3 States Challenge Federal Policy on Storing Nuclear Waste

By MATTHEW L. WALD

WASHINGTON — The attorneys general of New York, Connecticut and Vermont sued the Nuclear Regulatory Commission on Tuesday, challenging a new commission policy stating that nuclear waste can be safely stored at a nuclear power plant for 60 years after a reactor goes out of service.

The three states argued that the policy, adopted in December, violated two federal laws requiring that a full environmental review be carried out at each nuclear site before permission for long-term storage could be granted.

“Our communities deserve a thorough review of the environmental, public health and safety risks such a move would present,” New York’s attorney general, Eric T. Schneiderman, said in a statement.

In a phone interview, Attorney General William H. Sorrell of Vermont said “a prudent federal response to the problem of spent fuel storage might be different from one site to the next — that’s what this is about.”

The attorneys general noted that storage of nuclear waste remained a nagging issue for the federal government. After years of work by the Energy Department to prepare Yucca Mountain in Nevada as a permanent repository for nuclear waste, the Obama administration in 2009 ruled out using that site. (State utility regulators have challenged that decision in a lawsuit.)

“It puts more pressure, frankly, on the federal government and the nuclear power industry to come up with long-term — and by that I mean permanent — solutions,” Mr. Sorrell said of the suit. “If we take our feet off the accelerator there, the politics and other considerations of permanent storage will be allowed to go unresolved for a longer period of time.”

Yet the potential impact of the lawsuit filed on Tuesday, and even the commission’s position
on waste, is unclear.

David McIntyre, a spokesman for the Nuclear Regulatory Commission, said the lawsuit by the attorneys general had mischaracterized the nature of the December decision. He described it as a commission “opinion” on how long waste could be safely stored rather than a rule permitting any plant to store spent fuel.

But people who favor building new reactors said the adoption of the policy was important because it helped outline a legal basis for approving the construction of new reactors and long-range plans for handling their spent fuel.

Most of the nuclear plants running today were designed at a time when engineers thought that spent fuel would be stored for a few years in an earthquake-proof pool at the site. Then it would be moved to a different site where it would be chopped up and chemically processed so that some parts could be reused, the thinking went.

But efforts to develop storage and reprocessing sites for nuclear waste stalled, and most nuclear plants ended up with too little storage space in their pools to accommodate the waste.

With no place to send the fuel, nuclear operators have instead built “dry casks,” small steel and concrete silos, filed with inert gas, into which old fuel can be sealed. Most nuclear plants in the United States either store fuel in casks now or have plans to do so.

The Nuclear Regulatory Commission licenses dry casks for 20 or 40 years, and then decides whether the licenses can safely be renewed, or whether additional precautions should be taken. The first casks were initially licensed for 20 years, and some have received 40-year renewals.

Mr. McIntyre said the underlying reason for the commission’s December “opinion” was that such casks were “working really well.”

The commission does not require that an environmental-impact statement be prepared for a site before it grants an extension, he acknowledged, but he said that in some cases there had been public hearings.

The casks require security guards, and at some sites the presence of the waste has made it impractical to reuse the land for any other purpose. At the Connecticut Yankee nuclear power station in Haddam Neck, Conn., torn down in 2007, all of the fuel ever used by the
reactor over its 28 years of operation is now sitting in dry casks.

In announcing in 2009 that it would drop its application for a license for Yucca Mountain, the Obama administration established a commission to pursue other solutions.

The panel is exploring technologies for reuse of some components of the fuel and developing a process for choosing the site for a repository.

In New York, the lawsuit on Tuesday had another political subtext. The licenses of the Indian Point 2 and 3 reactors in Buchanan are nearing expiration, and Gov. Andrew M. Cuomo opposes a 20-year extension sought by the plant’s owners.
COOPER: NRC CAN NO LONGER IGNORE “STAGGERING” COST OF WASTE DISPOSAL AND STORAGE IN REACTOR LICENSING AND RE-LICENSING

Economist Details $210 to $350 Billion in Costs That Undercut Case for New Reactors and Extended Life for Old Reactors; True Cost of Nuclear Power is $10-$20 Higher Per Megawatt Hour.

