29 January 2024

The Honorable Katie Hobbs
Governor of Arizona
1700 W. Washington St.
Phoenix, AZ 85007

Re: Close the Pinyon Plain (aka Canyon) Uranium Mine

Dear Governor Hobbs,

The undersigned organizations and scientists urge your administration’s leadership to protect critical cultural and natural resource values in Arizona by revisiting and correcting the Arizona Department of Environmental Quality’s (ADEQ) permitting for the Pinyon Plain uranium mine near Grand Canyon, in Baaj Nwaavjo ltah Kukveni – Ancestral Footprints of the Grand Canyon National Monument, a national monument you strongly support.

We urge you to use your authority as Governor of Arizona to limit permitting to closure and post-closure monitoring and maintenance activities, which are the only uranium mining activities that are compatible with protecting critical cultural values and ensuring against irretrievable harm to the Grand Canyon’s aquifers and springs. We urge you to exercise all other executive authorities at your disposal as may be necessary to achieve those ends.

The Pinyon Plain mine, located within Baaj Nwaavjo Itah Kukveni – Ancestral Footprints of the Grand Canyon National Monument, began extracting uranium ore on 8 January 2024. The mine is located just south of Grand Canyon National Park atop and extending down to between two major aquifers that feed Grand Canyon springs, and at the foot of Red Butte, which the proclamation for the Ancestral Footprints monument describes as:

[A] towering landmark that is eligible for inclusion on the National Register of Historic Places as a traditional cultural property. Called Wii’i Gdwisa by the Havasupai and Tsé zhin li’ahí by the Navajo, it is defined by an eroded rock and basalt cap from ancient lava and is sacred to the Havasupai, Hualapai, Navajo, Hopi, and Zuni Peoples. Red Butte and the surrounding area are central to Tribal creation stories, and dense concentration of flaked stone tools and pottery provide evidence of thousands of years of human habitation there.1

Given mining’s incompatibility with cultural values, the toxic health legacy of uranium mining within southwest Tribal communities, and its unmitigable environmental threats, federal and state approvals have come against nearly four decades of strenuous objection from the Havasupai Tribe, other tribes, expert scientists, local communities, individual members of the public, and indigenous, faith, and

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conservation groups. Hauling and processing of uranium through and near regional communities continues and worsens a legacy of environmental injustice resulting from uranium development.

In response to news that mining had begun at Pinyon Plain, the Havasupai Tribe reiterated its concern in a 11 January 2024 statement which in part reads:

As Guardians of the Grand Canyon, we the Havasu ‘Baaja, the Havasupai Tribe, have opposed uranium mining in and around our Reservation and the Grand Canyon since time immemorial. We do this to protect our people, our land, our water, our past, our present and our future. And yet, despite the historic and current assistance and advocacy from numerous allies, and the countless letters, phone calls, and personal pleas, our urgent requests to stop this life-threatening action have been disregarded.

Our tribal community’s only source of water is fed by aquifers, which unfortunately sit directly below the Pinyon Plain Mine. The Arizona Department of Environmental Quality and the federal EPA claim there is no danger to us, that no harmful effects will come our way from this alleged “clean energy” source. But how can they so confidently make such a claim when Energy Fuels has already contaminated one of the two aquifers while digging the mine shaft, which then led to the company spraying toxic water into the air, only to be spread to the precious plants and animals by the blowing winds. A whole set of unknown and new problems will exist when the company begins transporting uranium over the land.

