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The Honorable Nick Joe Rahall, Chairman
Committee on Natural Resources
U.S. House of Representatives
1324 Longworth House Office Building
Washington, D.C. 20515

Testimony of Mark Squillace, Professor of Law and Director,
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on the Consolidated Land, Energy, and Aquatic Resources Act of 2009

Dear Congressman Rahall:

Thank you for the opportunity to appear before the House Committee on Natural Resources to share my views on the Consolidated Land, Energy, and Aquatic Resources Act of 2009. My name is Mark Squillace and I am a professor of law and the Director of the Natural Resources Law Center at the University of Colorado Law School. For more than 25 years, the Natural Resources Law Center has engaged policymakers to help find efficient and environmentally sound solutions to natural resource problems.

Over the course of my professional career, which includes two stints working on mining and related issues at the Department of the Interior, I have worked on a range of natural resources issues, and I have been especially focused on the need for better policies governing mineral development. While I generally support the efficiency, transparency, and accountability goals of the proposed legislation, I am here today primarily to offer my support for two particular provisions in the proposed legislation that relate to mining on the public lands. The first, which appears at Section 307 of the proposed legislation, concerns coal mine methane. The second provision, which is found at Section 511, involves a proposal to remove uranium from the General Mining Law and place it under the Mineral Leasing Act. I will address each issue separately.

Coal Mine Methane

As this Committee knows, methane, commonly known as natural gas, is a potent greenhouse gas that is approximately 23 times stronger than CO2. Coal mining releases about 10% of all anthropogenic sources of methane (CH4) in the United States, and about 90% of fugitive CH4 emissions come from the coal mining sector, primarily underground

mines. Deep coal deposits have more CH4 because of greater overburden pressure. *See Identifying Opportunities for Methane Recovery at U.S. Coal Mines*, EPA **430-K-04-003, 1-1 (2005).**

This coal mine methane (CMM) is also a serious hazard to underground miners and for that reason, methane from such mines has historically been vented into the atmosphere. In recent years, however, mining companies have begun to appreciate the economic value of capturing and selling the methane that was otherwise being vented. In recognition of the environmental benefits associated with CMM capture and use, the Environmental Protection Agency has established the Coalbed Methane Outreach Program (CMOP). CMOP is a voluntary program designed to reduce methane emissions from coal mining activities, by removing barriers to CMM recovery and promoting its profitable use. *See* http://www.epa.gov/cmop/.

Unfortunately, the current law governing *federal* coal leasing is a barrier to CMM recovery by creating complications and obstacles that serve no one's interest. Although coal mine methane is essentially embedded in the coal resources that a federal coal lessee develops, the United States Supreme Court has interpreted federal law to separate ownership of the coal from ownership of the embedded methane gas. As a result, lessees of federal coal do not own the gas, and the gas can only be developed if it is separately leased. *Amoco Production Co. v. Southern Ute Indian Tribe*, 526 U.S. 865 (1999). The *Southern Ute* decision raises significant practical questions about how best to order development to maximize recovery of both the coal and the gas resources, as well as important legal questions about the coal developer's potential liability to the gas owner for any releases of methane that might have been captured by the gas owner had the coal not been developed first.

On most public lands disposed of after 1916, the federal government reserved all of the minerals, including the coal and the gas. Even on lands where the U.S. owns both the coal and the gas, the Mineral Leasing Act (MLA) thwarts recovery and development of the coal and gas resources because the coal and the gas resources are subject to separate competitive leasing provisions. *Compare* 30 U.S.C. §§201 and 226. Moreover, under *Southern Ute*, a lessee of federal coal does not own or have the right to develop the gas. Conceivably the federal government could lease the gas in a separate competitive leasing process, but a gas lease held by a separate entity could interfere with the operation of the coal lease, as well as the safety of coal miners in an underground mining situation.

Further complicating this matter, the Interior Board of Land Appeals (IBLA) recently held that methane gas from a coal mine is not subject to leasing under the MLA because coal mine methane is not a "deposit" of oil or gas for purposes of the MLA. *Vessel Coal Gas, Inc.*, 175 IBLA 8, 25 (2008). While some commentators have suggested that coal lessees might simply capture gas and sell it as an incident to coal mining, the legal risks pose a strong disincentive to such development by the mining company. *See* L. James Lyman, *Coalbed Methane: Crafting a Right to Sell From an Obligation to Vent*, 44 Colo. L. Rev. 393 (2007); Jeff Lewin, et al., *Unlocking the Fire: A Proposal for Judicial or Legislative Determination of the Ownership of Coalbed Methane*, 94 W. Va. L. Rev. 563 (1992).