WASHINGTON, D.C. – December 19, 2013 – The U.S. Nuclear Regulatory Commission (NRC) must start taking into account the full cost of nuclear waste disposal and storage, which would add up to a third of a trillion dollars to the price tag of nuclear power, according to a declaration filed today with the NRC by economist Mark Cooper of the Vermont Law School. Cooper details how acknowledging the full cost of nuclear power would both dramatically undercut the rationale for relicensing of existing reactors and the licensing of proposed reactors and also make nuclear power far less attractive in comparison to wind, solar, and expanded reliance on energy efficiency.

Cooper presents his latest calculations about the cost of nuclear power in a declaration filed with the NRC as part of the court-ordered Draft Waste Confidence Generic Environmental Impact Statement process. Cooper is a senior fellow for economic analysis at the Institute for Energy and the Environment of the Vermont Law School. In addition to detailing the three dozen most at-risk reactors in the United States in “Renaissance in Reverse: Competition Pushes Aging U.S. Nuclear Reactors to the Brink of Economic Abandonment” (2013), Cooper is also the author of “Policy Challenges of Nuclear Reactor Construction, Cost Escalation and Crowding Out Alternatives” (2009).

In the NRC filing, Cooper states: “Are the economic costs of at-reactor nuclear waste storage and disposal in a permanent repository large enough to affect the economics of nuclear power and, therefore, should the Nuclear Regulatory Commission consider those costs in its nuclear licensing decisions? The answer is simple and clear - these costs are so large they must be considered. Conservatively estimating these costs, I put the total cost in the range of $210 to $350 billion, in real, undiscounted dollars. That is a figure that is certainly large enough to demand consideration by the Nuclear Regulatory Commission.”

Commenting on his analysis, Cooper said: “The economic numbers are crystal clear. Nuclear waste management costs are staggering and should be included in any proper analysis of the economics of nuclear reactors for purposes of issuing new licenses or renewing old ones. Given the substantial scale of these costs, any cost-benefit analysis that ‘hides’ such numbers is simply not credible. The fact that some of these costs have been socialized and taken off the shoulders of the industry does not make them any less expensive, burdensome, or relevant in determining the full and true cost of nuclear power.”

The Cooper declaration looks at a range of scenarios including heavy reliance on on-site reactor storage of nuclear waste in casks (which must be fully replaced at a cost of $100 billion or more every 100 years) and the use of one or more Yucca Mountain-style repositories. The economist notes that the estimates of nuclear waste storage and disposal are subject to the same kind of runaway cost increases that the industry sees when it comes to projections for construction of new reactors.

In the declaration, Cooper concludes the extra cost per unit of nuclear reactor output with nuclear waste storage and disposal would be “in the range of $10 to $20 per megawatt hour ($0.01 to $0.02/ kWh) of electricity generated by the reactors that produce the waste. This is equal to 10 to 20 percent of the cost of nuclear power from newly constructed reactors as calculated by the Energy Information Administration. Compared to the cost of the other resources included in the Energy Information Administration analysis, the cost of waste management would make nuclear power much less attractive as a resource.”

Cooper explains that factoring in the extra cost due to waste storage and disposal could be the tipping point for existing older reactors. “… the cost of nuclear waste management is even larger compared to the operating costs and margins of existing reactors. Several operating reactors have recently been abandoned because their operating margins of $9 per MWh are insufficient to cover their costs and meet the revenue requirements that their owners demand and others may face a similar fate. Waste
management costs of $10 to $20 per MWh must be considered very significant in evaluating the economics of aging reactors. The majority of the license renewals that are pending at the Commission, or expected to come before the Commission in the next few years, involve reactors whose operating costs and margins are no better than the margins for reactors that were recently retired before their licenses expired."

