Testimony of Loretta Pineda, Director, Division of Reclamation, Mining and Safety, Colorado Department of Natural Resources on behalf of the Interstate Mining Compact Commission and the National Association of Abandoned Mine Land Programs re Oversight Hearing on "Abandoned Mine Lands: Innovative Solutions for Restoring the Environment, Improving Safety and Creating Jobs" Before the Subcommittee on Energy and Mineral Resources of the House Natural Resources Committee – July 14, 2011

Good afternoon. My name is Loretta Pineda and I serve as the Director of the Division of Reclamation, Mining and Safety within the Colorado Department of Natural Resources. I am appearing today on behalf of the Interstate Mining Compact Commission (IMCC) and the National Association of Abandoned Mine Land Programs (NAAMLP) concerning the Subcommittee's oversight hearing on "Abandoned Mine Lands: Innovative Solutions for Restoring the Environment, Improving Safety and Creating Jobs". This is topic of great interest and importance to the states and tribes represented by our two organizations. Our statement focuses primarily on the reclamation of abandoned hardrock mines in the West. However, I will also speak to challenges we face with respect to the reclamation of abandoned coal mines, as well as abandoned noncoal mines in other parts of the country beyond the West. We appreciate the opportunity to appear today to share our views and concerns.

The Interstate Mining Compact Commission (IMCC) and the National Association of Abandoned Mine Land Programs (NAAMLP) are multi-state governmental organizations that together represent some 30 mineral-producing states and Indian tribes, each of which implements programs that regulate the environmental impacts of both coal and hardrock mining. Many of these programs have delegations of authority from the federal government to implement national environmental laws such as the Surface Mining Control and Reclamation Act (SMCRA), the Clean Water Act, the Uranium Mill Tailings Radiation Control Act and the Resource Conservation and Recovery Act. Under these statutes, the states and tribes exercise primary responsibility for the permitting and inspection of the affected mining operations, for the enforcement of applicable environmental performance standards, and for the protection of public health and safety, including the safeguarding and cleanup of abandoned mines.

The development of our Nation's mineral resources is a critical component of our national well-being and security. Our manufacturing activities, transportation systems and the comfort of our homes depend on the products of mining. At the same time, it is essential that an appropriate balance be struck between the need for minerals and the protection of public health and safety and the environment. Over the past 40 years, with the passage of sweeping national environmental laws, the states and Indian tribes have taken the lead in fashioning and then implementing effective programs for the regulation of mining and its impacts, including the cleanup of inactive and abandoned mine lands. As we face new challenges associated with homeland security, climate change and alternative energy sources, the importance of mineral development will only become more critical, as will the role of state and tribal regulatory authorities.

We commend you, Mr. Chairman, for your continued commitment to craft a meaningful and effective program for reclaiming and restoring the land and water adversely affected by past hardrock mining. Without a national solution for this legacy issue, it is unlikely that significant progress can be achieved. This is due primarily to the lack of sufficient funding, and not a lack of will by the states, tribes and others to do something about the matter. The states and tribes – often together with our federal agency partners – have made notable progress in addressing the issue. But our efforts need a substantial boost and the potential for legislative solutions before the Subcommittee today will go a long way toward accomplishing this goal.

Nationally, abandoned mine lands continue to have significant adverse effects on the environment. Some of the types of environmental impacts that occur at AML sites include subsidence, surface and ground water contamination, erosion, sedimentation, chemical release, and acid mine drainage. Safety hazards associated with abandoned mines account for deaths and/or injuries each year. Abandoned and inactive mines, resulting from mining activities that occurred over the past 150 years prior to the implementation of present day controls, are scattered throughout the United States. The sites are located on private, state and public lands.

Over the years, several studies have been undertaken in an attempt to quantify the hardrock AML cleanup effort. In 1991, IMCC and the Western Governors' Association completed a multi-volume study of inactive and abandoned mines that provided one of the first broad-based scoping efforts of the national problem. Neither this study, nor any subsequent nationwide study, provides a quality, completely reliable, and fully accurate on-the-ground inventory of the hardrock AML problem. Both the 1991 study and a recent IMCC compilation of data on hardrock AML sites were based on available data and professional judgment. The data is seldom comparable between states due to the wide variation of available inventory criteria. Nevertheless, the data do demonstrate that nationally, there are large numbers of significant safety and environmental problems associated with inactive and abandoned hardrock mines and that cumulative remediation costs are very large.

