



The Environmental Action Network for the 21st Century

1200 Eighteenth Street, N.W. Washington, DC 20036

**Testimony of Velma M. Smith
Senior Policy Associate, National Environmental Trust
before the
House Committee on Resources
Subcommittee on Energy and Mineral Resources
Opportunities for Good Samaritan Cleanup of Hard Rock Abandoned Mine Lands
July 13, 2006**

On behalf of the National Environmental Trust, I thank the Committee for this opportunity to testify on the important issue of cleaning up abandoned mine sites.

Our hope this morning is to bring several messages before the Committee. First, a message of appreciation for recognizing the long-festering and still-growing problem of abandoned hardrock mines. In addition, a sense of optimism to what can clearly seem like a daunting task— noting the important cleanup work that is going on already, under current law and involving diverse parties.

At the same time, we would hope to dispel what appear to be critical misperceptions about this problem, including the idea that nearly all abandoned mines date from the turn-of-the-20th- century or that liability is always a barrier to cleanup. We also offer cautions about the complexity of cleanup at many sites, the potential for remediation failures – regardless of good intentions, the need for solid information and analyses, and the absolutely inescapable need for resources.

In fact, we would argue that the pressing need today is not for new legislation but for an infusion of funds: Mining sites are not being cleaned up fast enough because neither the industry nor the government is contributing sufficient money to the task. The federal budget is tight, but to really address this problem, you must find a way to bring more resources to a serious cleanup effort.

We would also underscore the fact that while fear of liability may, in some cases, give pause to non-mining parties who would otherwise venture into mine cleanup, that pause, in and of itself, may not be a bad thing when it comes to cleaning up these difficult messes. Mining sites can be not only difficult to diagnose but also enormously difficult to cure. Entered upon without solid information, with poor design or with faulty execution, cleanups can and have gone terribly wrong.

Finally, we urge you to recognize that liability for both previous operators and land owners is an important factor that has been driving many cleanups – cleanups that are happening at listed Superfund sites like the Iron Mountain Mine in California, Clark Fork in Montana, and the Captain Jack Mill in Colorado and at non-listed sites like Yerington, Nevada, Bingham Canyon, Utah and the Copper Basin Mining District of Tennessee. If Congress reaches too broadly to encourage the cleanup of the most easily remedied mine sites, it will put at risk the current liability leverage that leads to cleanup of enormously difficult and expensive mining messes. And if a Congressional response brings re-mining and reprocessing operations into the definition of “Good Samaritan” actions, you may end up creating the exception to swallow the rule, removing normal, for-profit operations, which nearly always take place in old mining districts, from existing regulatory requirements.

So please, don’t look simply through the narrow prism of regulatory hurdles for cleaning up a few of the many mining problems. Look broadly at the full scope of the problem and recast your topic as “Solutions to Mining

Contamination.” In that context, figure out not only how to drive more of the easier cleanups but also how to stop adding to the problem and how to address the large and seemingly intractable mining messes. In that context, we believe you should look, with new openness, to the mining reform legislation sponsored by Congressman Rahall, which includes dedicated funding that can be used for mine cleanups and also sets a new standard of environmental scrutiny and performance for hardrock mines. The Rahall bill addresses only operations that take place on federal lands, but we would argue that it should be applied to all hardrock mining, regardless of location.

Hardrock mining is enjoying a boom. Metals prices are breaking records; exploration fever has once again hit the West; and even old operations that seemed like economic losers are attracting new attention. So now, while hardrock mining is flush, is the time to engage the industry in cleaning up its past and current operations. Now, we would hope, is the time for the mining industry to act cooperatively in the true spirit of the Good Samaritan who gave aid to the injured man and paid his expenses with no thought of compensation. Our plea to the industry is to step forward willingly to pay a modest fee on mining profits in order to create a trust fund that can remedy a long legacy of pollution problems.

A Big Problem

In 1993 the Mineral Policy Center, now known as Earthworks, assembled data on hardrock abandoned mines from state and federal agencies, private contractors and associations.¹ From this effort, they estimated nearly 557,000 abandoned hardrock mines in 32 states. Their numbers, though perhaps considered high at the time, are generally in line with other best judgments – including estimates from the Western Governors’ Association, the Bureau of Land Management and the Environmental Protection Agency.

A compilation of abandoned mine land data assembled by the Western Governors Association, for example, shows counts ranging from 150 abandoned mines in North Dakota to 100,000 in Arizona.² The WGA report cautions that different states use different definitions of abandoned mines and count mines and mine sites in different ways. It also clearly acknowledges that existing inventories are incomplete. The report’s numbers for 13 states total more than a quarter of a million.

