

The work ahead of us

A world without nuclear is not a pretty thing. Beyond all the benefits it brings us—cheap, clean, and reliable power, life-saving medicine, advanced industrial technologies, etc.—there are more direct, and for many people, real benefits to nuclear. Just ask the people of Carlton, Wis., and Vernon, Vt., which until recently were the homes of two very well-functioning nuclear power plants—namely, Dominion's Kewaunee and Entergy's Vermont Yankee, respectively. When these plants closed, for purely economic reasons, they took with them a lot of jobs and revenue. And unlike, say, a San Onofre, where the effects of closing the plant can be largely absorbed by a large and economically diverse community, the small municipalities of Carlton and Vernon are not so lucky.

The *New York Times* recently ran an article on the impact Kewaunee's shutting down has had on the local community, noting that while Kewaunee was operating, Carlton received about \$350,000 in taxes from the plant annually. That was 70 percent of the town's budget! Likewise, Bruce Parker of *The Addison Eagle* reported that Vernon and its surrounding communities are likely to feel the economic consequences of Vermont Yankee's closure for years. Only adding to the tragedy is that the closing of the plants came with little warning and little time to prepare. It was a surprise to nearly everyone, including the local residents. As a longtime Carlton resident told the *Times* about Kewaunee, "I thought it would be there forever."

Of course, nothing lasts forever, and the truth is there will be more closures among the country's remaining fleet of 99 power reactors in the coming years. If

Our ability to build new nuclear will be directly related to our ability to D&D old reactors.

current market flaws are not addressed, there are some that, like Kewaunee and Vermont Yankee, may close due to economics. But even then, the majority of the fleet is aging and many reactors will be reaching the end of their useful lives, even with license extensions. Given a 60-year operating life, all the nuclear power plants operating in the United States today will be retired by 2055.

This coming wave of retired nuclear reactors poses both a challenge and opportunity for the nuclear industry. Of course, there is the difficult task of decontaminating and decommissioning a large, radiologically complex structure and managing its waste. There also will be the challenge of growing and maintaining a skilled workforce capable of doing the highly technical and exacting work required. Balancing the need of plant owners to decommission reactors safely and efficiently with the desires of community members and stakeholders, who often don't understand why you cannot "just get rid of the stuff," likewise will pose its own challenges.

Yet, as we do more of this work it is certain to become more efficient, if not easier. New methods will be adopted and old ones refined, as will machinery and technologies. In the feature article starting on page 18, Richard Reid, of the Electric Power Research Institute, looks at how new and existing D&D technologies are being enhanced to improve efficiencies. Then, the following article (starting on page 21) provides an excellent

example of how Westinghouse has used lessons learned through prior D&D projects to methodically segment and package Cabrera's reactor vessel in Spain.

In addition to more cost-effective and labor-saving D&D techniques, it is feasible that lessons learned also will lead to improved and more streamlined regulations. Indeed, the Nuclear Regulatory Commission currently is reviewing its rules regarding reactors that are transferring to decommissioning. And, is it too far fetched to imagine that with more and more used nuclear fuel languishing at closed sites, the public will demand once and for all that the country site and build a permanent geologic repository? Incidentally, as I write this, the NRC has just released its draft supplemental environmental impact statement for the Yucca Mountain repository. That statement found the impacts of the Nevada repository to be "small."

I still believe in the nuclear renaissance, but it looks more and more as if we'll be tearing down before we begin building up. As we examine the task before us, there will be a lot to learn during this age of decommissioning. Know that *Radwaste Solutions* will continue to be there. We will not only continue to produce our valuable annual Buyers Guide (starting on page 35), we will be publishing the informative articles, covering the pertinent meetings and conferences, and analyzing the news, all to keep you informed on what is happening.—*Tim Gregoire, Editor*