Across the country, the number of abandoned hardrock mines with extremely hazardous mining-related features is estimated at several hundred thousand. Many of the states and tribes report the extent of their respective AML problems using a variety of measures including mine sites, mine openings, mine features or structures, mine dumps, subsidence prone areas, miles of unreclaimed highwall, miles of polluted water, and acres of unreclaimed or disturbed land. Information contained in IMCC's Noncoal Report and that we have provided to the Government Accountability Office (GAO) include the following gross estimated number of abandoned mine sites: Alaska – 1,300; Arizona – 80,000; California – 47,000; Colorado – 15,000; Montana – 6,000; Nevada – 16,000; Utah – 15,000 - 20,000; New York – 1,800; Virginia – 4,000 Washington – 3,800; Wyoming – 1,700. Nevada reports over 200,000 mine openings; New Mexico reports 15,000 mine hazards or openings; Minnesota reports over 100,000 acres of abandoned mine lands and South Carolina reports over 6,000 acres. While the above figures attempt

to capture a universe of ***all*** abandoned mine sites by state, the actual number of sites that pose ***significant*** health, safety or serious environmental problems is likely lower.

What becomes obvious in any attempt to characterize the hardrock AML problem is that it is pervasive and significant. And although inventory efforts are helpful in attempting to put numbers on the problem, in almost every case, the states and tribes are intimately familiar with the highest priority problems within their borders and know where limited reclamation dollars must immediately be spent to protect public health and safety or protect the environment from significant harm.

Estimating the costs of reclaiming hardrock abandoned mines is even more difficult than characterizing the number of mines. Based on the estimated number of AML sites, one can develop a very rough estimate for the costs of safeguarding mine hazards and reclaiming small surface disturbances. But the costs of remediating environmental problems such as ground water and surface water contamination, acid rock drainage or wind blown contaminants are extremely difficult to estimate. And many of these problems will not be fully detected until after thorough assessment and testing occurs at a minesite.

In an effort to quantify and forecast what states could spend ***immediately*** as part of an expanded program that focuses on the cleanup of abandoned hardrock AML sites over the next 18 to 24 months (assuming the availability of new funding), IMCC and NAAMLP have gathered information from nine states. A summary of that information is attached to this statement. Few of these projects have been funded to date and are examples of how enhanced funding under new legislation or appropriations would immediately be put to use. In addition to the forecasts provided by these states regarding economic and job enhancements, it should be noted that, in general, for every dollar spent by the states/tribes on local construction, this translates to $2.70 that is spent in the local economy for things such as supplies and materials, local equipment rentals and equipment operators, and employee support.

Today, state and tribal agencies are working on hardrock abandoned mine problems through a variety of state and federal funding sources. Various federal agencies, including the U.S. Environmental Protection Agency, the Bureau of Land Management, the National Park Service, the U.S. Forest Service, and the U.S. Army Corps of Engineers have provided some funding for hardrock mine remediation projects. These state/federal partnerships have been instrumental in assisting the states and tribes with their hardrock AML work. As states and tribes take on a larger role in hardrock AML cleanups in the future, they will continue to coordinate with their federal partners. Unfortunately, most of these existing federal grants are project specific and do not provide consistent funding.

For states and tribes with coal mining, the most consistent source of AML funding has been the Title IV grants under the Surface Mining Control and Reclamation Act (SMCRA). *Section 409 of SMCRA allows states and tribes to use these grants at high priority non-coal AML sites.* The funding is generally limited to safeguarding hazards to

public safety (e.g., closing mine openings) at hardrock sites. It is worth noting that recent fatalities at abandoned hardrock mine sites have been in states without SMCRA-funded AML programs. The small amount of money that SMCRA states have been able to spend on physical safety hazards at hardrock sites appears to be making a difference. More specific information regarding the nature and extent of the hardrock AML accomplishments of the states and tribes is available from IMCC and NAAMLP.

As states and tribes work to address the remaining inventory of abandoned hardrock mine sites, we are increasingly concerned about the escalating costs of addressing those problems that continue to go unreclaimed due to insufficient funding. Unaddressed sites worsen over time, thus increasing reclamation costs. Inflation exacerbates these costs. The longer the reclamation is postponed, the less reclamation will be accomplished. In addition, the states and tribes are finding new, higher priority problems each year, especially as many of our urban areas encroach upon what were formerly rural abandoned mine sites. New sites also continually appear due to the effects of time and weather. Recent flooding events in the Western and Mid-Continent sections of the country are a testament to this phenomenon. This underscores the need for constant vigilance to protect our citizens and the importance of potential legislation before the Subcommittee today.

With the foregoing as background, we will now address several aspects of pending or proposed legislation that deserve mention. One of the most critical needs is the establishment of a consistent and robust funding source for addressing hardrock AML problems. While we do not have a formal position on the various royalty and fee provisions that have been suggested over the years, we do believe that some combination of these funding mechanisms is critical to the success of a hardrock AML program. Without certain, reliable funding from year to year, the states and tribes cannot effectively plan for and execute meaningful AML programs. We therefore strongly recommend a combination of appropriate funding sources that will consistently support a long-term AML program. This will result in substantial reclamation work over the life of the program. We also support continued funding for the hardrock AML programs already in place at the BLM, the Forest Service and the National Park Service. The unique focus of these programs should not be supplanted by new legislation. Much valuable work continues to be accomplished pursuant to these programs, often in partnership with the states and tribes.