The declaration also points out the cost of storing "stranded" nuclear waste — stored at reactors that have been shut down — can be up to five times the cost of maintaining waste at an operating reactor. Given the likelihood of further shutdowns of currently operating reactors, this is a cost-multiplier issue that cannot be ignored, according to Cooper.

Cooper pointed out that his estimate of the cost of nuclear waste storage and disposal would have been even higher if he had included the risk of nuclear reactor accidents and the cost of decommissioning outdated reactors.

Friday is the NRC deadline for comments in the wake of a 2012 U.S. Court of Appeals decision that resulted in suspension of all U.S. reactor licensing and re-licensing decisions until NRC completed a study of the environmental impacts of its failure to site a repository for disposal of spent reactor fuel. The federal government estimates that just over 141,000 metric tons of spent fuel either already has or will be produced under existing reactor licenses and reactors under construction. Meanwhile, after decades of trying to site a repository, Yucca Mountain has been cancelled and no other repository has been proposed.

Cooper prepared his declaration in support of comments on a draft Environmental Impact Statement by the NRC regarding the environmental impacts of spent fuel storage and the feasibility of siting a spent fuel repository. Attorney Diane Curran will submit the comments Friday on behalf of more than 30 environmental organizations. The groups contend that NRC has failed to satisfy the 2012 court decision ordering the EIS, and therefore must continue the current moratorium on reactor licensing and re-licensing that the NRC imposed in response to the court order.

MEDIA CONTACT: Ailis Aaron Wolf, (703) 276-3265 or aawolf@hastingsgroup.com.

EDITOR’S NOTE: A streaming audio replay of a related news event will be available on the Web at http://216.30.191.148/wasteconfidencerule/ as of 3 p.m. EST on December 19, 2013.
I can do this feasibility analysis in two minutes.

It's the worst idea in the world. Numbers don't lie.

Our CEO loves the idea. Luckily assumptions do lie.

Exhibit L
NUCLEAR REGULATORY COMMISSION

NRC Needs to Do More to Ensure that Power Plants Are Effectively Controlling Spent Nuclear Fuel
NUCLEAR REGULATORY COMMISSION

NRC Needs to Do More to Ensure that Power Plants Are Effectively Controlling Spent Nuclear Fuel

Why GAO Did This Study
Spent nuclear fuel—the used fuel periodically removed from reactors in nuclear power plants—is too inefficient to power a nuclear reaction, but is intensely radioactive and continues to generate heat for thousands of years. Potential health and safety implications make the control of spent nuclear fuel of great importance. The discovery, in 2004, that spent fuel rods were missing at the Vermont Yankee plant in Vermont generated public concern and questions about the Nuclear Regulatory Commission’s (NRC) regulation and oversight of this material.

GAO reviewed (1) plants’ performance in controlling and accounting for their spent nuclear fuel, (2) the effectiveness of NRC’s regulations and oversight of the plants’ performance, and (3) NRC’s actions to respond to plants’ problems controlling their spent fuel.

What GAO Found
Nuclear power plants’ performance in controlling and accounting for their spent fuel has been uneven. Most recently, three plants—Vermont Yankee and Humboldt Bay (California) in 2004 and Millstone (Connecticut) in 2000—have reported missing spent fuel. Earlier, several other plants also had missing or unaccounted for spent fuel rods or rod fragments.

NRC regulations require plants to maintain accurate records of their spent nuclear fuel and to conduct a physical inventory of the material at least once a year. The regulations, however, do not specify how physical inventories are to be done. As a result, plants differ in the regulations’ implementation. For example, physical inventories at plants varied from a comprehensive verification of the spent fuel to an office review of the records and paperwork for consistency. Additionally, NRC regulations do not specify how individual fuel rods or segments are to be tracked. As a result, plants employ various methods for storing and accounting for this material. Further, NRC stopped inspecting plants’ material control and accounting programs in 1988. According to NRC officials, there was no indication that inspections of these programs were needed until the event at Millstone.

