



# NUCLEAR unWASTEd NEWS

A QUARTERLY SUMMARY OF GENERATION, TRANSPORTATION, STORAGE AND DISPOSAL ISSUES

JULY - SEPTEMBER 2006

VOL. 1, No. 3

---

---

## Headline

### **An Uncertain Future for Interim Storage**

9/08

On September 7, the Department of Interior (DOI) rejected the Private Fuel Storage (PFS) lease to build a spent nuclear fuel storage facility on the Skull Valley Band of Goshute Indians reservation, 50 miles southwest of Salt Lake City, Utah. The decision was based on the belief that PFS plans for transporting radioactive waste were inadequate. The Nuclear Regulatory Commission (NRC) had previously issued PFS a license that would permit them to store 44,000 tons of spent nuclear fuel, contingent upon approval of their transportation strategy by DOI.

The rejection represented a victory for many of Utah’s elected officials, who had fought a long battle to thwart efforts to open the private repository. Senator Orrin Hatch explained that those who oppose PFS “wanted to put a spike right through the heart of this project and this does it.” Governor John Huntsman Jr. characterized the denial as “the best news I think our state has seen in recent years.... This makes it a done deal. It’s over.” Since the NRC issued PFS the storage license, Utah’s lawmakers have passed legislation creating the Cedar Mountain Wilderness Area next to the reservation, intended to block rail access to the site, and the Bureau of Land Management has received over 4,500 letters protesting the proposal.

Despite the optimism of state officials, Sue Martin, a spokesperson for PFS, explained that it was still too early to announce the death of the project. “We do need to see the record of decision and look at it in some detail before we get a good feel for what our options are. I believe Senator Hatch would lead you to believe we have no options and I’m not sure that’s true,” she explained.

Chronic delays in the opening of a permanent repository at Yucca Mountain have led certain members of Congress to pursue interim storage possibilities that could ease the demand for a private facility like PFS. One such interim storage proposal was recently included in HR 5427, the Energy and Water Development Appropriations Bill for FY 2007.

The proposal in the appropriations bill has drawn the concern of state and local officials for its rushed process, disallowing state input through conventional hearings, and for its narrow timeframe. Attorneys General (AGs) from California, Connecticut, Illinois, Maine, Minnesota, New Hampshire, New Jersey, New York, Vermont, and Wisconsin recently expressed their

<b>In this Issue:</b>		
Storage .....	2	
Yucca Mountain.....	4	
GNEP .....	5	

uneasiness with the proposal in a letter to Senators Pete Domenici (sponsor of the language and chair of the appropriations subcommittee involved) and Harry Reid (Senate Minority Leader from Nevada, currently fighting the Yucca Mountain Project). The AGs first noted that under the proposal, DOE would have the authority to act in ways that are inconsistent with state and local siting laws. Their letter also argued that the proposed timeframe was too narrow to address all the issues and risks that the storage and transportation of nuclear waste entails. The Attorneys General finally assert that the proposal is too restrictive in that it prohibits the Environmental Impact Statement from considering effects beyond 25 years, which is necessary due to the long lifespan of nuclear waste and the lack of a guaranteed permanent repository in operation by that time.

A joint letter from the National Conference of State Legislatures, National Association of Counties, U.S. Conference of Mayors, and the National League of Cities was also sent to the United States Senate expressing similar concerns. Their letter acknowledged the difficulty of implementing the Nuclear Waste Policy Act of 1982, but disagreed with the decision to advance the proposal through the appropriations process. The letter also emphasized the need to address issues concerning “transportation requirements and limitations, emergency response training and equipment, and public education.” The four organizations finally note the very limited involvement of state and local officials outlined in the proposal, and the lack of attention paid to the role of these governments in the siting process. Based on these concerns, the letter recommends that the Senate strike this section of the appropriations bill until these questions are addressed.

[Salt Lake City Tribune](#)

[Helena Independent Record](#)

[NCSL, et al, Letter to the US Senate](#)

## **Minnesota Judge Rules in Favor of On-Site Nuclear Waste Storage**

8/24

Earlier this month, Minnesota Administrative Law Judge Steve M. Mihalchick ruled favorably on Xcel Energy’s 2005 Certificate of Need submission requesting authorization to store nuclear waste at its Monticello plant, 40 miles northwest of the Twin Cities.