Another key component of an effective hardrock AML program is support for a strong state lead for the implementation of these programs. Today, there are abandoned mine land programs in most states. These include the 28 programs established by states and tribes under SMCRA Title IV, along with states across the country that are not eligible for Title IV funding, including Nevada, California, Arizona, South Dakota, Idaho, New York, South Carolina and North Carolina. All of these states and tribes are experienced with administering federal grants and completing AML projects in a cost-effective manner on state, private and federal lands.

The states and tribes must be provided an opportunity to assume primary responsibility for implementing any hardrock AML program given the unique differences among the states and tribes in terms of geology, climate, terrain and other physical and environmental conditions. This state/tribal-lead approach will assure the most critical AML problems are addressed first, since the states and tribes are closer to the problems and can best determine the priority of sites and the needed remediation work. In addition, they also have assembled excellent professional staffs with many years of experience (in some cases over 30 years) and an unsurpassed local contracting knowledge base. State and tribes would require minimal staffing increases compared to implementing a new federal program, thereby increasing on-the-ground results per program dollar.

In the West, New Mexico, Colorado, Utah, Wyoming, Alaska and Montana have used SMCRA Title IV funds to address a number of significant AML problems, both coal and hardrock. In addition, these AML programs have cooperative agreements with the Forest Service, the National Park Service, BLM and the U.S. Army Corps of Engineers that allow those agencies to fund AML projects on their lands when money is available. It is simply more efficient for the federal land managers to use the already established state AML programs with their staff of experienced engineers, reclamation specialists and project managers to design and conduct cost-effective AML projects on federally-managed land within each state's boundaries.

Given the importance of the states being able to use SMCRA Title IV funds for noncoal AML work, any new legislation should ensure that this practice can continue or increase. In this regard, we support the provision in H.R. 785 that would clarify that noncertified states and tribes are able to spend their unappropriated state and tribal share balances on noncoal AML reclamation. We believe this was the intent of the 2006 Amendments to SMCRA. However, the Interior Department, through OSM, has taken a different view in final rules implementing those amendments and has blocked the states from using these moneys for this worthwhile purpose. H.R. 785 would correct this unfortunate interpretation by Interior. A recent statement submitted by IMCC and NAAMLP for the record of a hearing on a similar bill before the U.S. Senate (S. 897) is attached and we request that it be included for the record of this hearing.

We support a lead role for the Office of Surface Mining Reclamation and Enforcement (OSM) regarding the overall administration of any hardrock minerals reclamation fund that might be created in potential or proposed legislation. We believe that OSM has the required expertise to oversee and administer the Fund and the overall AML program based on its 30 years of experience under SMCRA. We also support the necessary funding for OSM to carry out its administrative duties under the law.

We also support the awarding of grants to states and tribes pursuant to any hardrock AML reclamation fund that might be created by legislation in order to be consistent with the state/tribal-lead approach that we advocate. We recommend that these annual expenditures from the Fund be off-budget (mandatory) and not subject to the annual appropriations process. Given the known inventory of AML problems, we believe this approach will guarantee that annual contributions to the Fund are immediately

distributed for work on-the-ground rather than retained in a Fund that does little but generate interest. And with regard to allocations from the Fund, we could support a formula that takes into account both current and historic mineral production. We believe that this arrangement represents a fair and equitable disposition of any moneys paid into the Fund and will allow the states and tribes to effectively manage their programs and accomplish meaningful reclamation work. It may be helpful to clarify that any fund allocations paid to the states based on existing production are defined as a percentage of the total moneys paid into the fund for the current year by the respective states of origin.

As for any allocations from the fund based on historic production, consideration should be given in the formula as to how the specific mineral commodity is measured (ounces v. pounds v. tons) and the reference year from which historic production is calculated. For instance, Nevada's and California's mineral contributions to the nation predate both the 1872 Mining Law and the 1900 date from which historic production has been previously calculated. For other states, such as New Mexico, Wyoming, Arizona and Colorado, the records of mine production during the territorial period from 1850 to 1912 are very sporadic and scattered. As a result, any historic production formula must also take this reality into consideration, especially given the unevenness in the completeness, availability, reliability and accuracy of pre-1910 mining production records.

With respect to eligible land and water, we believe any legislative solution should recognize that most hardrock AML problems are on non-federal lands, even in the West. In most states, federal lands contain less than a quarter of all hardrock AML sites. In part, this is due to the patenting of mining claims in the nineteenth and early twentieth century that allowed miners to claim and obtain ownership of lands they mined. And when there are abandoned mine problems on federal lands, they often spill over into adjacent non-federal lands or in-holdings. To be effective, a hardrock AML program needs to be able to spend funds on all classes of land. It should also be clarified that there is no limitation on when lands and waters become eligible. In California, for example, many of the legacy AML sites pre-date the 1872 Mining Law, so limiting eligibility to only those problems that are post-1872 would be problematic.

