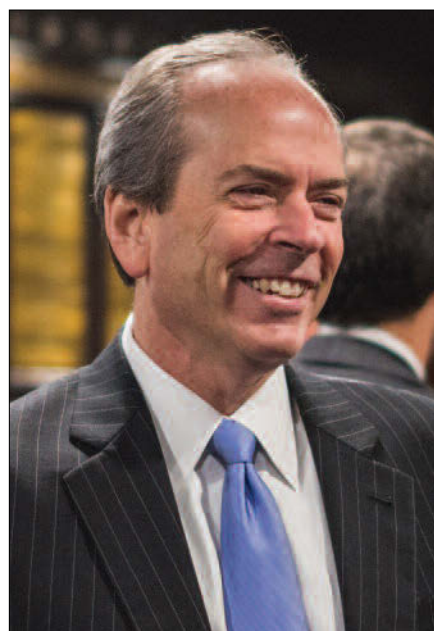


Bill Lindquist: A proposal for interim storage of spent fuel

Waste Control Specialists is answering the Blue Ribbon Commission's call for consolidated interim storage of spent nuclear fuel.

On February 7, Waste Control Specialists (WCS) announced that it is planning to submit an application to the Nuclear Regulatory Commission for a license to operate an interim storage facility for spent nuclear fuel at the site of its low-level radioactive waste disposal facility in Andrews County, Texas (*NN*, Mar. 2015, p. 96), the only commercial facility in the United States licensed to dispose of Class A, B, and C low-level radioactive waste. WCS operates a commercial facility for the Texas Vermont Low-Level Radioactive Waste Compact and a federal facility for Department of Energy waste at the West Texas site. With an interim spent fuel storage facility, WCS will be in a position to provide a comprehensive solution for the entire range of waste produced in the nuclear fuel cycle, the company said. To find out more about the application process and WCS's plans for the site, *Nuclear News* Associate Editor Tim Gregoire spoke with Bill Lindquist, chief executive officer of WCS. (Photos: WCS)



Lindquist: "We believe that 2020 is a reasonable goal in which to have the site up and running, but the federal government has to do some things to line up with it as well."

Your company wants to build an interim storage site for spent nuclear fuel and greater-than-Class-C waste. We are assuming that you intend to license it as an independent spent fuel storage installation (ISFSI) under 10 CFR Part 72. Is that right?

Yes, that's correct.

Although the project was canceled, Private Fuel Storage (PFS) applied for and received a license from the Nuclear Regulatory Commission for its planned ISFSI in Utah. Will WCS be using the same application process as PFS?

Yes, we are using that as a template for the application itself, although the siting of WCS's ISFSI is dramatically different. We have a community that is interested in doing this, and a state that is interested. Al-

though I won't speculate on what PFS dealt with—obviously there were issues—the license application process will be basically the same.

Other than PFS's experience, are there any other experiences or lessons learned that will inform your approach to licensing and siting the facility?

Well, we've been in Andrews County for 20 years, and the county invited us to site, design, and construct our low-level radioactive waste facility. So before the term "consent based" came into vogue as part of the Blue Ribbon Commission on America's Nuclear Future, we have had a consent-based site. The biggest thing for us, the thing we've learned from day one, is the importance of transparency with the commu-

nity and with all of our stakeholders. This includes the state leadership—the Texas House and Senate—and local leadership.

How has the state shown its support for the project?

Texas's interest is what really started this. We opened up the commercial part of our LLW facility in late 2012, and the federal part in 2013. As part of the licensing process and getting commitment and buy-in from the community and the state, we have done a lot of advertising, public relations, interviews, and talking to people. That includes talking to people in the legislature and the local community. We've been able, I think, to do a good job of educating people on radioactive waste, and the "radioactive" part of that is obviously the key word.



Waste Control Specialists' facility for the Texas Vermont Low-Level Radioactive Waste Compact has been open since 2012. WCS CEO Bill Lindquist hopes that the same state and local involvement that led to the licensing of the LLW facility will lead to the construction of an interim storage site for spent nuclear fuel.

What is unique about our community is that it is an oil and gas community. Andrews County has the third-largest oil and gas reserves in the state. And from the community's perspective, what we do with LLW on a day-to-day basis is not nearly as dangerous as what they do every day in the oil fields. They are very conscious of risk. When most communities would say, "We don't want an LLW facility in our backyard because of what may happen," this community is not that way. They understand risk, they accept the risk, and they just really embrace entrepreneurship. Using that as a backdrop, we have done a good job as part of the licensing process to pass that understanding throughout the state as well and have worked hard to get people to understand what we do. And that includes the governor.