Estimates from Federal agencies are high as well. BLM, for example, places the number of abandoned mines on lands that it administers at a low of 100,000 or a high topping half a million.³ About 5 percent of those sites – possibly more than 25,000 mines -- have caused or could cause environmental damage, according to the Bureau. The Forest Service estimates that about 5 percent of an estimated 25,000 to 35,000 abandoned mines on its lands will require cleanup under Superfund authorities; another 12 percent of those sites are expected to require water-related cleanup using authorities other than Superfund. Excluding lands in Alaska and California, the National Park Service estimates the number of abandoned sites on its lands at more than 3,200 – with abandoned mines inventoried in 134 of the 387 National Park System units

A Varied Universe, in the West and Beyond

What types of sites are these and what types of remediation is called for? The answers run the gamut from small problems to large complexes. And though much of the focus in this discussion is on the West, where the number of sites is huge, there are mine messes in other parts of the country as well.

In some instances, the highest priority problems may be open shafts and adits that pose physical hazards to people and wildlife. These must be plugged, filled, secured or closed off.

¹ Mineral Policy Center, Burden of Gilt, June 1993.

² Western Governors’ Association, Abandoned Hardrock & Noncoal Mines in the West: A Partnership Report, 1998 available online at <http://www.westgov.org/wga/publicat/miningre.pdf>.

³ US EPA, Office of Solid Waste and Emergency Response, Cleaning Up the Nation’s Waste Sites: Markets and Technology Trends, September 2004.

- A motorcyclist was killed in 2003, for example, when he rode his bike over a tailings pile directly into an open mine shaft in the Red Mountain area of California.
- In Nevada, the state reports that people have died swimming in open pit lakes and suffocated after entering open mine shafts.
- Wyoming has reports of mine subsidence affecting an interstate highway, a public water line and a housing development.
- In Alaska, 500 feet of dangerous high wall was reported in a heavily used area near Juneau, and open portals and shafts found within a few hundred feet of a public use cabin in a state park
- In Oklahoma, the community has learned that a third of the small town's 400 houses sit atop or near a huge mining cavern with a probability of collapse."⁴
- In California alone, the Office of Mine Reclamation has stated that 84 percent of the state's abandoned mines –that's nearly 33,000 mines – present physical hazards.⁵

In other cases, the threats are from elevated levels of pollutants in mine wastes, contaminated soils, blowing tailings and abandoned ponds of cyanide solutions or other wastewaters. Abandoned mines, as the U.S. Geological Survey reports, may degrade water quality and aquatic resources with releases of acid drainage, seepage from tailings piles, streambank erosion and storm runoff.

Overall, the government estimates that old mines have contaminated about 40 percent of all Western river headwaters, and scientists have reported loss of fish populations and deterioration of fish health as well as groundwater contamination, including contamination of drinking water wells, all associated with continuing pollution from abandoned or inactive mines.

- In Arkansas, for example, a 1996 report attributed problems in nearly 200 miles of streams to the impacts of old lead, zinc and coal mines.
- In Oklahoma, a report from that same year identified 23 lakes and streams adversely impacted from past and then present mining operations.
- In Utah an estimated 300 uranium mines have moderate to high levels of radiation.
- A 1999 Nevada report on abandoned mines notes problems with breached tailings dams spreading heavy metals and acidic wastewaters, elevated levels of contaminants including mercury, lead, cyanide and arsenic from abandoned mines, and mining-related threats to local agricultural activities and the habitat of the endangered Desert Tortoise and the Northwest Valley Fly Catcher.
- In March of 2005, a "flash report" by the Department of Interior's Office of Inspector General reported dangerous levels of arsenic and contaminated groundwater in a growing area of Pima County, Arizona.

Solutions to these problems will run the gamut as well, ranging from removing small piles of waste rock or tailings from a floodplain or reseeding a disturbed area, to removing transformers, machinery and buildings, stabilizing large waste piles, rerouting water flows, building new retention ponds, reinforcing old dams, managing toxic lagoons, removing or covering contaminated soils.

Old and New Contributions to the Problem

Much of the discussion of abandoned mines brings to mind the grizzled prospector with mule and pick axe, faded sepia-tone images and thoughts of the Wild West. But before you assume that the nation's abandoned mine messes all date from the 19th century, well before modern environmental regulation, consider this.

⁴ Omer Gilham, "Calls for Tar Creek buyouts intensify: A Corps of Engineers report brings home to residents the dangers of possible cave-ins," Tulsa World, February 2, 2006.