A critical component of any reclamation program is how to prioritize sites and identify remediation options. Abandoned mine lands range from sites with features that require no remediation because of their minimal size or risk; to sites that require significant earthwork, topsoil replacement and revegetation for erosion and pollution control; to safeguarding shafts and adits that present public safety hazards; to remediating sites with significant toxic leachate causing contamination of ground and surface waters. In addition, some hardrock mine sites have such a conglomeration of features, access problems, drainage problems, etc., that estimated reclamation/remediation costs exceed the entire annual AML budget of a state/tribe.

Regardless of which inventory or listing of sites is used, a large portion of sites will require little if any reclamation. In other cases, the per unit cost of reclamation is relatively small. These sites will also rank low in priority because of the reduced threat

to public health or the environment. On the other end of the spectrum, there will be a small number of sites that require a significant amount of funding to remediate and that contain a chronic risk to public health or the environment. Under current law, these are the sites that are being or might be remediated under Superfund (the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)). The AML priority sites should be those that constitute a physical threat to public safety, and sites with significant contamination, but that will likely never score high enough to be remediated under CERCLA. It should also be noted that CERCLA remediation is not without potential financial risk to the states. Generally speaking, where EPA authorizes cleanup of an abandoned mine site out of its "Fund Lead", states are required to pay 10 percent of the cleanup costs and to assume 100 percent of the operations and maintenance costs following cleanup. As a result, any perpetual water treatment becomes the responsibility of the state, including potential liability associated therewith. The Good Samaritan relief that we address later in our testimony would help to lessen the discharge cleanup standard, but still leaves the concern associated with endless treatment costs.

Given the above considerations, each state or tribe should be provided the discretion to determine which among the many sites in its respective AML inventory deserve the most immediate attention, with input from the federal land management agencies on whose land the sites may be located. The states and tribes can also best decide the appropriate remediation required under the circumstances given available funding and resources and in consideration of landowner desires.

Another aspect of any hardrock AML program is how to quantify the problem. A consistent and purpose-driven inventory of AML problems is critical to understanding the magnitude of the problems the states and tribes face. Assessing the present and future impacts to the safety and health of citizens and the impacts to the natural environment, while recognizing the changing cost structure of a long-term program, are key to a meaningful inventory of problems. However, lessons need to be learned from the inventory of abandoned coal mines undertaken pursuant to the Surface Mining Control and Reclamation Act, which is estimated to have cost more than $25 million and is still fraught with controversy.

Based on the SMCRA experience, any hardrock AML inventory needs to: have well thought out goals and instructions; maintain standardized inventory procedures; keep inventory crews small to minimize inconsistencies in reporting methods; minimize influence on the inventory by those with vested interests in the results; require any federal agency inventory work to be coordinated with the states; utilize state-of-the-art GPS imagery; and be conducted with consideration for seasonal snow and vegetation cover. In this regard, we support an appropriate cap on the amount of money to be invested in any inventory effort, so as not to divert money and energy from on-the-ground reclamation work. In addition, those states whose AML programs meet the above standards should be allowed to keep and rely upon their existing inventories and associated databases, rather than being required to create or adopt new ones.

A new complication for state and tribal AML work that also must be addressed is the limited liability protection related to applicable federal environmental laws such as the Clean Water Act where noncoal AML work is undertaken with SMCRA Title IV funds. OSM's recent rulemaking implementing the provisions of the 2006 Amendments to SMCRA removed this protection and that action has had a significant chilling effect on the ability of the states and tribes to undertake their noncoal projects with SMCRA funds. Given OSM's reluctance to address this administratively, the issue needs to be addressed with a perfecting amendment to SMCRA.

Any proposed legislation to enhance hardrock AML cleanups should also include special allocations from amounts paid into the fund for grants to non-hardrock mining states with noncoal AML problems and for grants to public entities and nonprofit organizations, such as watershed groups. We believe that the incorporation of these provisions into any legislation will likely generate additional support for the bill. States other than the western hardrock AML states (such as South Carolina, North Carolina, Virginia, Florida, New York, and Tennessee) have significant noncoal AML problems within their borders and there are limited, if any, funds available to address these sites. Therefore, to the extent that a small but reasonable amount of funding can be set aside for work in these states, it will make a difference in their efforts to remediate these sites. Based on our experience with watershed cooperative agreements under SMCRA, we believe that a program for nonprofit or public entities will provide a welcome shot-in-the-arm for their efforts to address water contamination and acid rock drainage issues in critical watersheds.