NRC is collecting information on plants’ spent fuel programs to decide if it needs to revise its regulations and/or oversight. In addition to reviewing specific instances of missing fuel, NRC has had its inspectors collect basic information on all facilities’ programs. It has also contracted with the Department of Energy’s Oak Ridge National Laboratory in Tennessee to review NRC’s material control and accounting programs for nuclear material, including spent fuel. It further plans to request information from plant sites and visit over a dozen of them for more detailed inspection. These more detailed inspections may not be completed until late 2005, over 5 years after the instance at Millstone that initiated NRC’s efforts. However, we believe NRC has already collected considerable information indicating problems or weaknesses in plants’ material control and accounting programs for spent fuel.

What GAO Recommends
GAO recommends that NRC (1) establish specific requirements for the control and accounting of loose rods and fragments and plants’ conduct of their physical inventories and (2) develop and implement appropriate inspection procedures to verify plants’ compliance with the requirements.

Commenting on the draft report, NRC generally agreed with GAO’s conclusions and recommendations.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Jim Wells at (202) 512-3841 or wellsj@gao.gov.

Source: Nuclear Energy Institute.

Nuclear fuel rods are filled with ceramic pellets of uranium and grouped into fuel assemblies, typically 5 to 10 inches square and 12 to 14 feet long.
Court Forces a Rethinking of Nuclear Fuel Storage

By MATTHEW L. WALD

WASHINGTON — The Nuclear Regulatory Commission acted hastily in concluding that spent fuel can be stored safely at nuclear plants for the next century or so in the absence of a permanent repository, and it must consider what will happen if none are ever established, a federal appeals court ruled on Friday.

In a unanimous opinion, a three-judge panel of the Court of Appeals for the District of Columbia said that in deciding that the fuel would be safe for many decades, the commission did not carry out an analysis of individual storage pools at reactors across the country, treating them generically instead. The commission also did not adequately analyze the risk that cooling water will leak from the pools or that the fuel will ignite, the court wrote.

The commission has relied on its conclusion that spent fuel rods can be safely stored at plants to extend the operating licenses of dozens of power reactors in recent years and to license four new ones.

The plaintiffs — four states, including New York, environmental groups and an American Indian organization — declared victory, although the precise implications were not clear. Still, it appeared that the commission would have to prepare and publicly defend an assessment that storage for many decades or even indefinitely did not entail large risks.

In the 1980s, Congress directed the Department of Energy to prepare a plan for creating a national repository at Yucca Mountain, a volcanic structure in the Nevada desert about 100 miles from Las Vegas. But that plan, decades behind schedule, was shelved in 2010 by President Obama, who had promised in his 2008 campaign to kill it if elected.

Some Republican lawmakers are now hoping to revive the idea of storage at Yucca but would face determined opposition, above all from the leader of the Senate’s Democratic majority, Harry Reid of Nevada.

“The commission apparently has no long-term plan other than hoping for a geologic
repository,” the appeals court wrote.

If the federal government “continues to fail in its quest” to find a place for spent nuclear fuel, then the material “will seemingly be stored on site at nuclear plants on a permanent basis,” the court said, and the commission will have to size up the environmental risks of this.

Failing to establish a repository is “a possibility that cannot be ignored,” the judges said.

A spokesman for the regulatory commission said that its lawyers were studying the ruling and that they would have no immediate comment.

New York State officials said they hoped the ruling meant that the commission would have to complete a sweeping analysis of waste storage at reactors before extending the licenses of the Indian Point reactors in Westchester County, which Gov. Andrew M. Cuomo wants shut down. The initial 40-year licenses at the two operating reactors there expire in 2014 and 2016.

John J. Sipos, a state assistant attorney general, said the safety rule that was at issue in the case had effectively taken “the waste issue off the table” in license renewals in recent years.

“We think that at Indian Point and other facilities going through license renewal, those issues will be back on the table,” Mr. Sipos said. He added that the commission’s analysis will have to cover whether waste should be moved out of the spent fuel pools and into sealed steel-and-concrete capsules called dry casks. The analysis will also have to address what the environmental impact of the casks will be if no burial site is built, he said.

