From: Kevin Kamps <kevin@beyondnuclear.org>
Sent: Friday, October 23, 2020 1:29 PM
To: WCS_CISFEIS Resource
Subject: [External_Sender] Beyond Nuclear's 18th set of public comments, re: Docket ID NRC-2016-0231, and report number NUREG-2239, NRC's ISP/WCS CISF DEIS, re: Risks of Loss of Institutional Control if De Facto Permanent, Surface Storage, Parking Lot Dumps are...

Dear NRC Staff,

We submit these comments on behalf of our members and supporters, not only in New Mexico and Texas, near the targeted ISP/WCS CISF site, but across both of these states, and the rest of the country, along road, rail, and waterway routes that would be used for high risk, highly radioactive waste shipments to ISP/WCS's CISF, as well as to Yucca Mountain, Nevada, on Western Shoshone land -- wrongly and illegally assumed by ISP/WCS, as well as by NRC, to someday (or some decade, or some century) become a permanent disposal repository. This unnecessarily repeated, multiple legged, cross-continental transport of highly radioactive waste, is another significant aspect of the EJ (Environmental Justice) burden associated with this ISP/WCS CISF scheme.

The following subject matter has gotten little to no attention in NRC's ISP/WCS CISF DEIS, a far cry from NEPA's legally binding "hard look" requirement:

Risks of Loss of Institutional Control if *De Facto* Permanent, Surface Storage, Parking Lot Dumps are Abandoned, Containers Fail, and Release Catastrophic Amounts of Hazardous Radioactivity into the Environment

DOE (the U.S. Department of Energy) has warned in its EIS (Environmental Impact Statement) on the proposed Yucca Mountain, Nevada national burial dump, that loss of institutional control would eventually prove catastrophic. Entropy means that things fall apart, over long enough periods of time. The Second Law of Thermodynamics holds that disorder increases with time. DOE was focused on this happening at nuclear power plant sites, if irradiated nuclear fuel was abandoned there forever. But the same is true here. If institutional control is eventually lost at the ISP/WCS CISF (de facto permanent, surface storage, high-level radioactive waste parking lot dump), the containers will eventually fail, and catastrophically release their hazardous, high-level radioactive waste contents into the living environment. Persistently hazardous, and even deadly, radioactive fallout would then flow with the winds and the waters, downwind and downstream, up the food chain, and down the generations, over greater and greater distances over longer and longer time periods. Remember, high-level radioactive waste remains hazardous, even deadly, for at least a million years into the future. This was acknowledged by the U.S. Environmental Protection Agency (EPA) in 2008, under court order in the Yucca Mountain proceeding. On July 9, 2004, the second highest court in the land, the U.S. Court of Appeals for the District of Columbia Circuit, ruled that EPA's cutting off of regulations at Yucca Mountain, just 10,000 years post-burial, was illegal, a violation of the Nuclear Waste Policy Act of 1982, as Amended. The court ordered EPA back to the drawing board, to correct its illegal Yucca Mountain regulations. This led to EPA's 2008 regulatory revision, recognizing a million years of hazard.

The 2002 lawsuit, which was consolidated with a dozen additional lawsuits in *NEI v. EPA*, was brought by NIRS (Nuclear Information and Resource Service), Public Citizen, Citizens Action Coalition of Indiana, Nevada Nuclear Waste Task Force, and Citizen Alert of Nevada. The environmental coalition, whose legal counsel was Geoff Fettus of Natural Resources Defense Council, was joined in the lawsuit by the State of Nevada, another leading opponent of the Yucca dump scheme.

Actually, even acknowledging a million years of hazard is a lowball estimate. Take the artificial (that is, manmade) radioactive isotope Iodine-129. It has a half-life of 15.7 million years, thus at least 157 million years of associated hazard, and perhaps even 314 million years.

Such impacts would extend to the immediately adjacent surface environment, and very likely even nearby, underlying aquifers, such as the Ogallala Aquifer -- which NRC acknowledged in its DEIS call-in verbal comment sessions, is located as little as one mile from the targeted CISF site. Other aquifers nearby are also in harm's way.

And, especially considering the direction of surface water flow, but also prevailing weather patterns and winds, such radioactivity releases from ISP's CISF would certainy impact New Mexico, just 0.37 miles downwind and downstream. An official from the New Mexico Environment Department confirmed this during one of NRC's verbal comment call-in sessions re: the ISP CISF DEIS.

Thus, the Ogallala can be considered downwind and downstream, over a long enough time period, from both ISP's, but also Holtec's, CISFs (just because Holtec's CISF is further from the Ogallala than ISP's, does not mean that over long enough periods of time, radioactive pollution escaping from Holtec's CISF in NM could not also reach the Ogallala, to contaminate it).

Additional aquifers directly under or adjacent to ISP's CISF are simply in harm's way nearer term, more directly.

Also, downwind or downstream surface level radioactive fallout from both ISP's and Holtec's CISFs could eventually find its way into the Ogallala, through natural flow paths (blowing with the winds, flowing with the rains and surface waters, deposition onto and into soil, downward flow to aquifers). The Ogallala, North America’s largest aquifer, and one of the largest on Earth, provides essential drinking and irrigation water for millions in Texas, New Mexico, Oklahoma, Kansas, Colorado, Nebraska, Wyoming, and South Dakota. As the water protectors at the Standing Rock Sioux Tribe reservation say in Lakota language on the Missouri River in North Dakota, *Mni Wiconi*, Water Is Life. This was made very clear by drinking water contamination disasters, in just the past decade, in such widespread locations as: Flint, Michigan (Flint River lead poisoning); Charleston, West Virginia (toxic chemical spill into the Elk and Kanawha Rivers); the Animas, San Juan, and Colorado Rivers in Colorado, New Mexico and Utah, and further downstream (EPA-caused toxic wastewater release from an abandoned gold mine); Toledo, Ohio (Lake Erie toxic blue green algae contamination); Marshall, Michigan (Enbridge of Canada toxic tar sands crude oil spill into Talmadge Creek and the Kalamazoo River, the largest inland oil spill in U.S. history) -- to name but a small number of examples. A radioactive release into or contamination of the Ogallala would be similarly catastrophic. As mentioned, radioactive

releases into surface waters and groundwaters nearer by the ISP/WCS and/or Holtec/ELEA CISFs would simply take place sooner, rather than later, as compared to the Ogallala itself, given distances and radioactivity flow with the elements.