Judge Mihalchick recommended that the Minnesota Public Utilities Commission (PUC), which is expected to consider the issue next month, allow Xcel to store spent nuclear fuel in 30 steel and concrete, above-ground containers at the facility. In his decision, Judge Mihalchick determined that although reprocessing and/or transporting waste off-site to a federal repository are not viable options at this time, the Monticello plant is an important source of affordable energy for Xcel customers and therefore must continue operation, requiring on-site storage.

Xcel filed a license renewal application with the Nuclear Regulatory Commission in March, 2005, for a 20-year extension on its original license expiration of 2010. The amount of on-site storage requested by Xcel in its certificate of need to the Minnesota PUC would cover the additional waste created over this extended period. The Minnesota PUC’s decision on whether to allow the storage will be final, barring any state legislative action on the issue.

On two occasions the Minnesota legislature authorized storage at Xcel’s Prairie Island facility, which uses techniques similar to those proposed at Monticello. In 1993, the Minnesota Court of Appeals determined that on-site storage should be characterized as “permanent” and therefore require authorization from the state legislature under the 1977 Minnesota Radioactive Waste Management Act. The legislature passed a law in 1994 allowing Xcel’s predecessor, Northern States Power, to store 17 containers of waste at the Prairie Island plant.

By the end of the 1990s, however, it became apparent that Prairie Island would be forced to close several years before its license expired due to limited storage capacity. The state legislature responded with a 2003 special session authorizing the storage of up to 48 casks as set by the original federal license. The law also required Xcel to work on the development of renewable energy sources and required the approval of the Minnesota Public Utilities Commission for future expansion requests.

Throughout the process, arguments questioning the safety and environmental risks posed by on-site storage of radioactive waste have been countered by claims that the minimal risks are far outweighed by the Monticello facility's contribution to an affordable energy supply.

[MN Legislative Guide on Nuclear Waste Storage News Summary](#)

### **"UPDATE"**

9/29

The Minnesota Public Utilities Commission (PUC) approved the Xcel Energy proposal on Thursday, September 28 to expand the spent fuel storage capacity at the company's Monticello plant. The decision will become final next June unless state legislators decide to intervene early next year.

The regulators' meeting was attended by lobbyists, environmental interests and utility companies, but featured less conflict than similar meetings in the past. Some attributed this difference to the conditional transfer of authority over nuclear waste issues to the PUC from the state legislature in 2003.

The decision left disagreement among some members of the board as to what the future may hold. One former state representative and current PUC member, Tom Pugh, indicated that the legislature might decide to address the issue after they convene in 2007. LeRoy Koppendrayner,

another former state representative serving on the PUC, emphasized the company's safety record and his belief that approving Xcel's plans was a clear-cut decision.

[News Article ..](#)

### **Federal Government Pays Utility for Failure to Take SNF**

8/31

The Tennessee Valley Authority (TVA) received \$34.9 million from the federal government this month as the result of a January 31, 2006 ruling in the Court of Federal Claims holding the Department of Energy (DOE) in breach of contract. The Nuclear Waste Policy Act of 1982, followed by a contract between DOE and the utilities in 1983 and the Nuclear Waste Policy Amendments Act of 1987, established DOE's responsibility for taking spent nuclear fuel (SNF) from utility sites by 1998. In return, utility ratepayers have contributed into a Nuclear Waste Fund (NWF) dedicated to the creation of a permanent waste repository. DOE has yet to meet its 1998 deadline for accepting SNF, forcing individual plants to find and pay for storage themselves.

TVA is the first utility to receive a court-ordered award out of the 66 cases that have been filed. Nine of these cases have been dismissed, while another three have been settled out of court. The most notable of these settlements occurred two years ago when Exelon Corporation received \$80 million to cover storage costs they had already incurred, with yearly payments to follow for additional expenses.