This is not just a problem that affects our remote Tribe. Rather, millions of people will now be forced to pass by an active uranium mine on their way to the majestic Grand Canyon... Shame on Energy Fuels, and those who were not brave enough to do what is right and necessary.2

Navajo Nation President Buu Nygren on 11 January 2024 also released a statement in response to news that mining at Pinyon Plain had begun. It in part reads:

Pinyon Plain/Canyon Mine was and is opposed by all neighboring tribes that have forever called Grand Canyon their home. Despite all of our objections through the years, we learn through the media, rather than from our federal trustee – the U.S. Department of Agriculture/U.S. Forest Service and U.S. Department of the Interior/Bureau of Land Management – as we would correctly expect, that our land and water will again be threatened with contamination.3

State and federal mine approvals, since the outdated, but still-in-force 1986 Environmental Impact Statement, have consistently favored mining over public interests. Each has dismissed Tribal concerns, downplayed or misrepresented scientific uncertainty and environmental risks, and dismissed and underestimated the potential for mine operations to encounter, deplete, and pollute aquifers upon which regional communities depend. These aquifers directly feed Grand Canyon’s springs, including

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3 Honorable Buu Nygren, President, Navajo Nation. 2024. We Join Our Neighbors to Implore Our Trustee to Protect Us from the Harmful Effects of Uranium Mining. Accessed 16 January 2024: https://www.facebook.com/PresidentNygren/posts/pfbid0fikzQLXdqzQKzrFLFop1gBwnEJUI93io7dStmaYvhCQyyKxdFmsnH2bPjA2Ffj1VY1
Havasu Springs and many others, which provide water for unique biota, endangered, and/or endemic species found nowhere else on Earth.

The mine’s ore bodies are positioned in geological strata between the Coconino and Redwall-Muav aquifers. Mine shaft excavation in 2016 punctured and began draining the Coconino aquifer. Each year since, the mine has pumped between eight and 11 million gallons of water from mine workings below the Coconino aquifer; that water, pumped into an open-air holding pond, has consistently exhibited concentrations of uranium and arsenic exceeding EPA drinking water standards. This ongoing flooding, during and after mining operations, threatens to travel through oxidized and water-soluble mined ore bodies, carrying pollutants into the Redwall Muav aquifer below.

Current permitting of the mine is predicated on a false scientific certainty alleging that, as stated by ADEQ, “it is virtually impossible for the mine to contaminate the Redwall-Muav Aquifer due to the impermeability and thickness of the rock layers between the bottom of the mine shaft and the Redwall-Muav Aquifer.” Prior permitting had relied on a similar assurance that developing the mine shaft would not encounter groundwater which is irrefutably disproved by ongoing pumping of contaminated groundwater from the mine shaft.

ADEQ’s false certainty belies a decades-long scientific debate relating to the potential for breccia pipe uranium mines near the Grand Canyon, and the Pinyon Plain mine specifically, to deplete and pollute regional aquifers. That still-vigorous debate includes recent peer-reviewed findings of both young and old water in the Redwall-Muav aquifer beneath the mine, indicating a connection between that Redwall-Muav and Coconino aquifers and land surface above it. One peer-reviewed study’s authors conclude that:

> In terms of resource management, the findings of this work indicate (1) contaminants, either from land-surface or subsurface sources, are likely to be transported into the deep aquifer, which is the primary source of South Rim springs and drinking water wells, (2) redistribution of run-off could significantly alter the net recharge, and thus discharge, and (3) current understanding of South Rim groundwater is incomplete, presenting a challenge to science-based decision making.5

Another peer-reviewed study’s authors state:

> This study explains the hydrochemical variability of South Rim springs and groundwater as primarily due to anthropogenic groundwater mixing and secondarily due to variations in local recharge, as proposed by others. The hypothesis suggests that uranium mining, local groundwater pumping, and management of the pipeline and [South Rim Water Reclamation Plant] infrastructure are all part of an interconnected South Rim groundwater system. A direct connection between the perched C-aquifer and R-M aquifer and mining operations is likely.6

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These and other studies underscore the persistent scientific uncertainty and disagreement concerning the potential for grievous harm from uranium mining to critical aquifers. In light of that uncertainty, neither industry nor regulators, despite ADEQ’s claims otherwise, can ensure against irretrievable damage to aquifers below the mine that feed Grand Canyon’s springs. That damage, were it to occur, would be impossible to correct, and, given the values at stake, is a risk that should not be taken. Preventing that outcome requires strong leadership from your administration.