Making these risks all the worse, NRC has allowed a quality assurance (QA) failure crisis to persist in the U.S. nuclear power industry for years and decades. These QA failures extend not only to on-site storage casks at reactors, but also to the shipping cask and away-from-reactor storage cask realm, directly relevant to both Holtec's CISF in NM, but also ISP's CISF in TX. The inner canisters of various cask models are identical, whether used for on-site storage at reactors, transport, or away-from-reactor storage at the CISFs.

Industry and even NRC whistle-blowers called attention to these QA failure risks 20 long years ago, yet little to nothing has been done to correct them since. Industry whistle-blower Oscar Shirani questioned the structural integrity of NRC-approved and industry-utilized storage casks sitting still, let alone traveling 60 miles per hour or faster on the railways. Shirani was backed up in his allegations by NRC Midwest Region (Region III) dry cask storage inspector, Dr. Ross Landsman, who warned “The NRC should stop the production of the casks, but they do not have the chutzpah to do it. This is the kind of thinking that causes space shuttles to hit the ground.” Shirani and Landsman were commenting directly upon Holtec container QA violations, but the widespread QA violations with Holtec containers begs the question, do similar QA violations afflict cask models that would be used at ISP's CISF?

Such QA failures, shoddy design, and shoddy fabrication, re: the storage casks and canisters, means that their eventual failure, and release of their deadly hazardous high-level radioactive waste contents, will only happen all the sooner.

Although Shirani and Landsman’s revelations were about Holtec casks, NRC’s incompetence at best, or even collusion with industry, when it comes to cask QA violations, extends to other cask models and designs, including NAC (Nuclear Assurance Corporation) and Areva (Orano) casks to be used at ISP's CISF at WCS, TX, just 40 miles from Holtec's in NM. The QA violation crisis also extends to many, most, or all other dry cask models, such as VSC-24s (Ventilated Storage Casks), as but one additional example, as deployed at Palisades in MI, Point Beach in WI, and Arkansas Nuclear One. Holtec has bragged in its license application for its CISF in NM that it could accommodate any and all cask model designs approved by NRC, with no exceptions. NAC challenged such claims by Holtec with an intervention in the NRC ASLB Holtec CISF licensing proceeding. But we mention the widespread QA violations, because whether Holtec containers, or other designs, the loss of institutional control and container breach risk still applies, both at Holtec's CISF in NM, and also at ISP's CISF in TX.

Nuclear Assurance Corporation (NAC) container – certainly to be used at ISP's CISF at WCS, TX, but also potentially to be used at Holtec's CISF in NM -- QA failures are of specific concern. In autumn 2016, shoddy welding by NAC led to the bottom literally falling out of an irradiated nuclear fuel assembly transfer caddy, allowing the assembly to strike the bottom of the storage pool at Chalk River Nuclear Labs in Ontario, Canada. Such bad welding calls into question the welds on NAC storage and transport containers as well, such as those to be used by ISP's CISF in TX.

In his 1987 book "The Next Nuclear Gamble," Dr. Marvin Resnikoff (who serves as an expert witness for Sierra Club in this ISP CISF licensing proceeding) documented NAC transport containers bowing out of shape, causing irradiated nuclear fuel assemblies to get stuck within them. In an incident at a California atomic plant, also documented in Resnikoff's book, a NAC transport container disgorged highly radioactively contaminated water, which then spilled onto the ground, splashed on workers, and otherwise escaped control. These are additional pieces of evidence that NAC containers, like Holtec's, suffer serious, safety-significant QA and technical specification violations.

At Davis-Besse atomic reactor on the Great Lakes shoreline near Toledo, Ohio, an Areva (now called Orano; previously called Cogema) design Transnuclear NUHOMS storage cask was loaded with irradiated nuclear fuel, despite local environmental interventions (including by Don't Waste Michigan, represented by legal counsel Terry Lodge of Toledo, OH) to stop it, after it was revealed the walls of inner canisters holding the high-level radioactive waste were ground too thin, violating technical specifications. But violations of technical specifications for the design and manufacture of casks in the U.S. are as rampant as QA violations. NRC looks the other way in both cases.

In fact, faulty welding was a major example of the Holtec container QA violations cited by Shirani and Landsman. See a 2004 summary of Shirani and Landsman's allegations, including re: faulty welding, posted online at this link here. Again, the question is begged: if Holtec's QA violations are so widespread, does a similar problem exist with container models that would be deployed by ISP at its CISF in TX?

Please address and rectify your woefully inadequate "hard look" under NEPA, re: this health-, safety-, and environmentally-significant, as well as legally-binding, subject matter above.

And please acknowledge your receipt of these comments, and confirm their inclusion as official public comments in the record of this docket.

Thank you.

Sincerely,

Kay Drey, President, Board of Directors, Beyond Nuclear

and

Kevin Kamps, Radioactive Waste Specialist, Beyond Nuclear

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Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abolish both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

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