Private ISF

From: info@pattyapostolides.com
Sent: Wednesday, January 25, 2017 6:23 PM
To: PrivateISF
Subject: Response to RFI on Private Initiatives to Develop Consolidated SNF Storage Facilities
Attachments: ApostolidesresponseJan272017nuclearwaste.pdf

Hello,

Attached is a pdf file in response to your DOE questions for public comment due Jan. 27, 2017.

"Response to RFI on Private Initiatives to Develop Consolidated SNF Storage Facilities"

Sincerely,

Ipatia Apostolides, BA, MFA

REQUEST FOR INFORMATION

DOE seeks information on PIs for a consolidated ISF, whether pilot-scale or larger-scale, as an alternative or in addition to federal facilities sited using a consent based siting process. In particular, DOE seeks information in the following areas (all questions do not need to be addressed by prospective respondents):

Responses made by Ipatia Apostolides:

1. What key factors should be considered to ensure that PIs, as part of the overall integrated nuclear waste management system, would provide a workable solution for interim storage of spent nuclear fuel and high-level waste?

PIs should not be considered a satisfactory or viable waste management system for nuclear waste. Using several ISF sites, would be similar to a shot-gun approach (spreading nuclear waste around). This will pose risks to the surrounding communities through the following: transportation to the sites increases possibilities for accidents, and the probability arises of the nuclear waste being mishandled by untrained/unqualified workers, as well as the sites being possible targets by terrorists.

2. How could a PI benefit:

PI may initially benefit, but the potential for disaster is there. How could nuclear waste benefit anyone? Fire, if it is mishandled, can kill. The same goes with nuclear waste. Human life carries a very high price tag. Lives can be lost due to careless planning. Human life should be the standard to go by, not how the PI benefits. How do WE as humans benefit?

3. What type of involvement if any should the Department [of Energy] or other federal agency consider having with the PI and the community regarding organizational, structural, and contractural frameworks and why?

As stated earlier, the PI should not be considered for nuclear waste management. This is a federal agency problem and should remain so. PI's are too risky.

4. What are the benefits and drawbacks of a PI, compared to a federally-financed capital project resulting in a government-owned contractor-operated (GOCO) interim storage facility?

There are no benefits of a PI. First of all, what and whose standards will they comply by? What if an ISF is owned by a foreign country or foreign company? Who will they be accountable to? How will they maintain the nuclear waste?

Radioactive release is insidious and the American people have no way of knowing if there is any radioactivity released in the air, ground, or watershed. They are vulnerable to radiation's damaging effects. I used to work in a radiation biology lab and had to wear a dosimeter due to the Cesium irradiator and radioisotopes I handled. I monitored my radiation exposure. I know about the damaging effects (short-term and long-term) of the Chernobyl and Fukushima catastrophes. Radiation kills, sooner or later. How can the American people be sure that a PI is looking out for their best interests if the bottom line is money (how much they get paid)? Who will inform them if an accident occurs? Not the PI, I can assure you.

For example, a 2016 article written by Megan Geuss (https://arstechnica.com/science/2016/08/nuclear-waste-accident-2-years-ago-may-cost-more-than-2-billion-to-clean-up/) describes this nuclear waste accident:

"The 2014 explosion apparently occurred when engineers at the Los Alamos National Laboratory were preparing a drum of plutonium and americium waste—usually packed with kitty litter (yes, kitty litter)—and decided to "substitute an organic material for a mineral one."

The new material caused a complex chemical reaction that blew the lid off a drum, sending mounds of white, radioactive foam into the air and contaminating 35 percent of the underground area," the LA Times wrote. The dump's filtration system, which was supposed to "prevent any radioactive releases," subsequently failed.

No workers were in the shafts of the dump at the time. Workers on the surface were only exposed to low doses of radiation due to the HEPA filters in the ventilation system.
Still, the dump site was set to receive another 277,000 drums of radioactive waste from around the country. The congestion is now creating a costly problem.

The federal government renewed its contract with dump operator Nuclear Waste Partnership to the tune of $640 million extra for cleanup. That number could grow, especially as federal officials now say the contaminated ventilation system on the dump needs to be replaced—a project that will not be completed until 2021. Until then, the dump must remain open, but it can not accept nuclear waste at the rate it had planned. The dump costs $200 million a year to remain open, the *LA Times* reported. Meanwhile, feds also have to pay to house the nuclear waste being stored at sites around the US (in Washington state and Idaho, for example) that's supposed to be on its way to the WIPP.

Another example of what might happen if we allow PI's to handle our nuclear (toxic) waste, is aptly described in this Wikipedia article on the infamous Love Canal incident: (https://en.wikipedia.org/wiki/Love_Canal)

"**Love Canal** is a neighborhood within Niagara Falls, New York. It is the site of a pollution disaster that extensively affected the health of hundreds of its residents, necessitating a Superfund cleanup operation.
Originally intended in the 1890s as a planned model community, Love Canal grew and then slowly declined before being bought out in the 1940s by the Hooker Company, which dumped industrial waste in the never completed canal. In the late 1970s, Love Canal received national attention for the public health problem originating from the disposal of 22,000 barrels of toxic waste. Numerous families were displaced from their houses, which had been contaminated with chemicals and toxic waste. Many of the families suffered several health issues with common problems of high red blood cell counts and indications of leukemia. The entire neighborhood has since been demolished and a Superfund cleanup was only wrapped up in 2004.

