Holtec-CISFEISCEm Resource

From: bikenotbomb@gmail.com on behalf of Gwen DuBois <gdubois@jhsph.edu>
Sent: Friday, July 27, 2018 4:09 PM
To: Holtec-CISFEIS Resource
Subject: [External_Sender] Docket ID NRC–2018–0052

July 25, 2018
ID-NRC-2018-0052,
Holtec has applied to the U.S. Nuclear Regulatory Commission for a license to store up to 8640 metric tons of uranium, spent fuel, high-level radioactive waste, from our nations's nuclear reactors and store it in LEA County in New HI–STORM UMAX Canister Storage System for 40 years. Ultimately, they hope to expand this to 20 x the storage capacity. Not only the storage but the transfer of this waste and then transporting the cannisters in casks on our highways, railways and by barge pose the possibility of huge environmental and health risks to the people in Lea County as well as to the population all along the route of transfer of this highly dangerous waste. Is this a terrible disaster waiting to happen? What are the risks of a major untoward event occurring? Because of the seriousness, even the low probability events should be considered.
Chesapeake Physicians For Social Responsibility, an organization of 300 dues paying members and 1000 activists, opposes nuclear power because of risks of proliferation: 1) nuclear power requires enriched uranium 235 which can be further enriched to make nuclear weapons; plutonium, which is found in nuclear waste, is the very fissile bombmaking element used over Nagasaki. Consolidating the irradiated fuel at Holtec or any centralized site could be a step toward reprocessing-which was suggested for this location in the past and could very likely occur once the waste is brought there. Over time, the amount of bomb grade plutonium in nuclear waste becomes more accessible as the shorter-lived isotopes disappear. The world is awash in plutonium.2) In addition to proliferative risks, uranium mining creates environmental contamination especially in Navajo Nation communities. Mine workers have a higher risk of developing lung cancer and silicosis. We do not believe that the United States has found a long term safe way to store nuclear waste which will have to last for centuries beyond the time that governments and nations as we know now are likely to still exist. How to we communicate to civilizations so far in advance to "stay away" and "danger." 3) The cost of nuclear power is another concern. As wind and solar prices of electricity per kwh drop while nuclear costs rise especially if the cost of waste is included, nuclear cannot compete without public subsidies thereby reducing limited financial resources for truly renewable energy. 5) Finally, nuclear power comes in years behind schedule as well as over budget. Simply stated, it is not a practical solution to the impending crisis of climate change. We believe that nuclear waste should be stored in hardened on-site storage casks until the time that a permanent reasonable safe deep repository can be found for perpetuity. In the meantime, we should stop producing this waste that we do not have a place to store safely.
That being said, this Environmental Impact Statement still should be as comprehensive as possible and should include transportation-related hazards and environmental concerns. Nuclear waste canisters are ½ inch thick unlike the > than 10-inch system in use in Europe. How thoroughly have the thin canisters been tested during transport? How does the 1/2 inch thickness increase the vulnerability for cracks in canisters within casks that can't be seen in transport nor storage ? There is no way presently to detect early cracks in these canisters. What about transport of high burnup fuel and safety? What about the possibility that cladding has been made more brittle and will shatter (it is known that oxidized zirconium with capture of hydrogen becomes embrittled with time and heat)? What about the problems using aluminum baskets not allowed in Japan after lessons learned from Fukushima? What is the risk of criticality being reached if assemblies crash into each other during transport due to faulty aluminum baskets?

Since accidents happen on the highways an average of 2.5-4.5 per million vehicle miles[1] ([2],[3]) how many trips and miles are going to be required and what would be the expected number of accidents? Train derailments occur 1.64 times per 1 million miles traveled.[4] IN either case, an "event" containing high level nuclear waste will be both dangerous and terrifying. Will these estimates take into consideration travel through urban areas? Bad weather conditions? Increased traffic in the future? How about for trips over 20 years? More than 20 years?

IN Maryland, we are particularly concerned about the high-level waste which will be removed from Calvert Cliffs nuclear power plant over 20-40 years. Calvert cliffs has some of the oldest thin-walled canisters in the country and yet we have no way of knowing what shape the cannisters are in when they are transferred to the transport casks. Are there cracks that have started? With multiple transports on barges over the years what are the chances that one of these casks ends up in the water? If that happened, how well would an old and possibly partially cracked or embrittled cannister hold up? Could there be contamination of the Bay waters? What effect would that have on humans? Marine life? The seafood industry? Once on the rails, there is a small possibility of an accident on the rails with the many trips that will occur over 20 or 40 years. Plans were submitted to the NRC for 120 casks at Calvert Cliffs .[5] We know about fires in CSX tunnels in Baltimore where an accident 2001 led to temperatures in excess of 1475 degrees Fahrenheit. Though never tested, through modeling these containers are estimated to withstand 1475 degrees Fahrenheit for not more than 30 minutes.? How many people would be exposed? How many people would need to be evacuated and for how long? Have the risk of an accident involving nuclear waste on the waterways, railways and highways been estimated and summed up from all of the trips with nuclear power plants' waste? There are possible additional consequences from high burn up fuel further embrittling the canisters, making them more fragile and likely to be damaged as the canisters are transported over the rails and highways.? Add in terrorist risks, highways more crowded, and more deteriorated especially after multiple heavy nuclear shipments, population centers exposed. WE know Fukushima has created over 100,000 long term refugees.[6]

The EIS should look closely into the risk of groundwater contamination and to concerns that this site sits and the southern end of the Ogallala Aquifer. The primary source of water is the Ogallala Aquifer, which is being rapidly depleted in certain areas and the supply may not be sustainable .[7] The region certainly cannot risk radioactive contamination rendering the water, which is already scarce, unusable. What is the risk of radioactive contamination of drinking water and to how many people? Suppose the waste sits at that location not for 20-40 years but, as some fear, for several hundred years given that finding a permanent repository site acceptable to the whole nation is so problematic. Is the site permeable to water over what time period? What long term barriers to water seepage have been required?