The subject of acid rock and acid mine drainage remediation efforts brings up another aspect of AML cleanups that should be addressed in legislation. This concerns liability under the Clean Water Act associated with these cleanup efforts. Citizen, environmental and watershed groups who may have a desire to fund the cleanup of impacted waters are often dissuaded from doing so because the previously mined and abandoned sites have contaminated mine drainage discharges which, if reaffected, would subject these "Good Samaritans" to liability under both state and federal law, thereby requiring them to be responsible for permanently treating the discharge to Clean Water Act standards. They could incur this liability even though they did not create the discharge and even if their cleanup efforts improved the overall quality of the discharge. This situation has been further exacerbated by a recent decision by the U.S. Fourth Circuit Court of Appeals in *West Virginia Highlands Conservancy v. Huffman*, 625 F.3d 159 (4th Cir. 2010). The court held that certain treatment systems for treating water from abandoned coal mines qualify as point sources and require NPDES permits under the Clean Water Act. While focused on bond forfeiture sites under SMCRA, the reasoning of the decision may apply equally well to the construction and operation of passive treatment systems employed by watershed groups to address acid mine drainage at abandoned coal mines. This situation must be rectified.

We believe that the best approach to address this situation is through the enactment of legislation that clarifies the application of Clean Water Act requirements to both coal and hardrock AML remediation efforts where contaminated or polluted mine

drainage is involved. We have seen the results from this type of approach in states such as Pennsylvania, which enacted its own Good Samaritan law to provide protections and immunities to those groups and individuals who were not legally liable but who voluntarily undertook the reclamation of abandoned mine lands or abatement of mine drainage. However, even Pennsylvania Good Samaritans are still exposed to potential liability under federal law for their good deeds, which is having a debilitating effect on watershed cleanup efforts. The recent Fourth Circuit decision has further complicated this situation given its broad holding.

Over the course of the past fifteen years, several bills have been introduced in the U.S. Congress to increase the cleanup of inactive and abandoned mines. Each bill offered a unique approach for addressing Good Samaritan voluntary remediation efforts to remove the current disincentives in the Clean Water Act that inhibit these cleanups. From the states' perspective, we have several recommendations and concerns that we believe should be considered in any Good Samaritan legislative effort, as follows:

- There are myriad reasons why Good Samaritan legislation is needed, but perhaps the most important is to remove the potential for incurring liability under the Clean Water Act and CERCLA. These liabilities deter motivated, well-intentioned volunteers from undertaking projects to clean up or improve abandoned sites, thereby prolonging the harm to the environment and to the health and welfare of our citizens. These impacts also have economic impacts that are felt nationwide. In addition, the universe of abandoned mine lands is so large and the existing governmental resources so limited that without the assistance of Good Samaritan volunteers, it will be impossible to clean up all of these lands.

- In accordance with the principles of state primacy contained in laws such as SMCRA and the Clean Water Act, we believe it is essential that Good Samaritan programs be administered by state regulatory authorities (or federal agencies where a state chooses not to administer the law), as the states best understand the complexities associated with abandoned mine lands within their borders, including which sites can be improved and how to accomplish the improvement. States also tend to have a better working relationship and understanding of potential Good Samaritans. Given the current structure of laws like SMCRA and the Clean Water Act, we believe that the states are in the best position to administer Good Samaritan programs with appropriate oversight by federal agencies such as EPA and OSM

- There is merit to extending Good Samaritan protection to abandoned coal, as well as hard rock, sites. The Western Governors Association has taken the position that the proposed definition of "abandoned or inactive mined lands" could be drafted to include coal sites eligible for reclamation or drainage treatment expenditures under SMCRA. We agree with this assessment. Also, to the extent that Good Samaritan permits are not required by states who are certified under Title IV of SMCRA when performing hard rock AML

remediation, this same protection should be afforded to states performing coal AML work. Furthermore, from a political support perspective, extending Good Samaritan protections to abandoned coal mines would likely enlist the support of more eastern and mid-continent states for the legislation.

- Some have suggested that provisions addressing remining of abandoned mine sites should be included in the legislation. Our position is that these two matters should not be connected. They have somewhat different goals. As an example, Pennsylvania allows those who are not legally liable for the reclamation to engage in remining. Sites that have a preexisting discharge can only be remined if the applicant demonstrates, and the state finds, that the remining will improve or eliminate the discharge. If the remining degrades the preexisting discharge, the mine operator is responsible to treat the resulting pollution. Remining of abandoned mine land that does not contain preexisting mine drainage is allowed, provided the operator reclaims the site to modern standards. To the extent that additional incentives are considered as part of Good Samaritan legislation, we suggest including technical assistance and federal funding for these projects.

- Good Samaritan legislation should also include provisions that allow for the minerals contained in the waste on the abandoned mine land to be recovered as part of the reclamation. Allowing recovery of materials from the waste can help offset or totally pay for the reclamation. However, the mineral recovery must be secondary to the purpose of reclaiming the site. Appropriate safeguards must be provided in the legislation to ensure the purpose of the work is to reclaim the site and not to conduct mining. New mining or remining should not be a part of Good Samaritan legislation.

