A Session Report from the 2002 ANS Winter Meeting

Saving a Few Hundred Million Dollars

A panel of representatives from several decommissioning plants gathered at the American Nuclear Society's (ANS's) 2002 Winter Meeting, held November 17–21 in Washington, D.C., to give advice to owners of operating nuclear power plants. As Mike Williams, balance-of-site supervisor at the small Saxton plant, stated, "This is your last chance to get this information for nothing!" The session, titled "Saving a Few Hundred Million Dollars: What Nuclear Power Plant Operators Should Be Learning from Plants in Decommissioning," was sponsored by the ANS Decommissioning, Decontamination and Reutilization Division and organized by Joseph Carignan, from TLG Services.

Positioning the Company Better for Decommissioning

Ray Burke, from Maine Yankee, noted that he would have called the session "Pay Me Now or Pay Me Later." His company made an abrupt decision to decommission, a decision that it was not prepared for, Burke said. His presentation addressed the question, if they had it to live all over again, how would they better position the company for decommissioning?

Regardless of whether a utility can recover the cost of a "decommissioning guru," it's a good investment.

First, Burke said, they would pay more attention to stakeholders. Build a relationship with your opponents and engage in dialogues with your local community, creating a community advisory board if you don't already have one. Also, he said, you need to go back to your archives and see who owes what to whom. If the company has committed to returning a piece of land to the community or to remediating a portion of property to preplant condition, you need to know that.

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Second, he said, control contamination now. Prevent leaks and spills and clean them up quickly when they happen.

Third, build a strong historical site assessment. Keep good records on both radiological and nonradiological spills. Take photographs before and during construction and during any plant modifications. Include spill and event questions in employee outprocessing forms. Maine Yankee was fortunate to be able to hire a former employee who had helped build the plant and who knew where the photos were kept. These photos proved invaluable in showing regulators the condition of the site before construction started.

Avoid the legacy waste trap, he urged. If you have any waste stored onsite, get rid of it ahead of time. This includes any contaminated soil, Burke said. Get rid of it now.

Finally, he said, develop a good decommissioning plan. Operating nuclear utilities need to have a decommissioning "guru" on staff—to create and update a decommissioning plan, to keep track of decommissioning issues, to attend industry conferences and sessions on decommissioning technologies—even if they are not planning to decommission a plant any time soon. Most plants are required to have a decommissioning fund and cost estimates, but you need a lot more. The decommissioning guru may seem like a wasteful expense but will prove to be invaluable, especially if there is a sudden shutdown decision. The guru needs to be a technical person, "not just an accountant," Burke concluded.

Getting Out of the Operations Mindset

Einar Ronningen, from the Sacramento Municipal Utility District, which is decommissioning the Rancho

Seco plant, spoke of the value of having people on staff for the decommissioning work who had been there when the plant was being built. But he added, staffers of Rancho Seco, which shut down in 1989, had "ten years to mourn the loss of the plant" and to get out of the operations mindset and into the decommissioning mode before actual decommissioning and decontamination work began. Rancho Seco staff had not been prepared for shutdown, and the plant did not have the funds in place to begin decommissioning until several years later. They spent some $100 million more than they had to through this lack of planning, Renningen estimated.

In other comments, he echoed some of Burke's suggestions. "Don't enter decommissioning with a large inventory of radwaste," he cautioned. In addition, minimize bulk chemical inventories before shutdown.

Also, he said, it would be wise to do a chemical decontamination of the major plant components immediately after shutdown. It may be expensive, but it is certainly cheaper than "sitting around for ten years" waiting for the components to cool down.

On the topic of decommissioning planning, Ronningen reminded the audience that a decommissioning cost estimate is *not* the same as planning. The cost estimate will tell you *what* not *how,* he said.

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Counterintuitive

Elias Henna, from Southern California Edison (SCE), which is decommissioning San Onofre-1, stated that the unit was shut down prematurely in 1992. The plant needed some $125 million in upgrades, and the expenditure was not deemed prudent at the time. This decision is now regretted in many quarters, Henna said.

Henna noted that his company is learning a lot from the San Onofre-1 cleanup, because it has two operating units sharing the plant site. His major suggestion was one that might seem counterintuitive, he said: If you have already decided on a decommissioning date sometime in the future, toward the end of life, switch to shorter refueling cycles and use lower burnup fuel. That way you will have to cool the fuel in the pool only five years, whereas high-burnup fuel has to cool for about 15 years. In this way, he said, you will add a couple more refueling cycles but can shorten your decommissioning project by some four years (assuming no technological breakthroughs in canister design and no change in U.S. Nuclear Regulatory Commission regulations). You will add about $191 million in fuel costs, he noted, but will save up to $261 million in decommissioning costs.

This idea is more appropriate for a plant operating in a regulated market not a free market, he conceded. SCE is current replanning the fuel cycles of Units 2 and 3 toward the end of plant life to incorporate this idea.

Henna also touched on the issue of safety. One incident can shut down the whole project, and you may not be able to go back to work for a couple of years.

Know Your Groundwater

Mike Williams suggested that plants keep GPS (global positioning system) coordinates for every spill. His other pieces of advice:

- Get a good decommissioning-oriented questionnaire in place and make it part of the exit interview.
- "Plant operators are smart but are not necessarily in very good shape!" Thus, he said, despite their value as repositories of plant history, you might not be able to use operating staff as your demolition workers. Your plan should include hiring demolition experts.
- Before you even *think* of a decommissioning cost estimate, do a historical site assessment.
- Finally, "Odds are you don't know enough about your site's groundwater. We thought we were in good shape. Wrong!"

In the subsequent question-and-answer session, an attendee asked if a plant's decommissioning fund could be used to fund the decommissioning guru. The panel suggested that there might be some regulatory resistance to that. One panelist noted that plants can use up to three percent of the fund for decommissioning planning, and so may be able to get cost recovery once decommissioning begins. However, Williams stated, regardless of whether a utility can recover the cost, it's a good investment.

In a question that strayed a bit from the session topic, an audience member asked about the costs for increased security at independent spent fuel storage installations (ISFSIs) at decommissioning sites since 9/11. Panelists agreed that the decommissioning plants are taking "multimillion dollar hits" over the security issue.—*Nancy J. Zacha* ■

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