⁵ California Department Of Conservation, Office of Mine Reclamation, Abandoned Mine Lands Unit, California's Abandoned Mines: A Report on the Magnitude and Scope of the Issue in the State, June 2000.

Modern-day mines are often located in historic mining areas, where mining wastes have been deposited in stream beds and other fragile areas, and where acid drainage still flows from old mine workings. In some cases, this makes it difficult to say with certainty just how much of a pollution problem is linked solely to recent activity.

In many instances, however, it is clear that modern operations not only worsen existing problems but also create new problems. Modern mine operations can cover large acreages and employ enormous earth-moving equipment. Their scale, complexity and waste production can dwarf that of historic mines. Frequently modern mines use large amounts of toxic chemicals, and collectively they release more toxics into the environment than any other industry. Their impact on the environment is enormous – and not always according to plan.

- Perhaps the most notorious example of a modern mine gone wrong is from Colorado. The Summitville gold mine opened in 1986 and was abandoned in 1992. It became one of the nation's most expensive Superfund cleanup sites, while the Canadian business tycoon behind the venture moved his schemes and his assets overseas. The Summitville area had a long history of mining, but the acid and cyanide drainage that killed miles of the Alamosa River were clearly connected to this faulty heap leach mine operation.
- In 1996, Canyon Resources boasted that reclamation of the northern section of its Montana Kendall heap-leach operation was 90 percent complete, and they predicted that they would rinse out the "last traces of cyanide" through the next year. Reclamation of the mine that opened in the late 1980s is still incomplete today, and according to news reports, the mining company is resisting State calls for more extensive cleanup. Canyon extracted gold and silver from the ground from 1989 until 1995. Treating the mine-contaminated water, says the State, will have to continue indefinitely.
- Near Riddle, Oregon, a now-defunct Canadian company ran the Formosa copper and zinc mine between 1990 and 1993. The company abandoned the 100-acre property in 1994, and by 1997 the system they had installed to handle acid mine drainage was no longer working. As is the case with many other mines – some reclamation was accomplished by the company before its departure, but those efforts did not stop copper, cadmium, lead and zinc from polluting some 18 miles of a nearby stream. According to the state, the contamination has "...severely harmed the ecosystem of these streams, including protected Coho and Steelhead salmon populations."
- In South Dakota, the Gilt Edge Mine was a 260-acre open pit and cyanide heap leach facility. Granted a permit in 1986, the operation was reportedly mined out by 1992. The mine's initial bond of \$1.2 million was based on a prediction that the mine would encounter only non-acid generating rock. The prediction, however, turned out to be wrong. When the mine closed, 150 million gallons of acidic, metal-laden wastes remained along with millions of cubic yards of acid-generating waste rock.
- Idaho's Grouse Creek mine began production in 1994, and its tailings impoundment, declared "state-of-the-art" when it was built, included clay and plastic liners and, according to a company spokesperson, exceeded permit requirements. But Hecla's gold find wasn't as rich as anticipated, and the company ran into processing problems. In July of 1995, EPA cited this mine near the Frank Church Wilderness for violations of cyanide, mercury and total suspended solids water quality standards. The problem: leakage from the impoundment liner. A month later, it was the pipeline carrying slurried mill wastes that caused more violations. In 1996, according to the U.S. Forest Service, another 19,000 gallon spill occurred in the mill area. The mine closed in 1997 and by 1999 "pervasive levels" of cyanide were found in Jordan Creek.

I could go on. But suffice it to say that mining's mistakes have and will always be characterized by the mining industry as its misguided past. In the 1970's, history included the turn-of-the-century gold rush mines as well as mine operations from the 1940s and 50s. Now, it appears, that mines from the 1960s, 70s and 80s have taken

their place in “history” as well. By 2020, will the mines of today be lumped in with those “turn-of-the-century” mines that bear all the responsibility for pressing pollution problems?

From Brewer Gold in South Carolina to the Battle Mountain mine in Nevada, from Zortman Landusky in Montana to Red Dog in Alaska, modern mines have given us ample evidence of continuing pollution problems. The facts on the ground suggest that regulation -- even today -- is sorely lacking in substance or enforcement, or perhaps both. And in too many instances mining companies seek the shelter of bankruptcy courts before they meet their reclamation and cleanup obligations.