After the Blue Ribbon Commission came out with its report on consent-based interim storage sites, Texas Gov. Rick Perry became interested. And at that point in time, Eddy and Lea counties in New Mexico had begun work on trying to get an ISFSI at their facility. The governor's thought process was that if it is going to be 40 or 50 miles on the other side of the border, where Texas is go-

ing to be affected by trucks coming through and people from Texas going to work there, why not look at doing it in the state of Texas.

So with that, he then commissioned the Texas Commission on Environmental Quality to prepare a report that would analyze the costs, the benefits, and the weaknesses of having an ISFSI in the state of Texas. That report came out last year, and basically it said that the ISFSI is a good idea, that it would benefit the state of Texas, and that it can be done safely. With that report, the governor then sent a letter to the Texas delegation in the U.S. Congress, as well as to the speaker of the Texas House of Representatives and the lieutenant governor. The speaker then set up some meetings in the state House of Representatives in 2014 to study the proposal. That gave us the support of the governor, the lieutenant governor, and the speaker of the house.

I then started going out to the community and meeting with Andrews County leadership, since we don't do anything with a new waste stream like this until we have buy-in and consensus from the community. I met with the Andrews County leadership for several months and received positive feedback. We had a community bar-

beque the first week of December last year, and on a cold Monday night we had over 500 people show up out of a town of about 13,000. It was a tremendous turnout. We have found over the years that if you serve barbeque at a public meeting, you get a lot more people there, which was our goal. We had a very good meeting with good feedback and almost unanimous support for the people who spoke. We view that very much as educational, and what we are doing now is the first step in educating the public. Also, the community fully understands that during the application process, the NRC will hold public meetings, which will give them the opportunity to ask more questions.

In terms of New Mexico, Rod Baltzer, who is the president of WCS, met with the Eunice City Council during a public meeting and the feedback was relatively positive. Keep in mind that the Eddy-Lea Energy Alliance is still alive, and I think they still have aspirations for applying for a license for an ISFSI.

When does WCS intend to submit an application to the NRC?

Continued

We have said that we would submit an application in the first quarter of 2016, but I think it could be earlier, closer to New Year's, because we are already pretty far down the road at this point. Assuming, however, that it is submitted in April 2016, we believe that the review process shouldn't take longer than three years. That takes us out to the middle of 2019, and we contemplate about a year of construction. So in terms of license, construction, and getting it ready for operations, I think we will be ready by the end of 2020.

Keep in mind that there are other things that have to line up as well—for example,

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transportation. That could be the long pole in the tent in terms of whether the Department of Energy, which is responsible for transportation, can arrange for routes, railcars, and other things by 2020. The other thing is the Nuclear Waste Policy Act (NWPA). We are meeting with the DOE shortly to get an understanding of how they believe that will work, since the DOE will be our customer and we will contract with them.

The key here is that under the NWPA, for the DOE to take title of the spent fuel, it has to be for disposal. What we will try to find out is whether interim storage is part of the disposal process, and whether they have the mandate to be able to take title of the waste and pay for interim storage. If not, if the DOE determines that they don't have that ability under the current law, then we will go to Congress and try to amend the NWPA to allow the DOE to take title and pay for interim storage as part of the disposal process.

As I said, we believe that 2020 is a reasonable goal in which to have the site up and running, but the federal government has to do some things to line up with it as well. And that is what we will be talking to them about over the next several months.

So WCS wouldn't be contractually involved with the utilities or producers of the spent fuel?

Correct. Under the NWPA, the DOE takes title, and then we would contract with them to store the waste.

Would your fees then come from the Nuclear

Waste Fund?

It would have to be some sort of funding through the DOE, either through the NWPA fund itself or an appropriation as part of the DOE's annual budget. We don't know how that is going to work out yet. But as I said, if the interpretation is such that the DOE cannot take title and use the fund to pay for the waste, we will try to have legislation introduced to get interim storage to qualify under the NWPA.

Do you see WCS charging the DOE a one-time fee, or will it likely be an ongoing fee?

