

Comments Submitted Online by Virtual Attendees During the U.S. Nuclear Waste Technical Review Board's August 29, 2023, International Workshop on Siting of Radioactive Waste Facilities in the Order that the Comments Were Submitted

Name: Lee Peddicord
Affiliation: NWTRB Board Member
Comment: Greetings. Have a good meeting.

Name: Steven Arndt
Affiliation:
Comment: I can't hear Dr. Siu.

Name: Daniel Harold Thompson
Affiliation: dan.thompson@amcinc.com
Comment: Ancient wisdom should be considered an overall guide; "Where there is no vision, the people perish . . ." Proverbs 29:18.
Bravo for the Canadian "learn more" activities that formulate local visions for success in siting!

Name: Lee Peddicord
Affiliation: NWTRB Board member
Comment: The "learn more" agreements sound very interesting and an excellent approach. How many learn more agreements did you do and over what length of time? Did the nature of these change over time?

Name: Lindsay Shuller-Nickles
Affiliation: Clemson University
Comment: You mentioned that, in the consent-based process, communities entered "Learn More Agreements"; agreeing to develop better understanding rather than considering to actually house the waste. Was initial engagement met with any skepticism due to distrust, and if so, what were the strategies to rebuild trust?

Name: Tony Leshinskie
Affiliation: State of Vermont Public Service Department
Comment: A stumbling block in US Spent Nuclear Fuel policy has been that opening an interim spent nuclear fuel storage facility without having a firm commitment for a permanent (probable deep geologic) repository has halted progress in interim facilities. Communities have raised concern that committing to an interim facility is committing to a de facto permanent facility since the location for a permanent facility isn't decided. How has Sweden convinced its interim facility host communities that a permanent repository elsewhere is forthcoming?

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: The Swiss use superior technical safety standards, so are more likely to be trusted. For interim storage they use thick-wall metal casks that meet or exceed ASME N3 requirements. Their thick casks can be inspected and maintained inside and out and do not have cracking issues. The NRC and DOE use unmaintainable uninspectable welded shut thin-wall canisters, yet they falsely tell the public that the waste is safely stored. The 2019 Sandia Lab report points out these problems, but does not state that only thick-wall metal casks can meet all safety requirements. When will the NWTRB state that only thick-wall metal casks (such as the Castor ductile cask iron casks used by the Swiss and elsewhere) are the only current dry storage systems in

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: Congress and the public need to know that all spent fuel assemblies must be stored in thick wall metal casks (following the Swiss model) before the spent fuel can be safely stored and transported. There are no other safe options. Instead, the NRC and DOE choose to lower critical safety standards.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: Swiss Solution meets and exceeds American ASME N3 and other safety standards. The NRC and DOE do not. Instead they give numerous critical exemptions to American (ASME N3 and NRC safety standards and NWPA requirements for monitored retrievable storage.

<https://sanonofresafety.org/swiss/>

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: DOE consent based siting outreach document states waste is safely stored in spite of the information in their own Sandia 2019 report. Why should we trust the DOE?

SAND2019-15479R

<https://www.osti.gov/servlets/purl/1592862>

Gap Analysis to Guide DOE R&D in Supporting Extended Storage and Transportation of Spent Nuclear Fuel

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: The DIE

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: The DOE de-inventory reports do not address the elephant in the room: The condition of the fuel rods in current dry storage. This inconvenient truth needs to be front and center in information NWTRB provides Congress.

This is how it's address in the Crystal River de-inventory report:

"Regarding condition of NUHOMS canister & contents, Crystal River Section 10: The TN 32PTH1 DSCs and GTCC RWCs will need to be evaluated prior to transport to ensure 10 CFR Part 71 requirements are met. At a minimum, this will need to involve a comparison of the fabrication records against the CoC requirements and verification that the canister integrity has been maintained. It is recommended to allocate two to three years for this activity, which could involve a need to revise the CoC. In general, a complete transportability study consisting of a comparison of each transport cask and its contents in a transport configuration to the 10 CFR Part 71 CoC at the time the transport will be performed by the NRC licensee with the support of the transport cask CoC holder prior to transportation of each canister to be offered for transport..."