If the TVA court decision sets precedent, the high number of waste storage cases filed against the federal government could add up to a costly payout - estimates suggest as much as \$50 billion. The TVA decision, along with a 2000 ruling that DOE had indeed broken their contract, have convinced many utilities that they have a favorable chance of winning their respective cases.

## Storage cont.

---

For many individuals following the outcome of the TVA case, the decision highlights the need for Congress and DOE to complete a permanent repository, or develop an interim storage solution that would allow the government to take the waste off of the utilities' hands.

Settlements in these waste storage cases are paid out of the federal judgment fund, not the NWF to which utility ratepayers have contributed over \$20 billion so

far. In the case of TVA, because the judgment covered damages up to September 30, 2004, there is nothing that prevents them from filing another lawsuit in the future to recover damages after that point.

[Court Decision](#)

[Payment Article](#)

[Decision Article](#)

## Yucca Mountain

---

### **Timetable Announced for Yucca Mountain Project**

7/24

On July 19, Ward Sproat, Director of the Department of Energy's Office of Civilian Radioactive Waste Management (DOE-OCRWM), announced the department's schedule for opening the Yucca Mountain radioactive waste repository. DOE will submit a license application to the Nuclear Regulatory Commission (NRC) by June 30, 2008 and begin receipt of nuclear waste at the repository in March of 2017, nineteen years after the legally-stipulated opening date.

In remarks before the House Subcommittee on Energy and Air Quality, Ward Sproat listed his four strategic objectives as the new director of OCRWM, the first being the submittal of a high-quality application for the Yucca Mountain project. The timetable for the project after the license is submitted will be subject to various uncertainties beyond DOE's control, including whether:

- Congressional appropriation levels meet project needs;
- NRC authorizes construction in a timely manner;
- Litigation outcomes are favorable;
- The Nuclear Fuel Management and Disposal Act passes, which would allow for access to the Nuclear Waste Fund, land withdrawal at the site, and the ability to preempt state/tribal transportation requirements.

Sproat's remaining three objectives as OCRWM director include: training a multi-skilled staff to competently run the Yucca Mountain project, addressing the mounting liability of the federal government's failure to remove spent fuel from nuclear plants, and developing a comprehensive transportation plan that addresses state, local and tribal concerns.

Requests for Proposals for independent assessment of the functioning of different areas within the Yucca Mountain project will soon be issued by OCRWM. Sproat hopes outside assessments, combined with his own data collection on the draft license application, the quality assurance programs, and the engineering procedures, will help OCRWM pinpoint problem areas to better prepare for the project's lengthy road ahead.

Mr. Sproat emphasized the importance of opening a repository for the 50,000 tons of radioactive waste currently stored at reactor sites in 31 states across the country. The creation of this facility will be important, he explained, to reduce the financial burden on American taxpayers, and to ensure that the potential of nuclear power as a source of energy is not compromised by the buildup of waste.

Nevada legislators and interest groups opposed to the Yucca Mountain project expressed significant skepticism about DOE's ability to meet the proposed dates and open the repository, stating their unequivocal commit-

## Yucca Mountain cont.

---

ment to fighting the repository with continued legal and political roadblocks. The schedule was quickly dismissed by Sen. John Ensign (R-NV) as having “no basis in science or reality,” and by Sen. Harry Reid (D-NV) as being “little more than a wish list.”

For many who have seen years pass without a timetable for the opening of Yucca Mountain, however, Sproat’s plan represents progress. “This is an ambitious schedule, but it’s nice to actually see a schedule,” expressed the chair of the Senate Energy Committee, Pete Domenici (R-NM). “This is the most detailed schedule on Yucca Mountain that I have seen in recent memory.”

