legal impediments to voluntary cleanup of AMLs. Policymakers and independent researchers including the National Research Council, the Western Governors' Association, and the Center for the American West have urged Congress to eliminate these impediments.

Many public agencies emphasized the importance of Good Samaritan liability relief in enabling them to expand the scope of their AML reclamation programs. In the absence of such relief, most agencies avoid sites with contaminated water, due to concerns about CWA liability exposure.

Several Good Samaritan bills have been introduced in the past. We strongly support the H. R. 3203's approach to Good Samaritan legislation, which would accomplish many of the key Good Samaritan objectives shown in Table 2.

The combined effect of a federal AML reclamation fund and Good Samaritan liability relief is the best way to accelerate the pace of AML reclamation. Good Samaritan liability relief will facilitate public – private sector partnerships, which we know is an important step in solving to the AML problem. I have discussed Good Samaritan liability relief with several public and private entities who have conducted or would like to conduct mercury remediation efforts.

One example is Homestake Mining in Lake County, California. Homestake operated the McLaughlin Gold mine, which was the largest gold mine in California. While this mine was in operation, it yielded gold and many good jobs in Lake County. McLaughlin was operated under modern day environmental laws and has an adequate reclamation bond. This mine has been protective of surface waters or groundwater. However, it is located in a historic mercury mining district. Although, Homestake did not operate or profit from these legacy mines, it has responsibly reclaimed several historic mercury impacted sites, including mine openings, processing sites, and waste piles.

Good Samaritan liability relief would allow other companies to help resolve the AML issue. It is not uncommon for modern day responsible mining companies to shy away from historic mining districts because of legacy issues. However, in many cases the best solution to an AML problem may be to have a responsible mining company access the remaining reserves and clean up the historic impact. Homestake is an example of a company that has cleaned up historical impact in California.

A second example is the Contra Costa Flood Control District in Contra Costa County, which is where I live. The Mount Diablo Mercury mine has polluted the Marsh Creek watershed and an important reservoir owned by the District. Contra Costa County would like to more actively participate in cleaning up this mine and the watershed. However, they are hampered by the concern over what happened to the East Bay Municipal Utility District (EBMUD) when they tried to reclaim the Penn Mine in Calaveras County. EBMUD is a "poster child" for public agencies trying to do the right thing only to be hit with a huge environmental problem that they had nothing to do with. Although Contra Costa County has received some federal funding through the Army Corps of Engineers, the clean up process has been very slow due to an overpowering liability concern. Counties like Contra Costa need Good Samaritan relief.

In addition to living in a county with AML issues, I am part of the Lac Courte Oreilles band of Ojibwa Indians Indian tribe that has suffered due to mining legacy sites. I have also been in contact with my Tribe. The tribal has legacy mining issues on the reservation and very low employment. Good Samaritan liability relief could prompt mine reclamation, provide good jobs, and restore my tribe's lands.

Conclusion

The NWMA and I very much appreciate this opportunity to testify today and put AMLs into the proper historical perspective, to explain why AMLs are a finite problem and how today's environmental regulations and bonding requirements prevent the creation of new AMLs, to describe some of the progress that is being made in reclaiming AMLs, and to present our recommendations for moving forward. We believe the AML problem is manageable and solvable. We understand the problems that AMLs are creating, and we have the engineering, environmental protection, and reclamation techniques needed to solve these problems. But our AML tool kit is missing two essential tools – adequate funding and Good Samaritan liability relief for voluntary AML cleanup projects.

So we conclude by asking for your help. Please add a federal AML fund and Good Samaritan liability relief to the AML tool kit. These two policies offer the best opportunity to accelerate the progress that is being made in abating AML safety hazards and remediating AML environmental problems. The NWMA stands ready to work with you and to help in any way we can to achieve what we all agree is an important goal – expediting AML reclamation.

I thank you again for this opportunity to testify on this important issue and will be happy to answer any questions.

