

## DOCKETED

<b>Docket Number:</b>	15-IEPR-12
<b>Project Title:</b>	Nuclear Power Plants
<b>TN #:</b>	204583
<b>Document Title:</b>	Gene Nelson, Ph.D. Comments: NPR Reported on the safety of dry cask storage 13 June 2012
<b>Description:</b>	N/A
<b>Filer:</b>	System
<b>Organization:</b>	Gene Nelson, Ph.D.
<b>Submitter Role:</b>	Public
<b>Submission Date:</b>	5/11/2015 1:11:57 PM
<b>Docketed Date:</b>	5/11/2015

*Comment Received From: Gene Nelson, Ph.D.*

*Submitted On: 5/11/2015*

*Docket Number: 15-IEPR-12*

## **NPR Reported on the safety of dry cask storage 13 June 2012**

A NPR article with color photograph regarding dry cask storage. The massive size of the dry casks is shown in the photograph. Despite the fear-mongering advanced by some docket respondents, dry cask storage has been thoroughly studied and found to be safe. Particularly ludicrous are claims by a former information technology system analyst and her allies that the stainless steel used in dry casks is "thin" and could be prone to stress cracking corrosion. An online catalog shows that a square foot of 1/2 inch thick stainless steel weighs 28 pounds! The former system analyst advocates for a different cask design that includes gaskets in its design. In the event of a postulated - but highly unlikely - cladding failure in the spent nuclear fuel, public safety is enhanced by a solidly welded 1/2 inch thick stainless steel liner instead of an inherently failure-prone gasket.

Selected NPR listener comments indicate that politics was behind the decision to halt development of the Yucca Mountain Storage Facility in 2009. (There is clear evidence that new reactor designs could use the remaining U-235 - about 95% of the material in dry cask storage - as fuel to generate more nuclear power.)

*Additional submitted attachment is included below.*

# Ruling Could Help Break The Nuclear-Waste Logjam

JUNE 13, 2012 5:12 AM ET

[HTTP://WWW.NPR.ORG/2012/06/13/154874352/RULING-COULD-HELP-BREAK-THE-NUCLEAR-WASTE-LOGJAM](http://www.npr.org/2012/06/13/154874352/ruling-could-help-break-the-nuclear-waste-logjam)



Christopher Joyce

NPR Morning Edition

3 min 7 sec



About 70,000 tons of used nuclear fuel sits mostly at power plants across the country. Much is kept underwater in spent fuel pools, but utility companies have been moving the fuel into concrete and steel casks like these in Richland, Wash. Energy Northwest CEO Vic Parrish (center) tours the facility with Reps. Doc Hastings (left) and Jay Inslee. **Shannon Dininny/AP**

The federal government promised almost 30 years ago to find a place to bury nuclear waste from power plants. It hasn't. So the waste is piling up at power plants around the country.

Now a federal court says the government must prove that this temporary solution is truly safe. The decision could help break the nuclear-waste logjam.

Most people agree that used nuclear fuel, which is highly radioactive, needs to be disposed of forever. But that's proving easier said than done. The government spent billions digging a giant hole for waste at Yucca Mountain in Nevada. Then President Obama canceled that project in 2009. The nuclear industry and many Republicans in Congress are fighting the administration to reverse that decision.

In the meantime, 70,000 tons of spent fuel sits mostly at power plants. Where it goes next, nobody knows.



Pete Vavricka conducts an underground train from the entrance of Yucca Mountain in Nevada in 2006. President Obama canceled the planned nuclear waste repository there in 2009. **Isaac Breecken/AP**

Lawyer Geoffrey Fettus of the Natural Resources Defense Council helped convince the federal appeals court in Washington, D.C., to tell the government this solution may not be safe.

"They're going to have to look at the environmental impacts of long-term storage on-site, potential disposal options, as well as the potential that they never even get a meaningful long-term disposal option," he says.

The Nuclear Regulatory Commission has argued that the waste is OK where it is — even for 60 years after a power plant closes. The NRC also says it will keep its promise to find a permanent waste dump "when necessary."

But the appeals court says: Prove it. The NRC "apparently has no long-term plan other than hoping for a geologic repository," the court ruled in a unanimous decision. Nuclear fuel could stay where it is

permanently, the court surmised, so NRC must assess the potential environmental effects of that outcome.

Nuclear critics such as Fettus say an environmental review will have to focus on the spent fuel that sits in big water-filled pools at power plants. The water keeps the radioactive fuel from overheating and possibly burning. "We've been fighting for years with the NRC," he says, "urging them to require moving fuel from the pools as soon as it's able. The NRC so far has refused to do this."

## More About Nuclear Fuel

Utility companies have moved fuel out of pools into dry casks of steel and concrete. These are widely viewed as safer than pools. But most waste, at least three-quarters of it, is still in pools, many of which are packed to the legal limit. And the waste just keeps coming. Over the next 40 years, the amount of spent fuel is expected to double.