We agree with the National Center for Manufacturing Sciences: “[T]he mining sector is, from an environmental standpoint, the *least* regulated of any comparable industry sector.” (Emphasis in original.) The Center goes on to state that the lack of regulation for mining “is no chance oversight,” but actually the result of a specific legislative loophole. Their reference is to the so-called Bevill amendment that shields the mining and mineral processing industry from federal hazardous waste rules. This hard-fought and carefully protected special deal for mine-related wastes keeps EPA from regulating wastes derived from extraction and beneficiation of minerals, even if they met established criteria for designating wastes as “hazardous.”

These wastes are frequently the crux of the problem at abandoned mine sites.

EPA issued a National Hardrock Mining Framework in September of 1997, with the specific aim of improving environmental protection with coordination and collaboration across programs and agencies, but in August of 2003, the EPA Inspector General declared that it “...found no evidence that the Framework contributed to environmental improvements or protections at specific hardrock mining sites.” The IG noted that the Framework’s goal of protecting human health and the environment at hardrock mining sites was hampered by EPA’s lack of direct regulatory authority.

In addition, as the Government Accountability Office made so clear in its August 2005 report,⁶ the federal government’s cleanup burden grows as businesses reorganize and restructure to limit their future expenditures for environmental cleanups. GAO points out that “EPA has not yet implemented a 1980 statutory mandate under Superfund to require businesses handling hazardous substances to maintain financial assurances” for environmental cleanups.

Only two months earlier, the GAO also concluded that BLM’s failure to obtain proper financial assurances from mining operations on federal lands has left a gap of some \$56.4 million in unfunded reclamation costs.⁷ That number, by the way, covers only 48 hardrock mines that had ceased operations by the time the study was undertaken. It doesn’t cover mines that are still operating.

A Matter of Money, Lots and Lots of Money

Because abandoned mine inventories have not been completed – and indeed may never be -- it is difficult, if not impossible, to offer any certainty about the likely costs of addressing these problems. Some sobering numbers have been put forward, however.

Earthworks, working with experienced mining engineers, has predicted that approximately 15,000 mines would require cleanup of water-related problems. The cleanup tab for the full universe of abandoned mine sites, according to the group, may run as high as \$72 billion.

⁶ US Government Accountability Office, “Environmental Liabilities: EPA Should Do More to Ensure that Liable Parties Meet Their Cleanup Obligations,” August 2005.

⁷ US Government Accountability Office, “Hardrock Mining: BLM Needs to Better Manage Financial Assurances to Guarantee Coverage of Reclamation Costs”, June 2005.

In January 2003, the EPA Inspector General reported that 87 sites classified as abandoned hardrock mines or mine-related sites had been placed on the Superfund National Priorities List (NPL).⁸ At the time of the IG's report, EPA's rough estimate of cleanup costs for these specific sites was about \$2 billion. Since then, more mine-related sites have been added to the list – and many more are possible candidates.

Looking beyond these few sites, EPA's Superfund office has predicted that somewhere between 7,700 and 31,000 mines will require cleanup – either under Superfund or under another program.⁹ An EPA report on the cleanup technologies, notes that the need for cleanup grows as the public looks increasingly toward rural areas for recreation and as some old mining areas are developed for primary housing or second homes. Certainly in your own thirsty state, Mr. Chairman, you understand that mining's impact on water resources grows more relevant to the entire state as downstate populations grow and look beyond existing water allocations for new water sources. Data from several sources cited in this EPA report indicate a range of cleanup cost running from \$20 to \$54 billion, with about \$3.5 billion of that related to Superfund designated sites.

The Bureau of Land Management estimates that cleanup of abandoned mine sites in its jurisdiction may cost as much as \$35 billion.¹⁰ Damage on U.S. Forest Service land alone would cost \$4.7 billion to fix.¹¹

How do expenditures match up against these figures? According to EPA¹², the total federal, state and private party outlays for mining site remediation have been averaging about \$100 million to \$150 million per year.

At this rate of expenditure, notes the report, only 8 to 20 percent of all the cleanup work will be completed over the next 3 decades.

No Easy Solutions

And now for the bad news. Cleaning up mining problems can be, not only expensive, but also technically challenging.

The case of the Penn Mine in California – the case that initially prompted the call to loosen Clean Water Act requirements for mining cleanups – makes the point.

The abandoned old copper mine in the Sierra Nevada Mountains was producing acid mine drainage flowing into the watershed that provides drinking water to the East Bay Municipal Utility District. The water utility, with the best of intentions, took on what it apparently thought would be a modest project to protect its water source. The Utility constructed a small dam, diversion facilities and retention ponds. Unfortunately, however, the results fell short of what was desired.

The ponds were not sized properly and maintenance of the structures was reportedly minimal. So the facilities – though they solved some problems – actually created additional problems at certain times of year. People in the community were upset and took legal action to compel more cleanup. The Utility found itself with a long-term cleanup job that it had not initially anticipated.