A spokesman for Entergy, which owns the reactors at Indian Point, around 40 miles north of Midtown Manhattan, said, “There is no reason to believe this issue will affect the current schedule for license renewal proceedings.”

The industry’s main trade association, the Nuclear Energy Institute, said it was disappointed by the ruling but urged the commission “to act expeditiously to undertake the additional environmental analysis.” It would not comment on whether any licenses would be affected.

Geoffrey H. Fettus, a lawyer at the Natural Resources Defense Council who argued the case, said that because of Friday’s ruling, “this is the first instance where the long-term implications of our nuclear waste disposal policy will have to be given a hard public look.”
Opponents of nuclear power have long cited the lack of a firm plan for a waste burial place in opposing license extensions for reactors. In the meantime, the terrorist attacks of Sept. 11, 2001, and the earthquake and tsunami that hit the Fukushima Daiichi nuclear plant in Japan last year have sharpened a debate about how the fuel is stored now.

Most of it is kept in deep pools made of steel-reinforced concrete and lined with stainless steel, in water that is monitored and filtered. At most plants those pools have been packed full, and some older fuel has been moved into dry casks.

Such casks have survived floods and earthquakes without apparent damage, and some experts have called for thinning out the pools and filling up more casks. The commission has said that either method is acceptable.

The fear is that if a pool leaked or if cooling failed and the pool boiled dry, the fuel could catch fire, although many experts doubt this is possible.

In its ruling on Friday, the court said the commission had reached its conclusions by examining past leaks. But that history "tells us very little about the potential for future leaks or the harm such leaks might portend," it wrote.
July 7, 2005

Re: Private Fuel Storage, LLC application for commercial irradiated nuclear fuel "interim" storage site at the Skull Valley Goshutes Indian Reservation in Utah

Dear Commissioners Diaz, Jaczko, Lyons, McGaffigan and Merrifield,

On behalf of the millions of members our 437 organizations represent (31 Native American, 26 national, 366 regional/state/local, and 15 international organizations), we urge you not to approve the license application by Private Fuel Storage, LLC (PFS) to open an "interim storage site" for commercial irradiated nuclear fuel at the Skull Valley Goshute Indian Reservation in Utah.

The need for PFS is far from clear, given approvals for on-site dry cask storage at a growing number of reactors, and the fact that true consolidation of waste is not possible as long as nuclear utilities continue to produce it. The proposal is also plagued by many problems, and its location poses unacceptable risks. The facility has no contingency plan for faulty containers, the storage/transport containers are of questionable structural integrity, and there is an increasing risk that PFS could well become de facto permanent storage. The plan also raises serious transportation safety concerns, and is beset with environmental justice violations.

In short, the proposal is neither safe, sound, nor just.

Skull Valley is not an appropriate site for storing irradiated nuclear fuel. The adjacent complex of Hill Air Force Base and the Utah Test and Training Range (UTTR) represents one of the biggest and busiest bombing ranges in the country, with thousands of over-flights annually posing the risk of accidental crashes into PFS. The stray missile which struck the scientific research station on the reservation in the 1990's, and the Genesis satellite crash into the UTTR last September, for instance, show the potential dangers of storing 44,000 tons of highly radioactive waste next to such active military facilities.

PFS also plans no pool or hot cell on-site, and thus would lack any waste repacking capability in the event of an emergency. If storage casks fail for any reason - human error during shipping or handling, natural disaster, accident, act of sabotage, faulty casks, or gradual corrosion - it would be difficult to adequately address the problem and prevent radioactivity from leaking into the soil, water, and air.

