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Executive Director
Colorado Medical Society
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Suzanne Hamilton
Director, Public Affairs
Colorado Medical Society
7351 Lowry Boulevard, Suite 110
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RE: Proposed Resolution on Opposition to In-Situ and Open Pit Uranium Mining in Colorado - Larimer County Medical Society

Dear Mr. Gilchrist and Ms. Hamilton:

On behalf of the Colorado Mining Association (CMA) and its member companies, I am writing to express our concerns about a proposed resolution from the Larimer County Medical Society to the Colorado Medical Society on Opposition to In-Situ and Open Pit Uranium Mining in Colorado. The resolution misstates the geologic science of uranium deposits, groundwater issues and the impacts of uranium mining operations. Moreover, if such a resolution were adopted, it would have the effect of endorsing a prescriptive ban on most uranium mining. If implemented nationwide, it would essentially endorse shutting down much of the uranium production needed for electricity and a variety of other beneficial uses, including nuclear medicine.

For these reasons, and as more fully outlined herein, CMA requests that the Society table this resolution pending a more thorough consideration of its merits. CMA would welcome the opportunity to meet with you to provide information that would better enhance your understanding of uranium mining.

CMA is an industry association, founded in 1876, whose more than 700 members include the producers of coal, uranium, metals and other minerals throughout Colorado and the west. Our organization has long supported responsible mining, and has worked to strengthen state regulatory programs governing mineral development activity. CMA administers an environmental stewardship program, and several of our members have earned recognition from both CMA and the state of Colorado through its environmental leadership program. Our comments on the resolution follow.

First, the resolution itself states, incorrectly, that the mining industry has filed for 3,000 mining permits in Colorado, creating the false implication that there are an equal number of mining operations in the state. In 2006, there was *no* commercial production of uranium in Colorado. While uranium claim staking activity has increased in recent years, the filing of a claim is only the first step in a lengthy, complex and expensive permitting process. By the time that a mine has gone through the permitting process, the operator will have consolidated many of the claims filed into a single mining operation. In Colorado, only a handful of permits to conduct uranium mining activity have been approved. Even with the inclusion of coal and other types of mining, the industry impacts less than one per cent of the lands in Colorado and is required to comply with dozens of environmental laws during mining operations and fully reclaim the land following the conclusion of operations in accordance with state law.

The resolution also draws broad, unsupported conclusions about both the environmental and safety effects of uranium mining and nuclear energy, as this letter will demonstrate in further detail. At a minimum, the Society should allow the industry and health experts from within and without state government to comment on the resolution. For example, paragraph 3 of the resolution states that "all aspects of uranium mining have adverse environmental consequences." Not only does the resolution fail to state the basis for these conclusions, they are also inaccurate, especially as those statements relate to the groundwater impacts of modern in situ uranium mining in Colorado.

Uranium mining is very effectively regulated at both federal and state levels. Contrary to the assertions in the resolution, in situ uranium mining, properly regulated under state and federal law, is not known to "contaminate groundwater (aquifers)" as alleged. Uranium occurs naturally and is common in water, soils and rocks, especially in the Rocky Mountain region. In-situ recovery mining is less invasive than other mining operations, and actually enhances water quality by continuously recycling water throughout the operation. Surface mining for uranium is also subject to stringent regulation by the Colorado Division of Reclamation, Mining & Safety and the Colorado Department of Public Health and Environment, which carefully monitor any impacts to the hydrologic balance.

As they relate to modern uranium mining, the statements about the alleged health effects of uranium mining are without merit. Because uranium and nuclear power have characteristics that are significantly different than most metals, the mining and processing of uranium have been the subject of numerous health studies and are well understood. None of these studies supports the allegations set out in the resolution. In fact, a comprehensive fifty year study (copy attached) of the effects of uranium mining and milling in a Texas county concluded that "no unusual patterns of cancer mortality could be seen in Karnes County over a period of 50 years, suggesting that the uranium mining and milling operations had not increased cancer rates among residents." *Cancer mortality in a Texas county with prior uranium mining and milling activities, 1950-2001,* J. Radiol. Protect. 23, 247-262 (2003).

The Texas study spanned more than one-half century, a period of time in which both surface and in-situ uranium mining activity took place. Another study (copy attached) by the National Institute of Occupational Safety & Health (NIOSH) evaluated

the mortality experience of 1,484 men employed in seven uranium mills in the Colorado Plateau for at least one year on or after January 1, 1940. *Pinkerton, et al., Mortality among a cohort of uranium mill workers: an update,* Occup Environ Med 2004; 61: 57-64. That study concluded that *"mortality from all causes and all cancers was less than expected based on U. S. mortality rates."* This study also covered a period of time prior to the enactment of comprehensive environmental legislation in the United States.

Uranium mining and nuclear plant operations also have a good safety record. Mining operators are required to monitor and control dust in accordance with plans carefully reviewed by state agencies, to protect worker health and safety.

The resolution also does not mention the need for uranium mining and nuclear energy to meet the nation's growing energy needs. Increasing domestic production is essential to reducing the nation's growing reliance on foreign energy sources. At present, nuclear energy accounts for 20% of the nation's electricity and is also essential for nuclear medicine. The United States consumes more nuclear energy than any other nation in the world. U. S. nuclear reactors use about 50 million pounds of uranium per year, but U. S. production is accounts for only 4 million pounds of that consumption. As worldwide demand for uranium (180 million pounds) is nearly double current production (100 million pounds), the U. S. must increase production to meet the growing demand.

Nuclear energy provides clean, emission free power to meet our nation's current and future electricity needs. It also produces no greenhouse gases. Nuclear energy is also very efficient. A single uranium fuel pellet – the size of the tip of your little finger – is the equivalent of 17,000 cubic feet of natural gas or 149 gallons of oil. Nuclear energy is a source of affordable electricity to meet baseload (or normal) power demands.

In short, we believe that it would be helpful for your group to fully understand the science and technology of uranium, uranium mining and uranium processing before considering the proposed resolution. We would be pleased to arrange to have specialists from within our industry and others meet with you to assist you in developing a more complete understanding of the need for modern, environmentally sound, uranium mining.

We look forward to working with you.

Sincerely,

Stuart Sanderson
President

cc: Radiological Advisory Committee, Colorado Department of Public Health and Environment
Health Physics Society, Central Rocky Mountain Chapter
Larimer County Medical Society