Question 2: Linkage between storage and repository
Submitter’s Name/Affiliation: Kevin Kamps/Beyond Nuclear

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SENATE COMMITTEES’ QUESTION: Should the bill establish a linkage between progress on development of a repository and progress on development of a storage facility? If so, is the linkage proposed in section 306 of the bill appropriate, too strong, or too loose? If a linkage is needed, should it be determined as part of the negotiations between the state and federal governments and included in the consent agreement rather than in the bill?

BEYOND NUCLEAR RESPONSE:

In short, the bill absolutely should establish a very strong linkage between progress on development of a repository and progress on development of a storage facility. The linkage proposed in section 306 of the bill is currently much too loose, much too weak, and must be significantly strengthened and tightened. A very strong linkage is needed, and should not only be enshrined in federal legislation, but should also play a central role in the negotiations between the state(s) and federal government, as in the consent agreement(s) needed before a centralized interim storage site, or sites, or a repository, or repositories, are allowed to move forward.

Beyond Nuclear has endorsed a group sign on statement, which states, in part:

“Consolidated storage sites could become de facto permanent

The primary purpose of moving the waste to a temporary site is to satisfy the grave legislative blunder ratified by the Nuclear Waste Policy Act of 1982: that the federal government not only would take possession of commercial nuclear waste, but that it would begin accepting waste for disposal in 1998.

Because the federal government is 15 years late taking ownership of the waste, it is pushing a strategy that prioritizes the resolution of financial liabilities rather than ensuring safety and security. Moving irradiated nuclear fuel and other high level wastes to a consolidated site could de-incentivize and adversely impact progress of the nation’s efforts toward a viable permanent solution. The draft legislation’s overtures toward decoupling the relationship between storage and permanent disposal further exacerbate this issue.

Our view is simple: there must be no transportation of spent nuclear fuel or high level waste until it is heading to a permanent site. The discussion of consolidated storage without the linkage provided in the existing Nuclear Waste Policy Act is not credible as "temporary" and the provisions offered by the Committee do not rise to the level of that term.”

To add, the draft bill speaks of “substantial progress [towards a permanent repository]…as measured by the mission plan.”

The draft bill holds that, so long as “substantial progress” towards a permanent repository is being made, irradiated nuclear fuel will be allowed to roll into a consolidated or centralized interim storage facility, or facilities, with no limitation on the quantities involved.

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But who gets to determine that “substantial progress” towards a repository is being made? First and foremost, the draft bill would put that power in the hands of the Nuclear Waste Administrator.

Of course, the Administrator would write the mission plan. We are concerned that “substantial progress,” as defined by the mission plan, could be too loose a term, allowing too much wiggle room for high-level radioactive wastes to flow into a centralized interim storage site, even though real progress towards permanent disposal was not happening.

Why would the Administrator ever readily and willingly admit lack of “substantial progress” toward a repository? This would be admitting that he or she had failed in his or her mission work. It is not likely that such an admission would easily be forthcoming, but rather would have to be extracted most grudgingly, like pulling teeth.

So, how much waste would get stuck in de facto permanent surface storage at one or more parking lot dumps before it was realized, before the Administrator was forced to admit, that the repository was stalled, or even derailed, yet again?

In a sense, it is worse than Senator Bingaman’s bill last year. He gave away the first 10,000 metric tons of “pilot” centralized interim storage, with no linkage to a permanent repository. (It should be noted that 10,000 tons is way more irradiated nuclear fuel than is currently “orphaned” or “stranded” at permanently closed, and even dismantled, nuclear power plants in the U.S.) That was an unacceptable political compromise. An unacceptable risk-taking of de facto permanent surface storage.

How long would such a delay in admitting the truth go on, before grudgingly admitting that the permanent repository was derailed, yet again? Would even more than 10,000 tons of irradiated nuclear fuel have already been delivered to centralized interim storage, before the Administrator or Nuclear Waste Oversight Board grudgingly admitted that the repository was yet again derailed?

This does not make sense. It is very risky. It risks de facto permanent centralized interim surface storage.

Both proposed repositories that advanced the furthest in the U.S. thus far – that is, advanced to nowhere -- can be pointed to as cautionary tales.