To better appreciate the extent of the problem of methane venting, the Committee should consider the circumstances at the West Elk Mine on national forest land near Somerset, Colorado. Historic methane releases from the mine have averaged 13-17 million cubic feet per day, or about the amount emitted by a 300-400 MW coal-fired power plant. When mining begins on a new coal seam, methane releases will drop to about 7 million cubic feet per day, which is still the equivalent of nearly 1 million metric tons (MMT) of CO_2 per year, or enough methane to heat more than 48,000 homes each year. Indeeed, methane releases from this single mine are equal to nearly 3% of the total greenhouse gas emissions from all electric utility plants in the State of Colorado. *Final EIS: Deer Creek Shaft and E Seam Methane Drainage Wells Project,* August 2007, *available at*, http://www.fs.fed.us/r2/gmug/policy/minerals/deer_creek/Deer_Ck_Shaft_and_ESeam_MDW_Project_FEISr2.pdf.

Several environmental groups have challenged the Forest Service decision to approve new methane gas venting at the West Elk Mine in court. Apparently in response, the BLM (which manages coal leases on national forest lands) has approved an addendum to the coal lease that authorizes the lessee "to drill for, extract, remove, develop, produce, and capture for use or sale any or all of the coal mine methane" from the leased lands. It further provides, however, that the lessee is not required to capture the CMM if it is not economically feasible to do so, "independent of the activities related to mining coal." Finally, the addendum imposes a 12.5% royalty on CMM that is captured for use or sale, except that no royalty is imposed for methane use that benefits mineral extraction at the West Elk mine site.

While the BLM deserves credit for trying to address this issue, its resolution raises two significant problems. First, the government does not appear to have any legal authority to lease gas outside the scope of the Mineral Leasing Act, and IBLA's *Vessel Coal*

Gas decision holds that CMM is not subject to leasing under the MLA. Second, the decision to allow the lessee to continue to vent CMM unless it is economically feasible *independent of the mining operation* makes no sense. No other environmental restriction on mining is required to meet such an economic threshold and none should be imposed for CMM capture, especially given the growing concern over greenhouse gas emissions.

Section 307 of the Consolidated Land, Energy, and Aquatic Resources Act of 2009 solves these problems in a straightforward manner, by including embedded coal mine methane in the federal coal lease. In exchange for granting the coal lessee the rights to this valuable resource, the lessee would be obligated to recover the methane released during mining to the maximum extent feasible. Moreover, for deep mining operations where most of the recoverable methane exists, the Secretary would be required to analyze the feasibility of methane recovery before issuing any lease. The Secretary would also be required to consider the possibility of flaring methane gas if the methane cannot be recovered feasibly. Flaring would effectively convert the methane to CO2, which would significantly reduce the greenhouse impact from methane releases. ***While the intent of Section 307 seems to be to require flaring if flaring is feasible but recovery is not, the Committee should consider adding a sentence to Section 307 to clarify this intent.***

By including in every federal coal lease any embedded gas that is owned by the federal government, and by requiring the development of the coal mine methane at federal coal leases whenever it is economically and technically practical to do so, Section 307 of the Consolidated Land, Energy, and Aquatic Resources Act of 2009 recognizes the significant greenhouse gas implications of methane venting at coal mines and proactively promotes a policy to maximize recovery of CMM in conjunction with mining activities. I applaud the Committee for including this provision in the proposed legislation and strongly urge its passage.

Public Lands Uranium Leasing

Section 511 of the Consolidated Land, Energy, and Aquatic Resources Act of 2009 would convert uranium from a locatable mineral under the General Mining Law of 1872 to a leasable mineral under the Mineral Leasing Act. I strongly support this proposal for several reasons.

First, uranium deposits have never fit particularly well under the General Mining Law. Uranium deposits tend not to fit the classic definition of either a lode or placer claim and for that reason courts have struggled with how best to characterize these deposits for purposes of the General Mining Law. *See e.g., Globe Mining Co. v. Anderson,* 318 P.2d

373 (Wyo. 1957). Likewise, uranium deposits, and thus associated uranium mining operations, tend to occur over large relatively uniform tracts of lands that lend themselves to the kind of advanced planning that can be accomplished through a leasing program.