In basic English, this means they have no method to determine conditions of fuel rods, basket or canister to ensure adequate safety in storage or transport. Obtaining exemptions to NRC regulations and ASME N3 codes is not a solution. It's only a plan for disaster. There are good employees at the DOE and NRC, but they don't get to make the final safety decisions.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: The public would like to know what radiation and how much radiation is streaming out the air vents of each of the thin-wall canister systems. This includes the carbon and water particles that become radioactive Carbon -14 and tritium as they flow through the air vents. (Thin-wall canisters do not stop neutron and gamma radiation.) This would be a good item for the NWTRB to address before transport is even considered by the DOE.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: Proposed CIS legislation eliminates critical safety requirements in the NWPA. Recommend the NWTRB advise Congress on the important safety requirements in the NWPA that should not be removed.

Appropriation bills propose to bypass the Nuclear Waste Policy Act when establishing a pilot Consolidated Interim Storage facility. This would be a disaster for the public and the States.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: The NWTRB has reported that long term research is needed before any repository can work. Thank you for telling the truth on this. Now there needs to be outreach so Congress and the public knows this.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: How much radiation is released from operating reactors every day? The public is not told what types and how much. I wonder if the Swiss citizens know this? The idea that any of this is safe and clean is a lie.

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: Regarding repository storage, What is the blackout plan if it doesn't work, even in the short-term?

Name: Anonymous

Affiliation:

Comment: We learned today from Canada, Sweden, and Switzerland that success is related to building trust and a cooperative relationship over many years or decades with a consistent team that has authority and flexibility. Given that, why does DOE believe it is a wise decision to fund 13 different teams for an 18-24 month period to reach out to various unspecified tribes and communities and engage them in developing a CBS process when these teams have no legal authority and no longevity? Isn't there a serious risk these 13 projects will just ferment false hopes and confusion among the public and interested communities?

Name: John Buchser

Affiliation: jbuchser@comcast.net

Comment: Thank you to hear in greater detail how Canada, Switzerland, and Sweden have proceeded in engaging with their citizens in siting of HLW disposal. The 50-year timeframe to really engage the public is long but probably necessary for the US.

1. I have concerns about pursuing only interim storage. As some of the casks of waste are already 50 years old; cladding will be degrading to the point of failure in the next 50 years. Placement into interim sites will increase subsequent risk of movement into a permanent sites. I recommend that the NWTRB recommend that funding be provided to identify potential suitable sites for permanent disposal. This would help in minimizing transportation risk.

2. Future work on how to better communicate risk to the public is a very important point that was raised in today's presentations.

Thanks,

John

Name: John Buchser
Affiliation: Sierra Club, Rio Grande Chapter (NM)
Comment: Just providing affiliation for prior comment.
Thanks

Name: Donna Gilmore
Affiliation: SanOnofreSafety.org
Comment: I don't see the DOE Consent based siting speakers even considering the current technical problems of short-term and longer radioactive releases. Have they read the Sandia 2019 Technology Gap Report?

Name: Donna Gilmore
Affiliation: SanOnofreSafety.org
Comment: Do the Consent Based Siting speakers know that radiation continuously streams out the air vents? Do they understand material corrosion risks? Do they understand the zirconium fuel rods continue to degrade during dry storage?

Name: Donna Gilmore
Affiliation: SanOnofreSafety.org
Comment: Why do the speakers use the word "perceived" radioactive risks? What are the technical resources they are using to deny these risks? What technical resources are they using to determine radioactive risks?

Name: Donna Gilmore
Affiliation: SanOnofreSafety.org
Comment: The female speaker who mentioned women were harder to convince the waste would be safely stored was interesting. However, for her to assume the women's concerns were not valid was insulting.

Name: Donna Gilmore
Affiliation: SanOnofreSafety.org
Comment: Listening is a start. Taking action to address and resolve the safety problems the public identifies has had limited response from the DOE. None of the problems have been resolved that I am aware of.

Name: Jan boudart
Affiliation: Nuclear Energy Information Service
Comment: Thank you for having this public workshop.

The audio was variable. Barely able to hear questions and answers from Natalia Saraeva. The person fielding questions was truly inaudible. I could hear Carmen Mendez and the young woman with long hair and glasses, but I never caught her name or her position. I would like it to be posted when her picture appears, as is done on Democracy Now!

The people speaking were inadequately identified. The public is confused about committees and subcommittees, etc. People's positions, names and jobs should be constantly available to viewers to avoid confusions.