As documented in the 1986 book Forevermore: Nuclear Waste in America, by Barlett and Steele, the U.S. Atomic Energy Commission (AEC), in the late 1960s and early 1970s, was very gungho about burying high-level radioactive wastes in a salt formation at Lyons, Kansas. The AEC was so confident about the site, despite having done very little site suitability study, that it held a press conference announcing the imminent opening of the country’s, and the world’s, first deep geologic repository for high-level radioactive waste.

However, the Kansas State Geological Society involved itself. It pointed out that the locality was riven like Swiss cheese with drilling operations, mines extracting fossil fuels and
minerals. In fact, large quantities of water used in such mining operations had simply disappeared into the ground, to points unknown. Thus, there was a very real risk that unknown pathways for corrosive brine already existed, or could come into being, that would serve to quickly corrode the high-level radioactive waste burial containers at the proposed Lyons, Kansas dumpsite. In addition, given the natural resources in the surrounding locality, the risk of inadvertent human intrusion busting open the dump to the environment would be too great. The absurdly over-confident AEC was forced to beat a hasty retreat, and the Lyons, Kansas dumpsite entered the dust bin of history. So much for “substantial progress” towards a repository that time!

Yucca Mountain, too, was assured to be making “substantial progress,” after all. Energy Secretary Spence Abraham declared Yucca “suitable” for a repository on Valentine’s Day, 2002, despite ample evidence since the early 1980s that the site’s geology was unsuitable. George W. Bush rubberstamped Yucca’s “suitability” three short days later. Even Congress saw fit to override Nevada’s veto a few short months later. All for naught, as Yucca’s “politics over science” karma, and its geologic and hydrologic unsuitability (not to mention the fact that it belongs to the Western Shoshone Indian Nation by treaty right, and they don’t want the waste there) finally caught up to it. The Obama administration wisely cancelled the proposed Yucca Mountain dump beginning in 2009.

Our point is, despite assurances that persist for years, or even decades (Yucca was under consideration as the only site in the country to be further studied as a potential high-level radioactive waste repository from 1987 to 2010, nearly a quarter-century), “substantial progress” towards a repository could be little more than a feel-good “illusion of a solution.” But under this draft bill, such a mirage in the desert would be justification enough to roll unlimited amounts of high-level radioactive waste by road, rail, and waterway across our country, into a centralized interim storage site, or sites, which would then be stuck there indefinitely, even though the Administrator could be forced to finally admit someday that “substantial progress” towards a repository had yet again derailed.

So long as the Administrator stands by “substantial progress” being made towards a repository, under the draft bill this would allow centralized interim storage to fill up, no matter how far behind permanent disposal actually lags, unless and until the Administrator is forced to admit “lack of substantial progress,” something that would come only grudgingly, if at all.

The draft bill does allow for suspension of shipments to centralized interim storage, but under section 306(f), allows shipments already delivered there to simply remain in storage. But how was that mistake made then in the first place? How were shipments allowed to roll into centralized interim storage, when obviously, “substantial progress” towards a repository was, in reality, later admitted to have been lacking all along? The draft bill would allow for waste already delivered to now be indefinitely stuck in centralized interim storage, the very definition of de facto permanent surface storage. In other words, a parking lot dump.

For this reason, iron-clad linkage must exist between a permanent repository and centralized interim storage from the get-go, in order to guard against the danger of de facto permanent parking lot dumps.
The risk of de facto permanent, or at least indefinitely long, “interim” storage is all too well established in the U.S. Just look at the General Electric-Morris ISFSI (Independent Spent Fuel Storage Installation, as NRC and industry call it) in Illinois, located immediately adjacent to the Dresden nuclear power plant. Fortunately, the proposed reprocessing facility never operated, due to a major design flaw. If it had operated, radioactive emissions to the environment would have been nightmarish. But even though it thankfully never operated, the GE-Morris storage pool has held 772 tons of irradiated fuel, from multiple reactors in various states, for four decades now, with no end in sight. “Temporary” or “interim” seems to have taken on a new, Orwellian definition in the Atomic Age, at least in regards to forever deadly high-level radioactive waste.