- Good Samaritan protections should be extended to both public and private lands. The pollution problem knows no such boundaries and must be addressed wherever it occurs. The environment and public health and safety all benefit by cleanup of abandoned mine lands, whether public or private. We also believe the protections should extend beyond federal lands so as to allow nationwide application to all lands.

- With respect to applicable environmental standards for Good Samaritan projects, we believe it is absolutely critical that the legislation include flexible standards, based on a determination by the state or federal regulatory authority that the Good Samaritan efforts will result in environmental improvement. Some abandoned mine problems are so intractable that it is not possible to achieve "total cleanup" even with today's technologies. These types of cleanups could also be cost prohibitive. We know that in many circumstances some cleanup can result in significant environmental improvement. Forswearing that improvement because total cleanup cannot be achieved is poor public policy and shortsighted. We also know that, in some

circumstances, even where total cleanup is technically possible, at some juncture the cleanup reaches a point of diminishing returns and the money would be better spent on cleaning up other sites. The bottom line here is that some cleanup is usually better than none at all.

- Finally, it has been Pennsylvania's experience under its law that it is important that innocent landowners be covered for the Good Samaritan project activities. Some landowners will not cooperate if they are not protected.

Any new legislation should also provide the opportunity to clarify what the term "locatable mineral" means under current law. Some minerals are "locatable" under certain circumstances and "leasable" under others. For instance, uranium, which is currently locatable under most cases, is leasable under the Atomic Energy Act program and may become entirely leasable under future legislation. This creates confusion as to whether all abandoned uranium sites are now, or will be in the future, eligible for funding under the AML provisions of proposed legislation. This is particularly important given the legacy of AML sites from past uranium mining in New Mexico and other southwestern states. We believe that it is important to clarify that, until such time as it is determined otherwise, uranium continues to be a locatable mineral and thus subject to the provisions of the Mining Law.

Thank you for the opportunity to submit this testimony. Should you have any questions or require additional information, please contact us.

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Attachment

Examples of Hardrock Abandoned Mine Projects Ready for Immediate Funding

- **South Dakota** -- South Dakota has one major mining Superfund site currently in the remedial design and action phase. The Gilt Edge Mine Superfund Site is located in the northern Black Hills, approximately four miles from the town of Deadwood. Mining activities began at the site in 1876 and continued intermittently for more than 100 years. The most recent owner of the site, Brohm Mining Company, operated a large-scale, open pit, heap-leach gold mining operation at the site from 1986 until 1999. Brohm affected 265 acres consisting of open pits, waste rock depositories, process facilities, and a heap leach pad. This mining activity caused significant acid rock drainage. In 1999 Brohm abandoned the site, which was then taken over by the state of South Dakota. In 2000 the EPA listed the mine as a Superfund Site. Work accomplished to date is the construction of a lime-based water treatment plant for treating acid water and the capping of a 65-acre acid generating waste rock facility. EPA recently issued a Record of Decision for the remediation of the rest of the site which includes three pits, waste rock depositories, a heap leach pad and process facilities. Remedial design is estimated to take one year with the selected remedy emphasizing site-wide consolidation and containment of mine waste. The estimated cost for the remaining reclamation work is $72 million and it will take five to seven years to complete depending on availability of funding. Plans for water treatment will be finalized after site reclamation is completed.

- **Montana** – Montana currently has three construction-ready abandoned mine projects where all environmental and engineering studies have been completed and the projects lack only construction funding. A total of $4.5 million must be in place before these abandoned hard rock projects can be let for bidding.

- **Colorado**:

  Overview

  A statewide inventory of abandoned mines estimates that over 23,000 abandoned mine features (shafts, adits, stope openings) exist in Colorado. Approximately 400 legacy mine sites are adversely impacting, or have the potential to impact, over 600 miles of rivers and streams in the state. Legacy mines were operated prior to 1977 and prior to any permitting requirements. The current landowners of these mine sites did not participate in the mining and have no responsibility for their reclamation or remediation.

  Hardrock Mine Safety Hazards

Colorado's Abandoned Mine Reclamation Program (AML) was established in 1980 to address the hazards and environmental problems arising from abandoned mines in Colorado. It was instituted under the provisions in the Surface Mining Control and Reclamation Act (SMCRA) of 1977, which gives the states that have approved coal mining regulatory programs under Title V of SMCRA the ability to assume exclusive responsibility and authority to reclaim abandoned mine lands within their borders. Mines abandoned prior to 1977 are eligible for the program. The program was launched with a comprehensive inventory of hazards and environmental problems associated with past mining activities, which revealed an estimated 23,000 abandoned mined sites throughout the state. Using this inventory, Colorado prepared a statewide reclamation plan, which was approved by the U.S. Department of the Interior, Office of Surface Mining (OSM) in June 1982. Since then, approximately 7,800 abandoned mine openings have been addressed through this program.