Almost any grassroots organization has better technology for helping people hear, see and participate than the government, including the DOE. But the worst example is the NRC. The NRC claims to have public meetings; then they place every stumbling block possible for members of the public to access their meetings.

The word "stakeholders" should be defined at the beginning of every meeting. I suspect that the public is not considered a stakeholder, but the committee meetings and reports don't say.

Nevertheless, I appreciate that the government tries to let the public know what is going on in this extremely detailed and difficult subject. Jan Boudart

Name: Donna Gilmore

Affiliation: SanOnofreSafety.org

Comment: Why would people trust the DOE given the continual radiation releases in rivers and other environmental radiation releases at multiple DOE nuclear waste sites? This has been happening for decades.

Name: Dan Solitz

Affiliation:

Comment: Would it be advantageous to not commingle weapons legacy high level waste with spent nuclear fuel in deep geologic disposal? The regional benefits of nuclear electricity versus a national deterrence benefit making a weapons site more acceptable.

Name: Kalene Walker

Affiliation: none

Comment: At previous NWTRB meetings, technical discussions of degradation and instability of high burnup fuel in storage and transportation have been discussed.

Fragility of fuel due to ductile to brittle transition, thinning of cladding, zirconium hydrides and hydride reorientation must be acknowledged and not ignored.

The DOE continually tells the public the waste is "safely" stored at nuclear sites. One would think that "safe" means secure containment of the radionuclides.

But a basic assessment of the NRC approved 1/2" to 5/8" thin stainless-steel welded-shut

canisters used to store the waste, reveals that the NRC approves canisters that are vulnerable to stress corrosion cracking - but with no viable or approved method to find cracks, prevent cracks or stop cracks.

Conditions for crack initiation have been found on 2 year old Diablo Canyon canisters.

The NRC has stated that once initiated, cracks can grow through wall in as little as 16 years.

How can this be considered “safe”??

Each canister holds roughly a Chernobyl 1986 disaster worth of radionuclides.

Without a Dry Fuel Handling (hot cell) Facility, there is no way to repackage fuel from a failing canister.

And worse, there is no dry fuel handling facility in the entire U.S. capable of handling canister fuel transfer.

If you are interested in international actions and processes, please look at the Swiss Zwiilag facility that uses thick bolted casks, stored inside a facility that includes a fuel handling facility for monitoring and maintaining both the casks and the fuel.

Discussions today sound like we have DECADES to figure out consent based processes, etc.

But unaddressed canister degradation problems make this a “now” problem and an urgent call for developing fuel handling facilities and acquiring thick bolted casks for repackaging fuel BEFORE canister failure. .

Instead of throwing money and effort at convincing unsuspecting communities to accept these unsafe canisters, please solve and close the numerous gaps in the the DOE’s Dec 2019 Sandia Gap Analysis Report.

Canister failure and consequences couldn’t be a more serious and urgent threat to the safety and well being of this country.

Technical references at SanOnofreSafety.org

Name: S. C.

Affiliation: srmarie3@yahoo.com

Comment: Have you considered enabling host communities to receive land rights from supply communities. Reclaimed land from sites and ISFSIs could be repurposed to support remote ownership by CISF host community (such as resort, casino, private camp for host community residents or commercial land lease paid to new host community). This arrangement could be guaranteed to last as long as the CISF.

Name: Fred James

Affiliation:

Comment: How confident is DOE staff that they will have funding in FY 24 to continue their work?

Name: Kalene Walker

Affiliation: none

Comment: So public comments are not read into the record of the meeting anymore?? That is not a favorable change if you are trying to build public confidence in this process.

Name: Lindsay Shuller-Nickles

Affiliation: Clemson University

Comment: The panelists asked the DOE representatives if they were aware of how our academic institutions are incorporating social science content into science and engineering curricula. To speak to that question: As a professor in Environmental Engineering and Earth Sciences and coordinator of Clemson's undergraduate minor in Nuclear Engineering and Radiological Sciences, I can confirm that we are actively implementing and continuously developing course modules, assignments, and assessments to enable our students to meet the socio-technical requirements sought by future employers.

Further, under the coordination of Brian Powell (Clemson University) and Haruko Wainwright (MIT), dozens of Nuclear Waste Educators have gathered for two consecutive years to workshop educational needs specific to Nuclear Waste-related disciplines. Be on the lookout for a publication reporting the findings of the 2022 workshop.