Was this particular party particularly inept or sloppy? Probably not.

⁸ Office of the Inspector General, US EPA, Nationwide Identification of Hardrock Mining Sites, March 31, 2004, Report 2004-P-00005.

⁹ US EPA, Office of Solid Waste and Emergency Response, Cleaning Up the Nation's Waste Sites: Markets and Technology Trends, September 2004.

¹⁰ Ibid.

¹¹ Robert McClure and Andrew Schneider, "More than a century of mining has left the West deeply scarred," The Seattle Post-Intelligencer, June 12, 2001.

¹² US EPA, Office of Solid Waste and Emergency Response, Cleaning Up the Nation's Waste Sites: Markets and Technology Trends, September 2004.

- In 1997, a mining company in Arizona was attempting to cover a tailings impoundment with waste rock. The impoundment failed and tailings and debris moved into Pinto Creek.¹³
- In Montana, a mining company reconstructed a tailings dam that had failed. Today, the State, the Forest Service, the EPA and the community are searching for answers and money to fix this previous “fix” that is now leaking and considered unstable. The company involved in this case and dozens of others is in bankruptcy.
- Initial cleanup efforts at the Sulphur Bank mine – an old mercury mine in California – used monitoring data from what turned out to be an unusual dry spell. When precipitation levels changed, the conceptual model of the mine’s release of mercury into the environment was proven wrong and adjustments to the remedy were required.
- A host of engineers tried to address the problems of acid drainage running through the Oklahoma lead mining district some 20 years ago. They apparently managed to keep acidic waters from returning to the surface through unplugged boreholes, and they thought they got it right with water diversions and “rerouting.” But just recently monitoring has shown high levels of lead and arsenic headed toward Oklahoma’s Grand Lake.
- Sadly, another lesson in unintended consequences comes from the same Tar Creek area, where the sensible course of action at one point seemed to be to encourage “remining” of abandoned ore bodies. In this case, “gougers” leased mines that had been abandoned in order to recover lower grade ores, and their modest operations provided some modest economic benefits as the mines were closing in the late 60s and early 70s. Since that time, however, there have been numerous and sometimes tragic cases of subsidence.¹⁴ Homes and businesses in the small town have been declared unsafe, and the community is now seeking federal support for relocation.

The Lessons of Yerington

But perhaps, Mr. Chairman, the most relevant case-in-point comes from your own Silver State. The old Anaconda Copper Mine is a sprawling site that has vexed State regulators for years and will, no doubt, continue as an expensive, long-term cleanup project. It is a site where remining and reprocessing were undertaken – but without significant remediation benefits. To the contrary, the reprocessing that occurred on this site appears only to have added to underlying problems. Yerington, as it is known, stands as a harsh illustration of why policymakers should be extremely wary of weakening environmental controls and accountability, waiving liability or allowing projects to proceed with less than thorough knowledge and understanding of baseline conditions and possible outcomes.

As I am sure you know, Mr. Chairman, Anaconda mined copper and produced sulfuric acid at this 3,400-acre site near the small City of Yerington from 1953 through the late 70s. At some point in the 70s, as regulators and the public later learned, the company recognized the presence of radioactive elements in the mine waste and considered options for uranium reprocessing. The property was purchased by Atlantic Richfield Company in 1977 as the mines were closing down. Shortly thereafter the property was purchased by another owner, who worked to demonstrate the potential for additional copper recovery from the tailings.

At this point, the site was used for copper recovery and for metal salvage operations. Arimetco then purchased the property and constructed five heap leach pads and other facilities. The company filed for bankruptcy in 1997 but continued to recover copper from tailings until late in 1999. In 2000, they walked away from the site leaving nearly 92 million gallons of acidic, metal-laden wastewater. Using standard BLM costing methods, engineers estimate that the closure of just the five leach pads could cost somewhere in the range of \$12 million to \$15 million – a fraction, unfortunately, of what the entire site cleanup may cost.

The site is difficult, not just because of the size and the range of activities that took place, but also because of the co-occurrence of the uranium in the copper ores and the fact that that information was not shared early on with

¹³ US EPA, Region 9, “Total Maximum Daily Load for Copper in Pinto Creek, Arizona,” April 2001.

¹⁴ Subsidence Subcommittee, “Report to Governor Keating’s Tar Creek Superfund Task Force,” July 21, 2000.

regulators, the public and, perhaps, with some users of the property. And problems with groundwater contamination have worsened, it seems, because the picture of what was happening with seepage and groundwater flows was sketchy at best for far too long. In fact, disputes over needed testing at this site are a strong argument against the language in H.R. 5404, which seems to discount the need for solid baseline data and careful site characterization.