Oscar Shirani, former Commonwealth Edison/Exelon lead quality assurance inspector and nuclear safety whistleblower, has questioned the structural integrity of the Holtec casks proposed for PFS. He cites numerous major quality assurance violations in the manufacture of the storage/transport containers. Cask defects would not only raise the risk of irradiated fuel degradation and increased container vulnerability during storage at Skull Valley, but also of a potentially catastrophic radioactivity release during transport due to a severe accident or terrorist attack.
As it is, PFS's transportation plan, or lack thereof, is very disconcerting. PFS would dramatically increase unnecessary transportation and handling of high-level waste. Despite PFS's assurances that it is only "interim" storage, its lack of waste repackaging contingencies and DOE's reluctance to accept PFS wastes at Yucca Mountain, as discussed below, all combine to raise the specter of irradiated nuclear fuel eventually being sent back thousands of miles to the reactors from which it originated. This would multiply the distances high-level waste is shipped, and escalate the risks of public and worker exposure, severe accidents, and terrorist attacks. It would also increase further stress and damage to the irradiated nuclear fuel, making future handling, transport, and long term isolation from the environment much more troublesome.

It is ironic that NRC would consider granting PFS an operating license, and thus permission to begin shipments, even before its Package Performance Study (PPS) is completed, a point raised by a number of our organizations during the public comment period on the PPS. Rushing the process, and using casks with only minimal testing and planning, is of concern to many communities along the transportation routes.

John Parkyn, PFS chairman and CEO, has publicly stated that PFS would train emergency responders along the routes to Skull Valley, however, PFS has not yet demonstrated the financial or technical capability to deliver on that promise. On February 7, at the U.S. Department of Energy's Fiscal Year 2006 budget unveiling, Office of Civilian Radioactive Waste Management director Margaret Chu stated that Nuclear Waste Policy Act section 180(c) funding to states for emergency response preparation would not even begin until five years before high-level radioactive waste shipments to Yucca Mountain. If the U.S. federal government requires such a long advance time, how could PFS privately provide such training before shipments would begin as early as 2007? Given the withdrawal from the PFS consortium by member companies such as American Electric Power/Indiana-Michigan Power, and the reduced investment by Southern California Edison, it is unlikely PFS could meet its basic commitments, let alone pay for emergency responder training and equipment all across the U.S.

The "interim" nature of the project is also questionable. Assurances have been given by PFS (and NRC staff in the proposal's Environmental Impact Statement) that irradiated fuel would remain at Skull Valley for no more than 40 years before transfer to Nevada for permanent burial. Last October, however, U.S. Energy Department Yucca Mountain Project transport director Gary Lanthum told the Salt Lake Tribune that the Yucca Mountain Project would simply not accept irradiated nuclear fuel from PFS, as that would violate the terms of DOE's Standard Contract for Disposal of Spent Nuclear Fuel, which requires DOE to only accept uncanistered fuel directly from nuclear utilities at reactor sites. Since PFS would not meet these requirements, it could very well lead to de facto permanent "disposal" of 4,000 casks of high-level radioactive waste above ground in Skull Valley.

For NRC to approve PFS at this time by assuming that Yucca Mountain would take the wastes after 40 years contradicts Gary Lanthum's statement, and also suggests
that NRC is predisposed to approve DOE's Yucca Mountain license application even before the proceedings have begun.

This is very troubling and ignores ongoing, serious uncertainties surrounding the Yucca Mountain Project's future. In addition, even if the Yucca Mountain repository does open, it is technically and legally limited to 63,000 metric tons of commercial irradiated nuclear fuel. DOE projects that the total amount of commercial irradiated nuclear fuel generated in the U.S. will double to over 105,000 metric tons in the decades to come. This means that even if Yucca Mountain opens, PFS could very well turn into the de facto permanent overflow zone for excess waste.

Finally, on its face, the storage or disposal of highly radioactive waste on a tiny, poverty-stricken Native American community that did not even benefit from the nuclear generated electricity also raises significant environmental justice concerns. The existing leadership crisis at Skull Valley only exacerbates such concerns. There is a long-running dispute over the legitimacy of the tribal leadership that supports PFS. The disputed Tribal Chairman, Leon Bear -- the primary proponent for PFS -- has been indicted on federal charges of embezzlement of tribal funds as well as tax evasion. Tribal members who oppose PFS claim they have been severely intimidated and harassed, and allege that irregularities such as bribery and extortion have been used to secure support for PFS within the tribe.