Albert Machiels, a waste expert at the utility industry's Electric Power Research Institute, says the public didn't expect local power plants to become de facto dumps.

"I think that it has a really large impact on the local communities," he says. "They never bought into the idea that the spent fuel was going to stay essentially beyond the lifetime of the power plant ... and it doesn't sell very well."

Moreover, the government has been charging utilities and their customers a fee to pay for a permanent waste dump. So far, more than \$30 billion has accrued, and it sits in the federal Treasury. David Wright, who runs the Public Utility Commission in South Carolina and is head of the National Association of Regulatory Utility Commissioners, says it's a rip-off.

"They [the federal government] have chosen not to do anything," he says. "The federal government has our money; we have their waste."

Wright says Yucca Mountain should be revived, but he says the court ruling in Washington requiring a reassessment of the status quo is one development where environmentalists and utilities can agree.

"The fact that we are finally getting some movement — and recognition in the court system is movement — and I think it's a positive development," Wright says.

The appeals court says the NRC must do an environmental assessment of all that waste. It did not, however, set a due date.

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### Selected comments

- [Breck Henderson](#) · 3 years ago

This issue is fraught with many contradictions and falsehoods. Anti-nuclear zealots are encouraged because they believe that if they can prove that storing nuclear waste is unsafe in dry casks or spent fuel pools, that will provide the rationale to shut down all nuclear power in the U.S. Pro-nuclear folks are pleased because they believe this ruling will force the Obama administration to move forward on Yucca Mountain, which is the alternative to

keeping spent fuel on the site of power plants.

**The truth is that the danger from spent nuclear fuel is grossly overblown.** It's safe in spent fuel pools, safe in dry casks, and safe in Yucca Mountain, and it just keeps getting safer as time goes by and the radioactive elements decay. I'd gladly keep a few dry casks in my backyard if DOE would pay me a few dollars a month to rent the space. Easy money, no risk.

But Harry Reid and the Nevada political crowd don't want to be told they have to take it, and they care not a wit for science, legal issues, or the economic activity a repository would bring to Nevada. Legally, the DOE and NRC are REQUIRED to move forward with Yucca -- but Obama and company care not for legal niceties. Obama is simply repaying his promise to Reid.

- [Breck Henderson](#) · 3 years ago

to continue . . . the environmental impacts of spent fuel have been researched and studied in great detail, with numerous environmental impact reports examining the issue from every aspect. The Goshute Indians in Utah have an approved site to store dry casks. The issue has been thoroughly examined at Diablo Canyon in California, and at every other site where dry casks are being used. It seems a bit presumptuous of this Court to suddenly discover that what has already been done is inadequate, but the NRC should be able to satisfy the new requirement fairly easily.

Also, it's not the NRC's responsibility to find solutions -- the NRC only rules on the technical adequacy of solutions presented to it by the industry or DOE. Antinuclear zealots seem to believe it is the job of the NRC to shut down nuclear power on their behalf (despite the science and 50 years of safe operation, they still don't believe nuclear power can ever be safe), but this is not the case.

- [Catherine Lemp](#) · 3 years ago

This story is incomplete in several respects. It fails to mention that Obama's decision to scuttle Yucca Mountain was part of a promise he made in exchange for Nevada Senator Harry Reid's support during the 2008 election. It doesn't mention that the NRC approved moving forward with Yucca Mountain, and that it was the Department of Energy that, perhaps illegally, withdrew its application for the site. The real story here is how politics (and folks who oppose any use of nuclear power) are interfering with the ability of a watchdog agency and its technical staff to do their job.

- [P S · 3 years ago](#)

Well... Harry Reid killed Yucca Mountain, but he did get the desert express!

These "green lobby" is an absurd collection of people that simply opted out of physics, chemistry and math sometime in high school out of fear of science, probably a decent overlap with the OWS protesters.

- [Religion Is · 3 years ago](#)

Norm St. Cyr (Norm3333) wrote:

This is how you know the pro - Global Warming liberals are disengenuous about its disastrous impending effects. They reject energy projects that have zero emmissions (nuclear power) because of the waste (Yucca mountain). That is like a terminally ill lung cancer patient turning down a transplant because the donor had a chest cold. Doesn't make any sense.

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Your analogy is actually quite good: if a lung infected with a chest cold is surgically implanted into a patient with terminal lung cancer, the cold would kill him / her as surely as the cancer due to the recipient's weakened state.

I consider myself an environmentalist and I support the use of nuclear power, but there are many better ways to deal with the highly dangerous waste it creates; nuclear reprocessing can make the waste usable again, but an even better solution would be to use advanced reactors that can work as well while creating less waste (such as breeder reactors) or no waste (such as traveling wave reactors, although these will not be viable until the more distant future).

I am an anti - Global Warming liberal so I guess this comment doesn't apply to me though.