So with Yerington in mind, we would ask you to recognize that mining problems can be a bear to solve. Remediation – whether it involves sealing adits, reconstructing tailings ponds, diverting waters or recovering valuable minerals left as waste – can and often does go wrong. An adit may be plugged, only to blow out as water pressure increases. New seeps from a closed tunnel may open up, not at the original point of discharge, but in other unexpected areas.¹⁵ Constructed wetlands may function for a time but cease their cleaning function when they reach a point of saturation. Acid-generating rock may be encountered where none was anticipated; a season of drought, can pull groundwater into a pit lake faster than expected; storms or heavy snowmelt overwhelm the capacity of detention ponds. And reprocessing or re-mining, as Yerington so clearly illustrates, can create its own significant problems.

These examples are offered, not to suggest that nothing can be done to abate the problems of mining, but only to caution against a “solution” that tries to fast-track decisions that should not be fast-tracked, that skims over the need for critical baseline data, that imposes unreasonable deadlines on those reviewing cleanup plans, that skimps on oversight, or that absolves operators of responsibility from the outset. All of these are problems we seen in H.R. 5404

No Quick Fixes for Acid Mine Drainage

These real world lessons also remind us that time is an element to be reckoned with in mine cleanup efforts. In many cases, mining cleanups will have to be viewed as holding actions, and responsibility for long-term management must fall to someone, if not to the party that initiates cleanup. According to EPA, nearly 60 percent of the mining sites listed on the Superfund NPL are expected to require from 40 years to “perpetuity” for cleanup operations.¹⁶ Many other mine sites will require long-term maintenance and vigilance in similar time frames.

This is a critically important point that any “Good Samaritan” legislation must face up to. It is understandable that small non-profit organizations or even large corporations have little interest in assuming responsibility for a discharge that may well outlast the life of their organizations. But the reality is that acid mine drainage will, in many instances, go on for decades or longer, and that someone, some entity must retain responsibility for operating active treatment systems or maintaining wetlands or other more passive systems. If the Committee does not wish to consider leaving this obligation with private entities, then it must determine how to enable state governments or federal agencies to take on the long-term maintenance that many sites will require.

These examples also make it clear that a general directive to “do no harm” or “improve the environment,” much like that in the legislation before you, may be difficult to follow or to assess. We do not believe that vague language and lofty but unclear goals should sweep away the fundamental underpinnings of the Clean Water Act, including water quality standards. The communities surrounding these mines – or downstream, downgradient or downwind from these mines -- deserve more assurances than these vague goals can provide.

And, because things can go wrong, despite the best of intentions, we think it would be more than reasonable for any provisions that encourage “Good Samaritan” actions to also ensure against the unforeseen. H.R. 5404 allows for but does not require financial assurance, but financial assurance would be essential for any complex

¹⁵ See, for example, “The Earth’s Open Wounds: Abandoned and Orphaned Mines,” *Environmental Health Perspectives*, Volume 111, Number 3, March 2003.

¹⁶ *Ibid.*

cleanup project. We recognize that financial assurance would add an upfront cost to cleanup projects, but that cost would be a small fraction of a project's overall cost. It could be subsidized by a trust fund, and its existence would help to ensure that the cleanup projects undertaken today do not become tomorrow's emergency removals, that what are anticipated to be small projects do not end up draining the government's resources for response and remediation. That a poorly crafted "cooperative conservation" program doesn't create more Yeringtons.

Existing Law Allows for Cleanups

It is, no doubt, frustrating to hear of cases in which a willing Samaritan hesitates to act because he doesn't want to become embroiled in Clean Water Act permitting, is wary of a citizen suit or fears the reach of Superfund liability. But consider that there is another side to that coin. Liability and obligations under environmental laws is, in many instances, driving cleanups, not impeding them.

Yerington, for example, is being cleaned up today because the threat of Superfund liability offers strong motivation to potentially responsible parties.

In Utah, the Kennecott case is also instructive. It has been heralded as a "voluntary" effort to clean up massive amounts of groundwater, but the more than 20-year cleanup was "voluntary" only in the sense that Kennecott negotiated out and agreed to a cleanup plan -- after complaints were filed by regulatory agencies. In 1986, the State Health Department, acting as Trustee of Natural Resources as provided for under the Superfund law, filed a complaint against Kennecott Utah Copper Corporation for groundwater contamination. Superfund liability, again, drove cleanup.

