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May 2, 2011

Northern Arizona Proposed Withdrawal Project
ATTN: Scott Florence, District Manager
Bureau of Land Management
Arizona Strip District Office
345 East Riverside Drive
St. George, UT
84790-6714

Dear Mr. Florence,

Grand Canyon River Guides, Inc., (GCRG) founded in 1988, is unique in that it provides a unified voice for river guides and river runners in defense of the Colorado River corridor through Grand Canyon. Our non-profit educational and environmental 501(c)(3) organization is comprised of over 1,600 individuals who are passionately dedicated to the continuing preservation of this national icon. Consequently, Grand Canyon River Guides' goals are to:

Protect the Grand Canyon
Provide the best possible river experience
Set the highest standards for the guiding profession
Celebrate the unique spirit of the river community

With those goals in mind, Grand Canyon River Guides supports protecting the Grand Canyon's watershed from uranium mining as outlined in Alternative B in the Northern Arizona Proposed Withdrawal Draft Environmental Impact Statement. It is our belief that Alternative B affords a minimal level of protection for the lands surrounding the Grand Canyon, which while acceptable as a starting point, will necessarily become much broader in scope as the American public, the scientific community, and land management agencies continue to consider

the serious and long term consequences of further uranium mining on the doorstep of this World Heritage Site.

Our concerns relating to uranium mining lie primarily in the potential contamination of surface and ground water resources. Uranium can become mobile in the flow of subsurface water, subsequent to disturbance of the breccia pipes where it is mined. Flash floods are also a common occurrence during the monsoon season. Downstream of the potential uranium mining adjacent to Grand Canyon are fragile seeps, springs, and riparian environments, habitat for protected and endangered species, and landscapes unlike any other on the planet. Beyond the protected lands of Grand Canyon National Park, 25 million Americans depend on the Colorado River for their municipal and agricultural water needs. The legacy of uranium mining in the southwestern United States is one of contamination, with immediate evidence all around us in Grand Canyon itself:

- The Orphan Mine's drainage into the Redwall aquifer and Horn Creek (please note that UNLV researchers recently found uranium pollution concentrations in spring water from Horn Creek which were *greater than 500 parts per billion*, when the standard is 30 ppb),
- Hack Canyon Mine's tailings pile flash flooding into Kanab Creek, and
- The Church Rock Mine tailing pond's breach into the Little Colorado River.

In fact, per the park's own website, "Streams where radionuclides have been found include the LCR, the Paria River, Havasu, Kanab and Lava Chuar creeks, and Pumpkin Springs...Drinking and bathing in these waters is not advisable." We therefore concur with the perspectives expressed by David Kremer, hydro-geologist from the University of Nevada Las Vegas, when he stated that "I believe that an assumption that uranium mining will have minimal impact on springs, people and ecosystems in the Grand Canyon is unreasonable, and is not supported by past investigations, research, and data."

We are very concerned that the threat to the Grand Canyon watershed is diminished only somewhat by the potential withdrawal since eleven existing mines will be exempt from the ban. Arizona Department of Environmental Quality recently issued three air- and one aquifer-protection permits for a few of those mines (EZ and Pinenut Mines in the North Parcel and the Canyon Mine south of Grand Canyon) despite broad public opposition. As we expressed in our January 2011 comments to the AZDEQ, "We find the lack of oversight, the insufficient environmental safeguards, and the absence of a scientifically credible and comprehensive monitoring program to be unacceptable, placing the burden of risk from any potential contamination on the public and on Grand Canyon itself."

Consequently, as an amendment to the proposed 20 year withdrawal as outlined in Alternative B, we believe the implementation of a region-wide groundwater monitoring program is appropriate, given the limited timeframe of the withdrawal and the potential for mining's impacts in the future. The effects of pollution on this complex and interconnected aquifer system in the Grand Canyon region may take years, decades, or even centuries to be fully manifest. It is the responsibility of all area state and federal land management agencies to develop a clear, consistent, and rigorous monitoring program involving "the emplacement of monitoring wells,

regular sampling and chemical analysis of water, and hydrologic and hydrochemical mathematical modeling.” (David Kreamer, “Uranium Mining in the Grand Canyon, Biting my Tongue in Front of Congress”, *Boatman’s Quarterly Review*, Volume 22, #4, winter 2009-2010) Baseline data relating to aquifer water quality downstream of both protected and non-protected areas is vital in our long term understanding of uranium mining’s real effects in the Grand Canyon’s watersheds.

Additionally, please consider the human cost of uranium mining pollution on the eleven Native American tribes who hold Grand Canyon sacred. These include the Hualapai, Havasuapi, Kaibab-Paiute, Hopi, and Navajo whose lands are directly adjacent to the canyon and river and who use the watersheds for drinking water and to sustain livestock and crops. As a Diné Nation member, river guide, and vice president of Grand Canyon River Guides, Nikki Cooley says:

“Uranium mining near the Grand Canyon continues to have a deadly history for many Native and non-native Americans. My late grandfather mined uranium for a short part of his life yet he died from cancer that is linked to his time working in the mines without necessary protective gear or training. The Navajo Nation, once known to be virtually immune to cancer, now has doubled the rate of cancer cases since the 1970s. There are many Navajos who have unknowingly built homes using contaminated rock, sand and wood, consumed water and meat from livestock that grazed near or on former uranium mines, who are now suffering from various forms of cancer. With such a tainted history, why are we continuing to expose and risk the health of our natural resources and people? Thirty-one years ago in 1979 I was born, which is the same year the Church Rock Mine had a leak from uranium mining spill, and those people today still have no choice or viable options for drinking water for themselves and their livestock.”

And, mirroring some of those sentiments, GCRG board member Robert Jenkins, who is a commercial river guide and member of the Hopi Tribe, states:

“People may not know what has happened on Indian lands, but there are two sites that I know of that were contaminated by uranium mining out on the reservation decades ago. This caused our people to abandon their homes, almost like our own “Chernobyl” right in our back yard. Those settlements are gone now – buried, but they should not be forgotten. Hopis and Navajos were displaced and who knows how it has affected the lives of those residents over time. One of those settlements north of Tuba City was in a drainage close to the Little Colorado River that is sacred to the Hopi tribe. Could it still be affecting the LCR? Uranium mining has already had a devastating affect on our tribal lands.”

Grand Canyon River Guides fully and strongly supports the implementation of the 20 year withdrawal of these million or so acres from uranium mining development. There are many urgent reasons to disallow uranium mining in the vicinity of the canyon: the potential for radioactive and chemical contamination of the environment, the lack of independent oversight and monitoring programs, the physical degradation that always accompanies such efforts, the health risks to people, the potential impacts on tourism, and the affront to native traditions and

understanding. However, the heart of why we believe Alternative B should be implemented is simple – this is THE Grand Canyon, one of the “Seven Natural Wonders of the World”, the iconic crown jewel of our National Park system, and World Heritage Site. These are some of our greatest public lands, held in the public trust for us to care for and protect for future generations to enjoy. Our greatest hope is that the withdrawal designation for lands adjacent to Grand Canyon National Park will one day become a permanent one.

Respectfully,

Grand Canyon River Guides, Inc.

Erika Andersson – President

Nikki Cooley – Vice President

Fred Thevenin – Secretary/Treasurer

Lynn Hamilton – Executive Director

Laura Fallon – Director

Robert Jenkins – Director

Jed Koller – Director

Ariel Neill – Director

Jared Weaver – Director

Greg Woodall - Director