**DOE Schedule for the Yucca Mountain Project**  
(as provided in a written statement for the House energy hearing)

### **Yucca Mountain License Schedule:**

Design for License Application Complete - November 30, 2007

Licensing Support Network Certification - December 21, 2007

Supplemental Environmental Impact Statement (EIS) Issued - May 30, 2008

Final License Application Verification Complete - May 30, 2008

Final Rail Alignment EIS Issued - June 30, 2008

License Application Submittal - June 30, 2008

License Application Docketed by NRC - September 30, 2008

### **Best Achievable Construction Schedule:**

Start Rail Construction in Nevada - October 5, 2009

Construction Authorization - September 30, 2011

Receive and Possess License Application Submittal to NRC - March 29, 2013

Rail Access In-Service - June 30, 2014

Construction Complete for Initial Operations - March 30, 2016

Start up and Pre-Op Testing Complete - December 31, 2016

Begin Receipt - March 31, 2017

[Sproat Testimony](#)

[DOE Press Release](#)

[News Article](#)

## GNEP

---

### **Industry Report on Economic Viability of Reprocessing**

7/26

The Boston Consulting Group (BCG), an international corporate consulting firm, released a report on July 25 indicating that reprocessing (recycling) nuclear waste is economically feasible and would be an attractive complement to the Yucca Mountain repository. The study was conducted on behalf of AREVA, Inc., an international conglomerate offering total nuclear fuel cycle services, including reprocessing.

Using cost estimates based on Areva’s European program, the report found that the cost of reprocessing

spent fuel would likely be \$520 per kilogram, which is financially competitive with the “once-through” fuel cycle of total disposal at \$500 per kilogram. This figure, however, contrasts sharply to other estimates that recycling nuclear fuel would cost closer to \$1,500 per kilogram.

BCG’s financial assessment is based on the PUREX reprocessing system of plutonium extraction, which is not currently used in the United States due to concerns of potential nuclear weapons proliferation from the byproduct. The Department of Energy’s (DOE) Global Nuclear Energy Partnership, a piece of which focuses on recycling, is instead looking into the development of an alternative known as UREX+, which would not separate out plutonium. The developmental and operational costs of this alternative, untested system are unknown. 5

The BCG report also compares “total lifecycle cost” estimates for a combined strategy of reprocessing and storage at Yucca Mountain (\$113 billion), with the purely once-through cycle and storage at Yucca Mountain (\$124-\$130 billion) - a savings of \$11-17 billion. Additional benefits touted in the report include the reduced burden on repository space with less waste and less heat-producing elements, and the reduced demand for new uranium supplies since 20-25 percent of nuclear fuel needs could be provided with recycled products.

Sen. Pete Domenici, chair of the Senate Energy and Water Development Appropriations Subcommittee and the Senate Energy and Natural Resources Committee, expressed a sense of encouragement from the findings of the report: “This report uses real economic figures to validate the position that it is time for the United States to embrace recycling of commercial spent fuel to maximize our energy use and minimize the amount of nuclear waste that must be stored.” Domenici plans to hold a hearing in his appropriations subcommittee in September to examine the BCG report.

[BCG Executive Summary](#)

[BCG Report](#)

[News Article \(E&E subscription required\)](#)

[AREVA Press Release](#)

### **Significant GNEP Reprocessing Change Announced**

8/04

In an effort to speed up the implementation of the Global Nuclear Energy Partnership (GNEP), the Department of Energy (DOE) announced plans on Thursday to look into “the feasibility of accelerating development and deployment of advanced demonstrations” of reprocessing technologies.

The plan described by DOE Assistant Secretary for Nuclear Energy Dennis Spurgeon would involve a “two-track approach.” Under the first track, DOE would focus on “the deployment of commercial scale facilities for which advanced technologies are available now or in the near future.” One part of the GNEP plan to close the nuclear fuel cycle on a global scale involves reprocessing (recycling) spent nuclear fuel. This part of the plan originally included the development of new recycling technologies that would not separate out plutonium (because of proliferation concerns), and the development of advanced fast reactors to burn that new recycled byproduct. DOE now plans to skip the demonstration scale phase of developing these new technologies and instead use reprocessing methods similar to those currently commercially available.

The second track of the plan would then involve focusing R&D toward new technologies to successfully and cost-effectively separate and fabricate transmutation fuels (containing plutonium and minor actinides) and create an advanced fast reactor to burn those fuels. Research in this second track is now slated to occur solely at DOE national laboratories.