In the Copper Basin of Tennessee, at the Rio Tinto mine in Nevada, along the Canadian border in Washington State and in dozens of other cases, investigation, cleanup and stabilization is happening, not in spite of liability and regulation, but because of it.

Mine cleanups are taking place not only within the context of the Superfund program -- as National Priority List sites, under orders and authorities for response actions and time-critical removals, as part of the Natural Resource Damage Assessment provisions and as Brownfields site. Mine sites are being cleaned up as part of community watershed initiatives, non-point pollution control programs and basin-wide programs to restore impaired waters. They happen under the authorities of the federal surface mining law and federal hazardous waste rules. And they involve not only the parties who created or worsened problems but also those who own the properties or want to own or use the properties. They engage volunteers, government agencies, non-profits and corporations. They are happening today -- under current law.

- In Colorado, for example, EPA reports that casino developers have capped and removed mine waste piles contributing to cleanup.
- In an area near the Birch Creek National Wild River Corridor, the Bureau of Land Management, the Alaska Department of Fish and Game, the Alaska Department of Transportation and the Alaska Department of Natural Resources worked together to restore portions of a reclaimed channel breach on land that had been used for placer gold mining from 1984 to 1990.
- In an area along the Hammond River, also in Alaska, BLM worked cooperatively with the State and Alyeska to clean up mine waste from an old 1930s to 1950s mine.
- The Martin Mine restoration project in Idaho was undertaken by the National Park Service in cooperation with the Craters of the Moon Natural History Association, the BLM and a local Boy Scout troop. This modest but useful project helped to eliminate a water quality threat to Little Cottonwood Creek.
- Not too far from here, over the river in Virginia, the Park Service worked with the State of Virginia and local volunteers to clean up the old Cabin Branch pyrite mine in the Prince William Forest Park.

- In Nevada and elsewhere, Bat Conservation International has worked cooperatively with U.S. Borax and others to address hazards in old mines in ways that help conserve bat habitat. Their work includes closure at the abandoned Murphy Gold Mine in Nevada designed to protect a large colony of pallid bats – again accomplished within the context of current law.
- And in January of this year, the Deltakeeper Chapter of Baykeeper and the California Department of Parks & Recreation signed a consent decree aimed at preventing a hundred year-old toxic waste at Empire Mine State Historic Park from continuing to degrade local waterways. The agreement – which actually grew out of challenge to the polluting discharges coming from the mine, was hammered out – not in spite of the Clean Water Act, but because of it.

Projects such as these and, of course, the much-talked about Trout Unlimited efforts, suggest to us that those who are determined can find room to work within the context of current law. Current law allows for creative and effective mine cleanup partnerships. The lesson from these examples is not, in our view, that the law should be changed, but that the experiences of mine cleanups should be shared widely; that more funds should be made available to allow for more projects.

H.R. 5404 is Not the Answer

In sum, Mr. Chairman, we repeat: The problems of abandoned mines are large and difficult, and Congress should be wary of simple solutions. Any effort to “encourage” cleanups with broad exemptions from Clean Water Act obligations, or worse still, from Superfund liability and other environmental requirements, is fraught with difficulty and unnecessary.

If a “Good Samaritan” is relieved of achieving Clean Water Act standards, what standards must they achieve? The legislation before you doesn’t answer that question. Over what time frame? What data should prospective Samaritans have in hand to assure that they understand critical aspects of water flow and geochemistry? Again, the legislation holds no answers. If a remedy fails, who bears responsibility? Who can be called upon for additional work or for maintaining treatment systems and reclamation work? On these points, the legislation tells us that the Samaritan is not responsible. It says that if the land is owned by the federal government, that the federal government is not responsible. But it doesn’t suggest just who it is that will take responsibility.

So what to do instead? We have a few recommendations.

1. Endorse EPA’s efforts to use model consent agreements, prospective purchaser agreements and other existing regulatory tools to promote “Good Samaritan” projects. Enable this work with adequate appropriations to support and enlarge the Mine-Scarred Land team of mining reclamation experts from federal agencies. Assure that this team has the resources and the support to act in an advisory capacity for new cleanup projects, providing technical critiques and disseminating information about the best practices and most likely problems.
2. Look to the mining industry to help fund cleanup of abandoned mines, following the model set out for coal mine restoration under the Surface Mining Reclamation and Control Act (SMCRA). Congress should impose a tonnage fee on all metals mined from private and public land to fund a serious, long-term remediation program. Use the resulting trust fund to pay for cleanup at old sites where responsible, solvent entities cannot be found. Congressman Mark Udall’s H.R. 1265 would be an excellent mark up vehicle.
3. Boost federal funding for cleanups and provide for coordination and sharing of funds among states, BLM, Forest Service, EPA and other appropriate agencies. Do this with more funding for Superfund, for brownfields, for Clean Water Act Section 319 grants and more. By encouraging federal agencies and the states to do joint planning and to pool resources, the best expertise and capacities of many parties can be leveraged for the maximum results.