The EIS should look closely at Environmental Justice issues as a marker of vulnerability of the population of nearby Hobbs New Mexico additional adverse events.[8] Compared with rest of U.S., this is a population that exceeds the 75th percentile for being low income, linguistically isolated, having a minority population (Hispanic) having less than high school education, and having a population under 5 . Regarding pollution exposure, it is at or exceeds the 75th percentile for lead paint indicator, and for being exposed to high ozone levels compared with the rest of the U.S. For Carlsbad, it is in the 75% for the worse ozone, NATA cancer risk, lead pain and waste water discharge to nearby streams. The minority index was in the 75% per centile and low income above 50%. This community already is overexposed to risk with the present low level radioactive waste storage facility and is less able to cope with the health and financial implications of living near radioactive dumps if there is a leak of radioactive waste. The WIPP fire in New Mexico where a little mistake, using the wrong kitty litter led to fires, radioactive releases, personnel exposure to radioactivity and closed the facility [9] for nearly 3 years[10]. This illustrates that when humans are involved, things can go very wrong. What would it man for property values if an accident were to occur. What would it mean for radiation exposure if an accident occurred? Should these people have this risk when they are already disadvantaged in their ability to cope with adversity?

What are the increased risks of leaks in Lea County with storage of high level nuclear waste as the years pass and the storage system ages? If the waste stays at this site for forty years before a final repository is found, what happens if a storage canister develops cracks and/or is leaking? How will it be discovered before radiation contaminates the environment? How is the canister to be monitored and how often? Does the technology exist to detect small cracks and leaks before temperatures rise or radiation is detected in the environment? Is it going to be transported back to the host site, again on public rails, roads and waterways if it is found to be leaking? We have seen the problems with retrieving and removing nuclear waste in Fukushima but at least there are spent fuel pools into which to put waste from which it can then be transferred. We understand that there is no plan to transfer the fuel into an intact cannister where there to be a leak found? Should the NRC require the thicker, more durable canister/cask system used in Europe that are in use at only a few nuclear power plants n the U.S? What are storage risks with high burn up fuel and brittle oxidized zirconium cladding? What are risks of storage when and if aluminum baskets fail and fuel assemblies crash into each other risking criticality? Would higher standards requiring thicker more durable canister/cask systems be safer and more cost effective for high burnup fuel? Interim storage means we will have to transfer and move nuclear waste twice. Why should we be exposing the nation to the risks of moving radioactive waste on rails and highways in the future in aged canisters? The scoping must consider the risks of transferring and transporting waste two times if this is truly an interim plan. On the other hand, what will be the risks of this waste being stored at Lea County facility for more than forty years if no permanent repository is found in that time? What are the risks of waste being stolen to make plutonium bombs when the waste becomes more steal-able as shorter lived hotter isotopes disappear? How long can the public be kept from exposure? How long can sources of drinking water be kept safe from these dangerous radioisotopes? How would storms and flooding and earthquakes effect that projection? Is there an alternative that poses less risk storing casks in hardened on site storage until a one final resting place has been found?

Are we cutting corners with inferior canisters that will not be able to hold up for the prolonged consolidated interim storage proposed here.

In short, what may appear superficially to be a good solution to the nuclear waste storage problem may simply replace one set of problems with other possibly worse problems. This EIS must be carried out in a scientific, thorough, and evidenced based fashion so that public health, and environmental sustainability don't become casualties of political expedience. To make sure that it is thoroughly vetted with the public, in addition to the comments above, the comment period should be extended to 90 days.

Sincerely,

Gwen L. DuBois MD, MPH

President, Chesapeake Physicians For Social Responsibility

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[1] https://www.dot.ny.gov/divisions/operating/osss/highway-repository/Average_Accident_Rates_14_15.pdf

[2] www.nrc.gov/docs/ML1108/ML110880284.pdf

[3] http://www.reuters.com/article/us-usa-energy-texas-dump-idUSBRE83Q11W20120427

[4] https://www.efsec.wa.gov/Tesoro%20Savage/Adjudication/Exhibits/Tesoro%205B/Exhibit%200239-000021-TSS.pdf

[5] https://www.nrc.gov/docs/ML1409/ML14090A122.pdf.

[6] http://www.japantimes.co.jp/news/2016/03/11/national/nuclear-refugees-tell-distrust-pressure-return-fukushima/#.WKs7-dIrLcs

[7] http://www.ose.state.nm.us/Planning/RWP/Regions/16_Lea%20County/2016/Reg%2016_Section_5%20Water_Supply.pdf

[8] https://ejscreen.epa.gov/mapper/

[9] https://www.theguardian.com/environment/2015/mar/27/cat-litter-blamed-for-240m-radiation-leak-at-new-mexico-nuclear-waste-dump

[10] http://www.world-nuclear-news.org/WR-First-waste-emplaced-as-WIPP-reopens-1301177.html

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Mail Envelope Properties (CAC-89BPTcwvpk+XN0LEd=XT69yerh4GCN7RvtcZ=CQ_va5_yhQ)

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Sent Date: 7/27/2018 4:09:29 PM
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Options
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