Uranium also logically fits with the other leasable minerals. All of the other energy minerals or fuels -- coal, oil and gas, tar sands, oil shale, and geothermal resources -- are governed by leasing systems, most dating back to 1920. Leasing enables the government to better protect the public's fiscal and environmental interests. Past and current controversies about uranium mining around such national treasures as the Grand Canyon underscore how ill-suited the Mining Law is to govern uranium development. Indeed, some federal uranium is already subject to leasing rather than to the Mining Law – a result of post-World War II withdrawals of some federal land on the Colorado Plateau that vested the old Atomic Energy Commission with jurisdiction, now exercised by the Department of Energy.

The leasing program established under Section 511 would also end the unwarranted subsidy to the domestic uranium industry, and consequently to the civilian nuclear power industry. Under the General Mining Law publicly-owned uranium is mined without a royalty or other payment to the treasury. The legacy of uranium mining and milling on our public lands has also left a huge cleanup bill for the taxpayer. At a single large abandoned mill tailings pile on the banks of the Colorado River near Moab, Utah, for example, the Department of Energy currently estimates clean up costs from $844 million to $1.084 billion. *See* http://www.em.doe.gov/pdfs/Final.Moab.Report.pdf. Many other uranium mines on public lands have been abandoned and millions of dollars more will be needed to reclaim these sites. Moreover, uranium mines pose significant health and safety hazards, as shown by the tragic legacy on the Navajo Indian Reservation, where mining authorized by the Department of Energy contaminated water supplies and led to a dramatic rise in the incidence of lung cancer, especially among Indian miners. *See e.g.,* Doug Brugge and Rob Goble, *The History of Uranium Mining and the Navajo People*, AMERICAN JOURNAL OF PUBLIC HEALTH, Vol. 92, No. 9 (September, 2002). A leasing system is not a cure-all, but it can provide for better environmental management than is usually accomplished under the General Mining Law. A leasing program for uranium will also better ensure that uranium development occurs only on those public lands that are suitable for such use and that consumers of uranium will pay the full cost of uranium development and reclamation.

Finally, there is no strategic argument for subsidizing domestic uranium production. Friendly countries such as Canada and Australia have abundant uranium resources that can often be developed far more cheaply than U.S. uranium. *See* http://www.wise-uranium.org/umaps.html.

A few minor changes to the current language in Section 511 would further improve it. First, subsection (f)(2) properly requires that leasing units of not more than 2,560 acres be "as nearly compact as possible." For management reasons, ***lease tracts should also conform to the public land survey system to the extent possible.***

Second, at the end of subsection (j)(1) (page 67, line 19 of the bill), a phrase should be added to clarify what appears to be the committee's intent to adjust the royalty for pre-existing uranium mining properties from 6.25% to 12.5%. The phrase "***at which time the royalty shall become 12.5% of the value of production,***" would accomplish this result.

Third, subsection (j)(2), which addresses the status of pre-existing uranium mining claims, ***should be changed to eliminate the one- year gap between the deadline for applying for leases and the expiration of the claims***. Under subsection (j)(1), the owner of any uranium claim may apply for conversion of the claim to a lease within two years from the date of enactment of the law. The Secretary would then have one year to decide whether to approve a lease. Whether or not a pre-existing claimant applies for a lease within two years, ***all affected claims should be deemed null and void immediately after the two-year deadline has expired.*** There is no good reason to extend the claims of claimants who fail to file a lease application for a third year. The Secretary is obliged to process the lease applications of claimants who file them, and make a final decision as to whether to issue a lease, whether or not any pre-existing claims have expired. These changes can be accomplished by amending section (j)(2) to read as follows:

> (2) Other Claims Extinguished – All mining claims located for uranium on Federal lands shall become null and void by operation of law, immediately following the expiration of the two-year deadline for lease applications established under subsection (j)(1); provided, however, that nothing in this language shall alter the Secretary's obligation to process and resolve lease applications filed for pre-existing uranium mining claims.

Finally, there is a minor ***typographical error on page 64, line 4***. The fifth word "is" should be removed.

Thank you for the opportunity to appear today to offer my views on the provisions in the Consolidated Land, Energy, and Aquatic Resources Act of 2009 relating to coal mine methane and uranium leasing on public lands. I am happy to answer your questions relating to my testimony.

Sincerely,

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