New York State Health Department Commissioner David Axelrod calls the Love Canal incident a "national symbol of a failure to exercise a sense of concern for future generations”

5. What assurances to the Government do you think would be appropriate, to ensure that SNF [Spent Nuclear Fuel] stored at a private ISF [Interim Storage Facility], would be managed effectively so as to contain costs to the Government?

There are no assurances, based on historical incidents of violations. See previous articles in #4 and the following article on The Valley of the Drums, from Wikipedia: (https://en.wikipedia.org/wiki/Valley_of_the_Drums)

The **Valley of the Drums** is a 23-acre (9.3 hectare) toxic waste site in northern Bullitt County, Kentucky, near Louisville, named after the waste-containing drums strewn across the area. It is known as one of the primary motivations for the passage of the Comprehensive Environmental Response, Compensation, and Liability Act, or Superfund Act of 1980. While the widely publicized Love Canal disaster is often credited as the reason the Superfund law was passed, Love Canal activist Lois Gibbs has said that Love Canal looked like a suburban community, while "Valley of the Drums became the visualization of the problem."[1]
The site became a collection point for toxic wastes starting sometime in the 1960s. It caught the attention of state officials when some of the drums caught fire and burned for more than a week in 1966. However, at that time there were no laws to address the storage or containment of toxic wastes, and the site continued to be unregulated for another decade. In 1977, the owner (also inferred to be the primary "dumper") of the site, A.L. Taylor, died. It is unclear who owns the property today, and county tax records show that the property taxes have gone unpaid for several years.
In 1978, a Kentucky Department of Natural Resources and Environmental Protection (KDNREP) investigation of the property revealed that over 100,000 drums of waste were delivered to the site, of which 27,000 drums were buried and the remaining containers were discharged directly into pits and trenches. Over a period of time, the conditions of many of the drums

on site deteriorated and the contents spilled onto the ground and were flushed into a nearby creek by storm water runoff. Frequent complaints about strong odors along the creek bed were received from adjacent property owners.
In 1979, large quantities of contaminants were carried into the creek by the spring snow melts, which caused the Environmental Protection Agency (EPA) to respond immediately. The EPA analyzed the property and creek and found high levels of heavy metal, polychlorinated biphenyls, and some 140 other chemical substances. The same year, the Environmental Protection Agency initiated an emergency clean-up of the worst of the leaking drums. Workers on the ground quickly realized that the scope of the problem was far beyond their abilities at the time, and after news of the problems there became public the site was used by members of Congress as one of the reasons the proposed Superfund law was needed.
Cleanup began at the site in 1983 and officially ended in 1990, although problems continued to be reported for many years. An environmental audit of the site in 2003 found PCBs in the sediment surrounding the area, and further testing was ordered.
In December, 2008, EPA inspectors found about four dozen rusted metal drums on land just outside the part of the dump that it capped and fenced in the 1980s, including a portion of Jefferson Memorial Forest. New cleanup work is being considered at the site as of December 15, 2008."

6. What possibilities are there with respect to business models for a PI, and what are the benefits and disadvantages of those models?

Again, a PI should not be considered.

7. How could a PI manage liabilities that might arise during the storage period?

See above historical examples. Another possible scenario is if we were to go to war, and our government fails somehow, and all these nuclear sites are abandoned or bombed. What happens next? The PI wouldn't be able to manage this liability. This could beAmerica's worse nightmare.

8. What state/local/tribal authorizations/approvals would be needed?

The site of nuclear waste storage should not be in an earthquake zone. It should not be near communities. The storage containers should comply to the strictest standards for safety. All this should be overseen by a federal agency and not a PI.

11. What other considerations should be taken into account?

Close all the nuclear power plants. They may create “clean” energy, but when a disaster hits, like Fukushima, Three Mile Island, and Chernobyl, the cost is astronomical (material and human). America has inherited these nuclear power plants and their nuclear wastes from decisions made long ago. Why continue doing the same mistakes our ancestors made? Close these nuclear power plants down and bury everything underground, where it belongs. Marie Curie made a terrible mistake in bringing radioactive substances from the ground to the surface. We don’t have to honor her mistake. Our bodies were not equipped for man-made radioactive substances, whose half-lives outlive ours and cause mutations in our genes. The devastating consequences have been felt already. How many more people must suffer before you do the right thing?

Epigenetics is real and our genes ARE affected by our environment. Radiation causes mutations in our genes. Our health is important, and people should come first. Let’s not continue this slow genocide due to monetary and policy agendas.

12. Are there any alternative approaches to developing non-federally-owned facilities that might be proposed (e.g. how projects would be financed, anticipated regulatory and legal issues, etc.). If so, what are they, are there proposed solution [sic., solutions], and how would the above questions be answered with respect to such approaches?

Bury it underground as done in Sweden.

See the following article:
https://www.theguardian.com/world/2010/jul/13/sweden-nuclear-waste-environment