We therefore urge your administration to revisit and correct permitting for the Pinyon Plain uranium mine to protect the Grand Canyon’s precious groundwater. We urge you to limit permitting to closure and post-closure monitoring and maintenance activities, which are the only uranium mining activities that are compatible with protecting critical cultural values at Red Butte and ensuring against irretrievable harm to the Grand Canyon’s aquifers and springs. We urge you to exercise all other executive authorities at your disposal as may be necessary to achieve those ends; time is of the essence.

Thank you for your consideration.

Taylor McKinnon  
Southwest Director  
Center for Biological Diversity  
(801) 300-2414  
tmckinnon@biologicaldiversity.org

Sandy Bahr  
Director  
Sierra Club - Grand Canyon Chapter  
(602) 999-5790  
sandy.bahr@sierraclub.org

Abalone Alliance SEC  
Don Eichelberger, Staff

Arizona Faith Network  
Rev. Katie Sexton-Wood, Executive Director

Alliance for Environmental Strategies  
Rose Gardner, Co-founder

Arizona Trail Association  
Matthew Nelson, Executive Director

ANFA - Australian Nuclear Free Alliance  
Sue Coleman, President

Arizona Youth Climate Coalition (AZYCC)  
Lyla Yango

Arizona Chapter of Physicians for Social Responsibility  
Barbara H Warren, MD, MPH, Executive Director  
David Spence, MD, MPH, Board of Directors

Arizonans for Community Choice  
Shelly Gordon, State Director

Beyond Nuclear  
Cindy Folkers, Radiation and Health Hazard Specialist
Black Hills Clean Water Alliance
Lilias Jarding, PhD, Executive Director

Brophy Native American Club
Cooper Davis, Faculty Moderator

Cape Downwinders
Diane Turco, Director

Chapter #63 (Albuquerque) Veterans For Peace
John E. Wilks, III, Vice President

Chesapeake Physicians for Social Responsibility
Gwen L. DuBois MD, MPH, President

Chispa Arizona
Vianey Olivarria, Director

Citizens Awareness Network
Deb Katz, Executive Director

Citizens for Alternatives to Radioactive Dumping (CARD)
Janet Greenwald, Coordinator

Citizens' Resistance at Fermi Two
Jessie Collins (CRAFT), Co-Chair
Jesse Deer In, Water Organizer

Climate Cabinet Action
Nick Arnold, Arizona State Lead

Coal River Mountain Watch
Vernon Haltom, Executive Director

Coalition for a Nuclear Free Great Lakes
Michael J. Keegan, Chair

Council on Intelligent Energy & Conservation Policy
Michel Lee, Chair

Dr. Laura Crossey
Professor of Earth & Planetary Sciences

Dr. Thomas De Pree
Assistant Research Professor

Don't Waste Michigan
Alice Hirt, Co-Chair

Earthjustice
Blaine Miller-McFeeley, Senior Legislative Representative

Global Network Against Weapons & Nuclear Power in Space
Bruce Gagnon, Coordinator

Grand Canyon Trust
Amber Reimondo, Energy Director

Grand Canyon River Guides
Lynn Hamilton, President

Green West Strategies
Pam Eaton, Founder

Gundjeihmi Aboriginal Corporation
Yvonne Margarula, Senior Traditional Owner - Mirarr people

Haul No!
Leona Morgan, Organizer

HEAL Utah
Melanie Hall, Policy Director

Indian Point Safe Energy Coalition
Marilyn Elie, Co Founder

Indigenous World Association
Petuuche Gilbert, President

Indigenous Rights Center
Peter Clark, Managing Director
Inter-Church Uranium Committee Educational Co-operative (ICUCEC)
Saskatoon, Saskatchewan, Canada
Linda Murphy, Secretary-Treasurer

International Society of Doctors for the Environment
Cathey E Falvo, MD, MPH, VP for N. America

Kahtoola, Inc.
Betsy Harter, Associate of Sustainability, Conservation & Philanthropy