WCS, in my view, should receive an ongoing fee. It is a storage fee, just as if you were to rent a storage locker. Now, as far as the payments to the state, county, and community to incentivize them and allow for interim storage to proceed in Andrews County and Texas, there has not been any discussion on how those payments will work.

If you look at some of the models that the Electric Power Research Institute and others have put together, they have what they call a hosting fee, and that is a one-time fee to the state and county. How our LLW facility works—and this is a model I like because we truly form a partnership with the state and the county—is for LLW that is coming in from around the country from the 34 states outside the Texas Vermont Compact, 25 percent of the revenue from disposing of that waste goes to the state of Texas and 5 percent goes to the county. I would love to see a similar type of structure for any payments that we receive, because under those terms, the more fees or revenues we generate, the state and county participate proportionally as well. I'm not saying the 25–5 percentages are right, but I like the concept of the partnership, and it is something that I think works really well, because then everyone is aligned.

Do you have an idea of what the cost to WCS will be for licensing, constructing, and operating the site?

We are talking about doing 40,000 metric tons of spent fuel in eight phases, so 5,000 metric tons staged over eight different pad areas. We believe that the first phase—getting all the buildings, infra-

structure, plus the first pad—will probably be somewhere between \$40 million and \$50 million. And those are really rough numbers—they could be off by a magnitude of one or two, but that is what our current thought is. Then the licensing cost, depending on how long it goes on, I would guess to be \$5 million to \$10 million.

Would 40,000 metric tons be the cap on what the site will hold?

Yes, it would be our initial cap. And that is a large facility. If you extrapolate the transportation, how long it takes to move the spent fuel, it is many, many years of accepting waste.

How will the acceptance of spent fuel be prioritized?

The DOE has issued a document that prioritizes the waste, and as our customer, the order they want takes precedence. However, our thought process, and the way the phases are structured, is that during that first phase, we would take all of the stranded waste at facilities that have been shut down. That's one of the reasons for the 5,000 metric tons—we would be able to take all the fuel and waste from those 10 or so power plants that have shut down. That was our thought, to take that waste first so the utilities can turn the land back over to the communities.

Would the WCS site accept just commercial spent fuel and waste, or will it also take DOE-managed waste?

Our belief is that it will be just commercial waste.

What will Areva's role be in the licensing of the site, and will the company be involved in the construction and operation as well?

We currently have an agreement with Areva in which the company is going to help us prepare the NRC application. One

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of the reasons that I think we can get the licensing done in three years and the whole process in about five years is that we went through a five-year licensing process in the state of Texas for our LLW facility. Most of that was the characterization of the property. We have characterized the heck out of

our property. We know what's underneath it. We have 640 borings and 400 monitor wells, and we know exactly what is there. So we believe that part of the application is done. In terms of the cask systems, to the extent that we can partner with a cask manufacturer, in this case with Areva, but also with Holtec and NAC, that cask system will already have been licensed. That should shorten the process, with only having to prove that the cask system can be tailored to our site. Then it is just a matter of the NRC's reviewing everything, holding public meetings, and doing all they need to do as part of the review process.

So Areva has been signed up to help on the application process and use its cask license to piggyback part of the application process. We are also talking to Areva about their being the preferred vendor for transportation, as well as the management and oversight contractor for the construction of the facility. We have a core competency in that we have a lot of radiation controls on site, and we have employees who are used to dealing with radioactive waste. But we don't construct, we don't transport, so we tried to find someone that could bring those things to the table, and we hope that will be Areva. We don't have a formalized construction and transportation agreement with them yet, but we are discussing those parameters.

Would the site then use the Areva NUHOMS cask system?

Ideally, I would like to get all of the three cask systems—Areva, Holtec, and NAC—on-site. That way we could take waste from everyone in the country. But the initial licensing will be for the NUHOMS system. However, I am hopeful that before we file the actual application, we can get NAC involved as well, because they have a high percentage of the stranded fuel sites. But if not, we will get the original license just with NUHOMS, and then if we need to amend it for some other systems, we can do that during the construction time or after the fact.

Will the WCS ISFSI have repackaging capabilities?

No, not immediately. We do not want to get into repackaging.

WCS intends to store fuel until a repository is available, which it publicly has said could be for 60 to 100 years. What do you tell people who ask what happens if a repository is never built?

The answer is that it is not going to be disposed of on our site. We will continue to renew the storage license, but the community has in their minds a maximum of 100 years. I would hope that we are going to have a disposal answer within those 100 years. **■**