Likewise, nuclear power plants themselves make the point. “Host” communities were assured the irradiated nuclear fuel would be stored on-site for an “interim” period – five years or so in the indoor wet pools to allow for radioactive decay and thermal cooling – and then it would be shipped away someplace else. Of course, this has turned out to be another false assurance. Oyster Creek, NJ, a 44-year-old reactor, still stores irradiated nuclear fuel in a pool packed to ultimate physical capacity (never mind the radiological risks of that). Big Rock Point, MI, which began operations in 1962, still stores high-level radioactive waste in dry casks on-site, even though the rest of the power plant has been completely dismantled and carted off to so-called “low” level radioactive waste dumps (although radioactive contamination of the soil, groundwater, Lake Michigan sediments, flora and fauna will linger on-site long into the future).

Furthermore, under section 306(e), the draft bill would allow for “emergency exceptions” to the suspension of shipments into a centralized interim storage site, or sites. This seems quite ripe for abuse as well. How are “emergency exceptions” to be defined?

If the nuclear power industry is to be listened to, on-site storage of irradiated nuclear fuel is safe, secure, and protective of public health and the environment. The U.S. Nuclear Regulatory Commission (NRC) parrots this industry line. So did the Blue Ribbon Commission on America’s Nuclear Future. Environmental watchdog groups have long challenged such false assurances that all is well with on-site storage, pointing out serious safety, security, and environmental risks of both pools and dry cask storage at reactors.

So what’s to stop abuse of this loophole, which is big enough to drive a radioactive waste truck (or train, or barge) through?! What’s to prevent the nuclear establishment (in industry, NRC, etc., including even members of congress, for that matter) from going from one extreme to the other? From claiming that all is well, to suddenly claiming that on-site storage everywhere represents a safety, security, and/or environmental emergency risk, just in order to rush their wastes off-site, into centralized interim storage, as soon as it is opened? After all, as soon as the irradiated nuclear fuel leaves their reactor sites, the title and liability transfers onto the backs of the American taxpayer, something the industry that generated these forever deadly wastes would like to see happen ASAP. Even though industry, likely for PR sake, deceptively insists that on-site storage is currently safe, secure, and protective of health and the environment – even though it is far from that, truth be told.
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The Senate Committee’s one-page summary states that centralized interim storage can start immediately, and there are no limits on the amounts of waste that can go there; also, that once there, waste can stay, even if further shipments are suspended. This epitomizes a rush job, which could easily result in de facto permanent consolidated surface storage, if and when permanent repository disposal derails yet again.

Other concerns raise their ugly head, indications that a permanent repository will be most difficult to site, if not impossible.

After watching the Yucca Mountain debacle unfold over the past generation, states are now on high alert that, once targeted for a national high-level radioactive waste dump, it becomes a 49-states-against-1 “game.” Whether targeted at a centralized interim storage site, or a permanent repository, all of a sudden, our country’s high-level radioactive waste problem could become a single U.S. congressional district’s problem. In that regard, at least in the U.S. House of Representatives, the “game” would then amount to 434-against-1. So much for “One Nation, Under God, Indivisible.” Not when it comes to high-level radioactive waste, it seems; then, it’s every state for itself. The 1987 “Screw Nevada” bill is a cautionary tale in this regard. Such a shameful, rotten history has created the dynamic that all future targeted states will simply resist, tooth and nail, with all their might, to avoid becoming the nation’s nuclear sacrifice area.

Along these lines, this draft bill’s lifting of the cap on 70,000 metric tons at the first repository, means that only one repository, if that, will ever open.

States across the country, which have carefully watched the Yucca Mountain debacle unfold over the past 25 years, will likely fight tooth and nail to NOT become a repository, THE repository, because it’s obvious they would get it all – not 70,000 metric tons of high-level radioactive waste, but the full national inventory, however big a mountain of radioactive waste that grows to be in the decades to come. Nevada, a state with no atomic reactors within its borders, and thus no in-state generated irradiated nuclear fuel or high-level radioactive waste, showed that such abuse by the federal government, and even by the other 49 states arrayed against it, can be successfully resisted. And states will likely resist, not desiring to become the nuclear sacrifice area for the rest of the country.

Thus, ironically enough, this draft bill’s own provisions have made opening a permanent repository all the more unlikely.

All this underscores the danger of opening centralized interim storage parking lot dumps with no real linkage to permanent disposal. A repository would be hard to impossible to open under the provisions of this draft bill. Thus, centralized interim storage would risk becoming a de facto permanent parking lot dump.