Kamloops Moms for Clean Air
Gina Morris, Spokesperson

Dr. Karl Karlstrom
Professor of Geology

Dr. David Kreamer
Professor of Hydrogeology

Laguna Acoma Coalition for a Safe Environment
Petuuche Gilbert, Vice President

Latino Outdoors
Jazzari Taylor, Policy Advocate

MA Peace Action
Susan Mirsky, Chair, Nuclear Disarmament Working Group

Malach Consulting
Steven Emerman, Owner

Manhattan Project for a Nuclear-Free World
Mari Inoue, Co-founder

Massachusetts Peace Action - Indigenous Solidarity Action Group
Craig Simpson, Facilitator

Mi Familia Vota
Vanessa Perez, Civic Engagement Director

MiningWatch Canada
Jamie Kneen, Co-manager

National Parks Conservation Association
Sanobér Mirza, Arizona Program Manager

NM Social Justice & Equity Institute
Anna Rondon, Director

Nuclear Energy Information Service (NEIS)
Dave Kraft, Director

Nuclear Watch South
Glenn Carroll, Coordinator

Nukewatch
Lindsay Potter, Co-director

Occupy Bergen County
Sally Jane Gellert, member

Ohio Nuclear Free Network
Patricia Marida, Coordinator

Partnership for Earth Spiritually
Marlene Perrotte, Secretary

Patagonia Area Resource Alliance
Carolyn Shafer, Board Co-Chair and Mission Coordinator

Physicians for Social Responsibility
Brian Campbell, Executive Director

Physicians For Social Responsibility Iowa Chapter
Maureen McCue MD PhD, Board President

Physicians For Social Responsibility Pennsylvania Chapter
Pouné Saberi, MD, MPH, Board member
Ramapo Munsee Lunaape
Dwaine C. Perry, Sachem / Chief

Ramapough Mountain Indians, Inc.
SD Smith, Advisor Legal Affairs

Rocky Mountain Peace and Justice Center
Chris Allred, Nuclear Guardianship Coordinator

Rockland Coalition to End the New Jim Crow,
Environmental Committee
Jacquelyn Drechsler, Co-Chair Environmental Committee

Rural Arizona Action
Madison Rock, Interim Policy and Political Director

Samuel Lawrence Foundation
Bart Ziegler, President

San Clemente Green
Gary Headrick, cofounder

San Luis Obispo Mothers for Peace
Linda Seeley, Vice President

SaveOurBayMa
Henrietta Cosentino, Board Member

Southwest Research and Information Center
Kirena Tsosie, Community Water Specialist

Spokane Veterans For Peace #035
Rusty Nelson, President

Dr. Larry Stevens
Research Ecologist

Stop Algonquin Pipeline Expansion
Suzannah Glidden, Co-founder

Sustainable Tucson
Tres English, President

Tahchee/Bluegap Uranium Concerns Committee
Seraphina Sandra Nez, Apache County Arizona Concerned Native

The Coalition for Nuclear Safety
Alice McNally, Volunteer

The Colorado Coalition
Robert Kinsey, Chair

The Conservation Alliance
Shoren Brown, Vice President Public Affairs

The Enviro Show
Don Ogden, Co-Producer/Co-host

The Nuclear Resister
Felice Cohen-Joppa, Co-coordinator

Tó Nizhóní Ání
Nicole Horseherder, Director

United For Clean Energy
Tina Volz-Bongar, co-organizer

Western Watersheds Project
Cyndi Tuell, Arizona and New Mexico Director

Wild Arizona
Kelly Burke, Executive Director
CC:

The Havasupai Tribe
The Hopi Tribe
The Hualapai Tribe
The Honorable Buu Nygren, President, Navajo Nation
The Honorable Kyrsten Sinema
The Honorable Mark Kelly
Representative Raúl Grijalva
Representative Ruben Gallego
Representative Greg Stanton
Arizona State Senator Mitzi Epstein
Arizona State Representative Lupe Contreras
Deb Haaland, Secretary, US Department of the Interior
Tom Vilsack, Secretary, US Department of Agriculture
Nicole Branton, Supervisor, Kaibab National Forest
Ray Suazo, Arizona State Director, Bureau of Land Management