Abandoned Mine Drainage

Water quality issues due to legacy mines present some of the most difficult challenges to restoring impaired water bodies in Colorado, from both the technical and legal perspectives. Legacy mines are a common pollution source in the mountains of Colorado. Many stream segments on the state list of impaired segments are impacted by heavy metals from inactive and legacy mines and natural background geologic sources. Dissolved metals and acidity due to legacy mining and natural loading sources make up 51% of the impaired waters in the State of Colorado. Common mine-related metal pollutants include zinc, cadmium, manganese, iron, copper and lead. Sediment related to past mining and milling activities also contributes to the contamination of the state's waters.

The amount of available funding to reclaim these sites and improve water quality is far over-shadowed by the magnitude of the water quality impact. For example, Colorado's allocation of the national non-point source appropriation is approximately $1.9 million per year. However, the estimate to remediate just one of the many impaired river basins in Colorado is $30 million dollars. The cost to restore water quality impacted by legacy mining issues statewide is estimated to cost nearly $314 million.

Animas Basin Remediation Efforts

One example of an impaired watershed in Colorado is the Animas River Basin. The water quality in the Animas Basin is severely impacted by legacy mining and the basin was selected as one of two initial pilot sites in the nation for a ten year remediation effort which extended from the mid-1990's to a few years ago. Remediation efforts have been driven by an extensive characterization process where some 200 mine sites have been prioritized for feasibility of metal loading reductions. This work was significantly supported by scientific studies done through the Department of Interior's Abandoned Mined Land Initiative.

The sites selected for remediation represented 90% of the mining-related metal loading sources. So far, remediation has been completed on 28 of the 32 mine waste sites and some remediation has been done on 5 of the 34 draining mines. Unfortunately, most of the mine-related metal loading in the basin emanates from the draining mines as opposed to the mine waste. Consequently, the local watershed group's restoration efforts have been limited by the lack of a Good Samaritan provision in the Clean Water Act to reduce liability for third-party cleanups. In an effort to move forward, the watershed group developed a pilot project Good Samaritan provision to apply to the Animas River Basin and had it introduced twice in Congress. Neither of these efforts was successful and presently there is no legislation to protect a "Good Samaritan" from incurring long term liability when remediating effluent from draining mines.

Creating Jobs and the Reclamation & Restoration Economy

Each year the AML program addresses approximately 350 mine openings and participates in about nine water quality improvement projects. These construction activities create jobs and enhance the local economic climate, and they also result in greater tax revenues for state and local governments by increasing the revenues collected from income and sales taxes. Construction jobs and the associated expenditures are input to local economies and spread through a large geographic area of rural Colorado, where any additional economic benefit is highly valuable. Local economies in the historic and rural mining areas benefit from the direct and indirect cumulative expenditures as a result of contractor labor, and purchase of materials, equipment, supplies, and in many cases meals and lodging. The AML program overall has created approximately 300 new permanent private-sector construction jobs, putting $23.6 million into local economies, and generating $1.5 million in Colorado sales and income tax revenues. (Note: used rounded RIMS II Multipliers for the industries indicated in the state of Colorado)

The true beneficiaries of reclamation and restoration of abandoned mined lands are the citizens of the local community. In addition to the economic stimulus that the restoration activities bring to the community, those who live and work in mining areas see the effects of reclamation projects every day through increased tourism and improved environmental conditions. Preservation of a community's historic mining area enhances the local tourism economy by providing visitors and tourists with safe ways to explore and enjoy Colorado's historic mining areas. Also, historic mining areas provide opportunities for tourists, and local residents, to experience the places and activities that authentically represent the people of the past and present while, at the same time, recognizing the value of the ample natural resources of the mountain environment.

Following are photographs of inactive mine drainage sites in Colorado that are seriously impacting water quality:

Figure 1 - Penn Mine discharge, Summit Co. CO CO

Figure 3 – Gold King Mine, San Jan Co.

Figure 2 - Perigo Mine, Gilpin Co, CO Adit

Figure 4 – Hinsdale County Draining

- **Utah** – Utah has an estimated 15-20,000 abandoned mine openings. Future safety hazard abatement projects (i.e. shaft and adit closure) that would use SMCRA funds have been identified and ranked. The 25 top-ranked hazardous abandoned mine areas contain approximately 4500 hardrock mine openings. Within 24 months Utah could conduct 7 projects in the most dangerous areas (1270 mine openings). Safeguarding these abandoned mine openings would require an estimated $6,350,000. Assuming legal authority and funding are available, the incremental environmental cleanup would increase the cost to $19,050,000. In addition, due to SMCRA funding limitations, many high priority environmental remediation problems exist at previously completed hazard abatement projects.