These are very shaky foundations upon which to build dry cask storage for 44,000 tons of commercial irradiated nuclear fuel, nearly 80% of what currently exists in the U.S. The Skull Valley Goshute Indian community seems to have suffered significantly from the PFS proposal long before the first shipment of irradiated nuclear fuel has even arrived.

We urge you to deny the PFS license request. Storing irradiated nuclear fuel at the Skull Valley Goshute Reservation is not a safe, sound, nor just solution to our country's high-level radioactive waste problem.

Sincerely,

NATIVE AMERICAN ORGANIZATIONS:

Margene Bullcreek  
Onhgo Guadedh Devia Awareness  
Member of the Skull Valley Band of Goshute  
Skull Valley Goshute Indian Reservation

Alberta Mason, Executive Director  
Sammy Blackbear, Vice Chairman, Skull Valley Band of Goshutes  
Environmental Justice Foundation  
Salt Lake City, UT
Valerie Jensen
A Growing Concern Counseling Center, Inc.
Fairbanks, AK

Cynthia Naha
Black Mesa Water Coalition
Keams Canyon, AZ

California Indians for Cultural and Environmental Protection
Marina Ortega, Director
Santa Ysabel, CA

Carol Two Eagle
Church of the Helping Hand, Inc.
Mandan, ND

Chief Johnny Jackson
Columbia River Tribes
Underwood, WA

Chief Wilbur Slockish
Suzie Slockish
CREED Columbia River Tribes
Warm Springs, OR

Charmaine White Face, Coordinator
Defenders of the Black Hills
Rapid City, SD 57709

Anna M. Frazier
Dine' Citizens Against Ruining Our Environment
Dilkon, Arizona

Milton Martinez
Eastern Navajo Uranium Workers
Haystack, New Mexico

Jodie White, Founder/Coordinator, Environmental Awareness Committee of
Fort Berthold, Roseglen, North Dakota

Ali Elissa
Flying Eagle Woman Fund
New York, NY

Elizabeth Tornes
Great Lakes Inter-Tribal Council
Lac du Flambeau, WI

Winona LaDuke, Executive Director
Natalie Marker, Associate Director
Becky Bodonyi, Research & Operations Manager
Carolyn Fuqua, Program Assistant
Honor the Earth  
Minneapolis, Minnesota  

Tom Goldtooth  
Indigenous Environmental Network  
Bemidji, Minnesota  

Manuel Pino  
Laguna Acoma Coalition For A Safe Environment  
Laguna and Acoma Pueblos, New Mexico  

Eric Labacz  
Lenape Nation, Inc.  
Sellersville, PA  

Teresa Jaurez  
New Mexico Alliance  
Chimayo, NM  


Jacquelyn Ross  
Pomo/Coast Miwok Nations  
Davis, CA  

Loretta Mendoza  
Product of Aztlán/New Mexico Alliance  
Chimayo, NM  

Nathana Bird  
Product of Aztlán Youth  
Chimayo, New Mexico  

Deb Abrahamson  
Twa-le Abrahamson  
S.H.A.W.L. Society (Sovereignty, Health, Air, Water, and Land)  
Spokane Indian Reservation, Wellpinit, WA  

Corbin Harney- Western Shoshone, Founder and Chairman of the Board  
Pete Litster- Executive Director  
Elizabeth Payne- Program Manager  
Shundahai Network  
Salt Lake City, Utah  

J. Gilbert Sanchez, Executive Director, Tewa Tribal Environmental Watch Alliance, Santa Fe, NM  

Corrine Sanchez and Kathy M. Sanchez, Co-Director  
Tewa Women United  
Santa Fe, NM
Susan Balbas  
Tierra Madre Fund for Indigenous Women  
Seattle, Washington

Donald and Juanita Mendoza-Keesing  
Voices Opposed To Environmental Racism (VOTER)  
Washington, D.C.