Efforts to adjust GNEP seem to be driven by a need to jumpstart the sputtering program. Due to planning concerns, House appropriators recently hacked the FY 2007 budget for GNEP to \$120 million from President Bush’s request of \$250 million. In addition to overall program concerns, congressional interest was peaked last month with an industry report detailing the costs of reprocessing using current technologies. The Boston Consulting Group (BCG) report, prepared on behalf of AREVA, Inc. (an international conglomerate offering total nuclear fuel cycle services, including reprocessing) suggested that the cost of current reprocessing technologies combined with the use of a repository are comparable to the cost of disposal alone.

BCG’s findings were based on the activities of AREVA, which uses “CO-EX” technology, a variation of plutonium-extraction (PUREX). Under the CO-EX approach, plutonium is taken from the waste and then combined with

small amounts of uranium to form a “mixed oxide base” (MOX) for the generated fuel. This link to PUREX raised an immediate red flag for those with concerns about the proliferation of weapon’s grade plutonium, which is separated out with current reprocessing technologies.

Edwin Lyman, senior scientist at the Union of Concerned Scientists, argued that DOE’s “radical change in direction completely undermines the primary objective of the GNEP program, which was to develop new reprocessing technologies that do not pose the same level of proliferation risk as conventional technologies.” Lyman went on to explain, “the so-called CO-EX process proposed by AREVA is even less proliferation-resistant than the UREX-plus process that DOE had proposed for development.” In Thursday’s announcement, Spurgeon was quick to dismiss proliferation concerns as they relate to the GNEP changes: “Many technologies have some relationship to PUREX,” he said, “but ... one of the inviolate requirements here is we do not produce separated plutonium.”

**Hearings planned:**

A briefing to describe DOE’s baseline plan and answer expression of interest-related questions will be held August 14, 2006, from 8:00 AM - 12:00 PM in the Washington, D.C. area. DOE requests that interested parties who wish to attend the briefing send an email to [GNEP\\_EOI\\_RSVP@nuclear.energy.gov](mailto:GNEP_EOI_RSVP@nuclear.energy.gov).

Rep. David Hobson (R-OH), chair of the House subcommittee that controls DOE spending, reportedly hopes to hold a hearing on GNEP in September. His Senate counterpart, Pete Domenici (R-NM), also expressed interest in conducting a reprocessing hearing that month. Both of their appropriations subcommittees have already completed consideration of the Energy and Water Appropriations bill that funds GNEP, but both foresee a conference necessary in the future to reconcile the significant difference between their FY 2007 funding levels (House at half, Senate fully funding).

[DOE Press Release .](#)

[News Article \(Subscription Required\)](#)

**NCSL Online Resources**

[NCSL Nuclear Waste Cleanup Webpage](http://www.ncsl.org/programs/envIRON/cleanup/cleanup.htm)  
<http://www.ncsl.org/programs/envIRON/cleanup/cleanup.htm>

[State Legislation Database on Nuclear Waste Issues](http://www.ncsl.org/programs/envIRON/nucwaste.cfm)  
<http://www.ncsl.org/programs/envIRON/nucwaste.cfm>

[State Legislation Database on Environmental Justice Issues](http://www.ncsl.org/programs/envIRON/envjustice.cfm)  
<http://www.ncsl.org/programs/envIRON/envjustice.cfm>

**NUCLEAR unWASTEd NEWS**

National Conference of State Legislatures, 7700 East First Place, Denver, Colorado 80230, (303) 364-7700.

**William T. Pound, Executive Director**

Funding for this newsletter is provided by the U.S. Department of Energy. Any opinions, findings or conclusions in this publication are those of NCSL staff and do not necessarily reflect the views and policies of the U.S. Department of Energy.

The purpose of this newsletter is to provide legislators, staff and interested parties with information on high-level radioactive waste and environmental management cleanup.

Articles in this newsletter have been researched by NCSL staff. Resources include *E&E News/Greenwire online*, *Nuclear Waste News*, *Nuclear Fuel*, *Platts Nuclear Fuel*, legislative research office contacts and other sources.

**Contributors to this issue:**  
**Christina Nelson.**

**Layout and design: Alise Garcia.**