TABLE 1 Partial Chronology of U.S. Mining versus Enactment Dates for Environmental Laws and Regulations Affecting Hardrock Mining		
Decade	**Commencement of Selected Western Mining Activities**	**Enactment Dates for State & Federal Environmental Laws and Regulations**
1840s	CA: Mother Lode–gold WY: Atlantic City – gold NW: Ortiz Mine - gold	
1850s	CO: Cherry Creek, Clear Creek, – gold NV: Comstock Lode - silver & gold WA: Okanogan District – gold	
1860s	CO: Front Range – gold & silver ID: Boise Basin – gold	
1870s	SD: Black Hills - gold CO: Leadville, San Juan Mountains – silver, gold & base metals AZ: - Superior, Morenci - copper NM: Silver City – silver UT: Park City – gold, silver, lead	
1880s	CO: Aspen – silver, lead, zinc MT: Butte – copper ID: Coeur d'Alene District – silver NM: Socorro– silver, copper	
1890s	CO: Cripple Creek – gold WA: Republic District – gold AK: Klondike, Nome – gold WY: Kirwin – copper, silver	
1900s	UT: Bingham Canyon – copper NV: Round Mtn., Tonopah, Goldfields, Ely: – gold, silver copper	
1910s	CO: Climax - molybdenum CO, UT - AZ vanadium, radium	
1930s	NM: Pecos – silver, zinc, lead ID: Stibnite – antimony, tungsten	
1940s	CO, UT, AZ, NM: CO Plateau - uranium	
1950s	NM: Grants – uranium WY Sandstones - uranium NV: Yerington – copper OR: Riddle - nickel	
1960s	NV: Carlin – gold	•National Historic Preservation Act •Air Quality Act •National Environmental Policy Act
1970s	CO: Henderson - molybdenum NV: Round Mountain – gold	•Occupational Safety and Health Act •Clean Air Act •CA Environmental Quality Act •MT Metal Mine Reclamation Act •MT Environmental Policy Act •Federal Water Pollution Control Act/Clean Water Act •Endangered Species Act •U.S. Forest Service 36 CFR 228A regulations •CA Surface Mined Land Reclamation Act •Federal Land Policy and Management Act

TABLE 1 Partial Chronology of U.S. Mining versus Enactment Dates for Environmental Laws and Regulations Affecting Hardrock Mining		
Decade	**Commencement of Selected Western Mining Activities**	**Enactment Dates for State & Federal Environmental Laws and Regulations**
1970s (cont.)		•Resource Conservation and Recovery Act •Clean Water Act Amendments •CO Mined Land Reclamation Act •Mine Safety and Health Act •Surface Mining Control and Reclamation Act •WI Metallic Mining Reclamation Act •ID Surface Mining Act •Archaeological Resources Protection Act
1980s	NV: Jerritt Canyon, Sleeper, Gold Quarry, Goldstrike, Chimney Creek – gold ID: Thompson Creek – molybdenum CA: McLaughlin - gold MT: Stillwater – platinum/palladium	•Comprehensive Environmental Response, •Compensation, and Liability Act/Superfund •BLM 43 CFR 3809 Regulations •SD Mined Land Reclamation Act •Hazardous and Solid Waste Amendments •Superfund Amendments Reauthorization Act •UT Mined Land Reclamation Act •NV Water Pollution Control Law •NV Mined Land Reclamation Act
1990s	AK: Ft. Knox – gold NV: Pipeline, Lone Tree - gold	•Clean Air Act Amendments •NM Mining Act
2000s	NV: Marigold expansion, NV – gold NV: Phoenix Project – gold NM: Copper Mtn. South expansion – copper AZ: Carlota, Safford – copper	•BLM updates 43 C.F.R. 3809 regulations to include mandatory bonding requirements for all surface-disturbing activities •USFS updates bonding requirements •NV expands and updates bonding requirements •MT updates bonding requirements

Table 2
Key Components of Good Samaritan Legislation

- Provide both Clean Water Act and CERCLA liability protection.
- Create Good Samaritan permits that provide unambiguous and complete legal liability protection against specified federal, state, and local environmental laws for AML cleanup activities that are performed according to the work plan authorized in the permit.
- Stimulate greater private-sector involvement in direct cleanup efforts and in making financial and in-kind contributions towards agency-led cleanup projects.
- Allow Good Samaritans to maximize the amount of money spent on the ground by streamlining the permitting process and eliminating the requirement to conduct a Potentially Responsible Party (PRP) search at sites that will be reclaimed using private funding. It should not matter whether there might be a PRP. The goal should be environmental improvement, not finding someone to blame.
- Allow entities – including mining companies – that have no previous connection to a site and that did not create environmental problems at an AML to qualify as Good Samaritans.
- Eliminate liability exposure associated with performing the site work necessary to determine the scope of the AML environmental problems and to develop appropriate remediation plans.
- Make federal land management agencies and State AML Programs the lead agency(s) in reviewing and approving Good Samaritan permit applications, with assistance from State environmental permitting authorities for those states where EPA has delegated Clean Water Act authority.
- Encourage meaningful public input and collaboration in the permitting process and discourage the misuse of the public involvement process as a vehicle for delaying project cleanups.
- The environmental requirements for a Good Samaritan project should be wrapped into a single permit. The permit should be approved only if the project is technically sound and promises overall improvement to the environment and/or securing of safety hazards.
- Allow incremental cleanups using technically sound remediation measures that will result in an improvement to the environment – even if they will not result in the complete cleanup of all contaminants at an abandoned mine land site or the attainment of all otherwise applicable environmental standards, such as stringent water quality standards.
- Give the permitting authority(ies) discretion to make site-specific adjustments to environmental requirements and standards under state and federal environmental laws that could otherwise thwart Good Samaritan remedial actions.
- Recognize that reprocessing is a viable site environmental remediation technique that removes metal contaminants from historic mine wastes and produces a more chemically stable and benign waste product that can then be stored in a properly engineered facility.