4. Engage states and federal agencies in developing adequate inventories of sites and, perhaps more importantly, selecting priority areas for voluntary cleanups and for re-invigorated enforcement-driven cleanups.
5. Direct EPA to get off the dime and issue rules for financial assurance for the mining sector, which makes such an enormous contribution to the country's Superfund burden. This duty already exists in law, so you don't have to pass new legislation. Make things happen with directions and appropriations. Senator Maria Cantwell has introduced legislation on this matter – S. 3515. No similar legislation exists in the House at this point.
6. Stop the continued creation of additional mine problems by first clearly defining “abandoned,” as recommended by the National Academy of Sciences and as done under SMCRA. And begin work on legislation to set out minimum performance standards, strong financial assurance requirements and clear permitting guidelines. Have the agencies create clear requirements for operators to notify regulators of changing conditions at operating mines, and be certain that mine permits – as well as bonding amounts – are updated as conditions change. Set out monitoring and reporting requirements as well fair and firm enforcement mechanisms. Build regulatory capacity and expertise in the field with grants to support state programs. Again, Congressman Rahall's legislation, H.R. 3968, offers the most thorough and useful model.
7. Weed out irresponsible investors and operators with solid “bad actor” provisions to deny future permits or government contracts to companies that violate environmental rules or walk away from reclamation obligations. Make sure bad actors cannot hide behind corporate reshuffling and creation of new subsidiaries. Such provisions are included in H.R. 3968.
8. Deal with the most dramatic regulatory loophole for mine operations by directing EPA to establish waste regulations specifically crafted for the management of mine waste rock, tailings or other mineral-processing wastes, including wastes currently covered by the Beville amendment.
9. Invest in research that will allow for more reliable predictions about mining's impacts on water resources, looking closely at the potential for creating acid mine drainage but also focusing on other difficult issues, such as disruption of aquifers from dewatering, mechanisms for groundwater contamination and impacts of pit lakes that refill with acids, metals and other pollutants after mine operations cease. Make sure that the best available predictive tools are used to plan cleanups and to permit mines in the first instance.
10. Learn from past mistakes with failure analyses conducted in conjunction with mine cleanups. Whenever federal dollars or enforcement authorities are used for cleanup of a mine site that operated during the mid-1980s or forward, regulators should analyze those aspects of the operation that led to a need for cleanup. As these analyses identify problem management areas – be they heap leach pads, faulty liners, pipeline breaks, unstable waste piles, poorly characterized geology or something else – regulators should act to disseminate new information on “best practices” and, as necessary, adopt new regulations to prevent repeat failures.
11. Commit to carrying out your oversight duties. This is a thorny issue, but there is much activity in the field. Congress should keep a close eye on developments, positive and negative, regarding mining and water quality.
12. And, to the extent that you decide to take legislative action on Good Samaritan cleanups, look to language introduced by Congressman John Salazar. Work from his carefully crafted legislation, H.R. 5071, that builds upon long efforts of many parties to address significant problems in the Upper Animas watershed of Colorado. It is based on solid background work to characterize and understand threats in the watershed and it authorizes a demonstration project that will be carried out as part of a watershed Total Maximum Daily Load program. This legislation could be expanded beyond the single watershed in Colorado, incorporating other TMDL restoration work in other watersheds. A watershed context for cleanups can provide valuable

context, assuring that individual projects do not unintentionally improve water quality for one parameter or in one location only to undermine it elsewhere. In addition, several projects within a single watershed may be able to share important baseline data and technical information. Assure that all projects have appropriate oversight, and require a report – say on a two-to-three-year time-frame – about successes and problems with the projects chosen.

13. As part of this effort, set up a trust fund – like that established under the Surface Mining Control and Reclamation Act – that can be used not just to fund individual cleanup projects but also to underwrite financial assurances for this work. Even well-planned projects can meet with difficulty, and a shared trust fund could be used to insure against creating new problems at any mine site.

Again, Mr. Chairman, I appreciate this opportunity to testify, and I hope that Committee members find this information and these recommendations of assistance. I look forward to your questions and to working with your staff on these important issues.