Lee Dazey, Western Shoshone Defense Project, Reno, NV

Ian Zabarte  
Secretary of State  
Western Shoshone National Council  
Cactus Springs, NV

NATIONAL U.S. ORGANIZATIONS:

Susan Gordon  
Executive Director  
Alliance for Nuclear Accountability  
Seattle, WA

Lynn Thorp, Clean Water Action, Washington, D.C.

Lois Gibbs, Center for Health, Environment & Justice, Falls Church, VA

Peter Montague, Ph.D.  
Director  
Environmental Research Foundation  
New Brunswick, N.J.

Ken Cook, Executive Director, Environmental Working Group, Washington, D.C.

Beth Klemmer  
Director  
Free The Planet!  
Washington, DC

Erich Pica  
Director, Domestic Campaigns  
Friends of the Earth  
Washington, D.C.

Bruce K. Gagnon, Coordinator, Global Network Against Weapons & Nuclear Power in Space, Brunswick, ME

Alice Slater  
Global Resource Action Center for the Environment (GRACE)  
New York, NY

Jim Riccio, Greenpeace, Washington, D.C.
Keli Lovejoy, Executive Director, Indigenous Rights Watch, Washington, D.C.

Jeffrey A. McKenzie, co-founder
MFSO (Military Families Speak Out)
Pooler, GA

Tara Thornton
Executive Director
Military Toxics Project
Lewiston, ME

Kevin S. Curtis, Vice President, National Environmental Trust (NET), Washington, D.C.

Carah Ong, Advocacy and Research Director
Nuclear Age Peace Foundation
Santa Barbara, California

Michael Mariotte, Executive Director, Nuclear Information and Resource Service,
Washington, D.C.

Helen Caldicott, M.D., President, Nuclear Policy Research Institute, Washington, D.C. and
San Francisco, CA

David Robinson, Executive Director
Pax Christi USA: National Catholic Peace Movement
Washington, D.C.

Kevin Martin
Executive Director
Peace Action and Peace Action Education Fund
Silver Spring, Maryland

Robert K. Musil, Ph.D. M.P.H.
Executive Director and CEO
Physicians for Social Responsibility
Washington, D.C.

Tim Carpenter
Director
Progressive Democrats of America
Northampton, Massachusetts

Wenonah Hauer, Director, Energy Program, Public Citizen, Washington, D.C.

Dave Hamilton
Director
Global Warming and Energy Program
Sierra Club
Washington, D.C.

Alfred L. Marder
President
US Peace Council
New Haven, Connecticut

Navin Nayak, Environmental Advocate, U.S. PIRG, Washington, DC

Susan Shaer, Executive Director, Women's Action for New Directions, Arlington, MA

REGIONAL, STATE, AND LOCAL U.S. ORGANIZATIONS:

Alaska:

Alaska/Arctic Environmental Defense Fund, Coordinator, Andrew Hund, Anchorage, AK

Stacey Fritz, No Nukes North, Fairbanks, AK

Arizona:

Frank C. Subjeck
Air Water Earth
Lake Havasu City, Arizona

Stephen M. Brittle
President
Don't Waste Arizona, Inc.
Phoenix, Arizona

Storm Waters
Earth First!
Tucson, AZ

Roxane George
Flagstaff Activist Network
Flagstaff, AZ

Julia Rouvier
Flagstaff Families for Peace
Flagstaff, AZ

Donna Cassano - Co-Founder
Flagstaff Nuclear Awareness Project
Flagstaff, AZ

Jack and Felice Cohen-Joppa
The Nuclear Resister
Tucson, AZ

Br. David Buer, ofm
St. Francis Mission
Whiteriver, AZ

The rest of the 437 signatory groups are posted online:

www.nirs.org/radwaste/skullvalley/skullvalleygoshutesgroupltr772005.pdf