- **New Mexico** – the state has six projects with a total estimated construction cost of $2.8 million that could be undertaken within the 18 – 24 month time frame. These costs are only for the construction contracts, and do not include any costs for investigation, evaluation, design or oversight. The projects all involve

noncoal and are on federal lands. One project involves a legacy uranium minesite on BML land where project development and construction costs are expected to be about $1.6 million.

- **Virginia** -- Based on current inventory data of over 4,000 abandoned hardrock mining sites in Virginia, over 30% or 1,200 of the sites pose severe safety hazards and approximately 400 or 10% pose severe environmental hazards. In the next 18 months, approximately five hundred thousand dollars of reclamation could be initiated to remediate safety hazards on federal and private lands in Virginia.. Several projects are estimated to cost upwards of ten million dollars each to reclaim. They would involve testing and engineering to remediate as well as release from liability under the Clean Water Act. All projects are bid competitively to the private sector thereby providing employment and economic benefits to the local economies.

- **Wyoming** – In the next 18 months Wyoming can put $30 million worth of projects on the ground. The number of jobs that would be involved is harder to estimate but based on similar sized projects it would be around 75 people but less than 100.

- **Arizona** – the state has 94 high-risk mine sites with 58 sites which can be identified for closure in the next 36 months. This means that over 61% of the 94 mines sites pose serious public safety and environmental threats to the public. These areas typically have high use for backcountry touring and off highway vehicle activities, and recreational mineral collection by winter visitors, or are located near populated areas. Many of the 94 mine sites has several openings with depth's greater than 50 feet. The number of jobs created by and through AML hardrock remediation is difficult to estimate because, in general, the abandoned mines that need to be addressed resulted from the efforts of small-time prospectors. We would estimate the number of jobs created to be 50-100. This number is subject to change once the momentum of closures increases throughout the 36 month timeline. The estimated costs are $940,000. Abandoned mines pose a serious threat to public health and safety and to the environment. Public safety is a growing concern as urban areas expand. Failure to timely and properly act to close mines posing serious hazards may cause liability problems for the state.

- **California** – the state estimates that approximately 47,000 abandoned mines are distributed throughout California. Of these, approximately 5,200 sites (11% of 47,000) present environmental hazards, and more than 39,400 sites (84%) present physical safety hazards. Some of the highest priority AML sites (for example, Iron Mountain) are being addressed, but the majority have not been evaluated to determine the required cleanup actions to protect public health and safety and the environment. In addition, there are numerous areas throughout the Sierra, including tribal lands that are contaminated from historic mercury use associated with gold mining. Hundreds of millions of dollars will ultimately be necessary to

remediate all the AML sites within the State. As you know, California does not currently receive federal AML funding as it is not a SMCRA state.

In 2007, at the request of Senator Feinstein's office, California's state and federal agencies working on AML issues created lists of priority AML sites with environmental and physical hazards. The list is being updated, but a current version is available from the state or IMCC. This list provides a snapshot of the known environmental, human health, and safety problems posed by abandoned mines in California. It is important to note that many AML sites have not yet been inventoried or assessed for hazards. The prioritization process used for each list is briefly outlined in the document.

Of the sites on the list, many can be considered at/near a "shovel-ready" stage (i.e., projects already advanced that can be put out to bid/work within 18 months). Listed alphabetically below are six of the State's priorities identified by the Office of Mine Reclamation, State Water Resources Control Board, and Department of Toxic Substances Control.

- Argonaut Mine, Amador County (private land/low-income PRP): $2.0M
- La Joya Quicksilver Mine, Napa County (private land/low-income PRP): $2.0M
- New London Mine, San Luis Obispo County (California National Guard): $3.0M
- Oro de Amador, mine tailings in Amador County (city of Jackson): $5.0M
- Plumas Eureka Mine, Plumas County (State Parks): $3.0M
- 150-200 priority physical hazard features on federal and state lands: $1.5M

TOTAL: $16.5 million

Other priority sites would likely be provided by federal agencies such as the Bureau of Land Management, U.S. Forest Service, and National Park Service (an estimated 67% of California's AML sites lie on federal land). We would like to stress that any hardrock AML funds for California's priority AML sites should go directly to the State of California or that the federal agencies receiving funds funnel them to the State.

Please note, the above "short list" represents only a partial list. We would be happy to work with the Subcommittee to provide a complete list that corresponds to our updated priorities. The above short list also does not address the many abandoned mine sites that would benefit from funding for <u>assessment</u> investigations prior to cleanup Should such funds be available, California could use an additional, initial $5,000,000 to conduct investigations at AML sites that pose immediate threats to human health and the environment to define cleanup construction projects. State and federal agencies would work together to conduct the investigations and select the highest priority cleanup actions. Sites and cleanup actions would be defined within less than a year of initiation of the investigation work and construction contracts could be awarded using contractors in place several months thereafter (thus, within 18 months from the notification of funding to award additional cleanup construction contracts).