

## Holtec's Disruptive Innovations Poised to Underpin Enhanced Human Health & Safety and Environmental Protection in the Nuclear Decommissioning Industry

We are pleased to share some of the recent innovations employed at our plants undergoing prompt decommissioning - Oyster Creek and Pilgrim - that have a large beneficial consequence to enhancing public health and safety as well as protection of the environment.

- Oyster Creek (a Holtec plant acquired from Exelon, 96.4 metric ton crane capacity) became the first beneficiary of a breakthrough (patented) technology that enables crane capacity -constrained plants to deploy Holtec's maximum capacity canisters (89 BWR or 37 PWR assemblies).
- A number of new innovations have helped boost the pace of transfer to dry storage to the rate of 2-1/4 canisters per week, an unprecedented feat in the nuclear industry which has obvious benefit to public health and safety accrued by the accelerated transfer of fissile material from wet to dry storage. Thanks to these innovations, the de-fueling of the Oyster Creek pool will be completed by Memorial Day, six months before the scheduled date!
- Oyster Creek broke the world record for reactor's steam separator segmentation in mere 40 days, only to be bested by our Pilgrim site, which set a new record of 38 days. In addition, Pilgrim broke Oyster Creek's record for segmentation of the steam dryer by completing the project in 20 days.



*Crane Safely Moves Transfer Cask at the Oyster Creek Decommissioning Site*

- A new family of high capacity LLW containers designed and built by Holtec are reducing the number of required containers at Holtec sites by as much as tenfold with corresponding benefit to the local communities and the environment in terms of reduced off-site shipments and a substantially reduced burden of waste disposal.
- A load handling innovation being implemented at Oyster Creek is allowing the fuel transfer and reactor segmentation to be conducted concurrently on the congested reactor building floor reducing the duration (and hence crew dose) of decommissioning the facility.

The innovations summarized above are but a representative sampling of the technologies that are being perfected to make nuclear decommissioning an environmentally benign undertaking conducted with utmost emphasis on maximizing human health and safety. As we march through the two current ongoing projects, we expect to discover, nurture, and mature more innovative solutions that help us realize our mission to render decommissioning of nuclear plants into an environmental non-event. In as much as the ease and cost of decommissioning is an important component of the life-cycle cost of a nuclear plant, our innovations will have a direct and salutary benefit to the per-kW cost of the new generation of reactors such as our SMR-160. The insights gained from decommissioning of the old plants is also being leveraged to inform the SMR-160's design to make it more amenable to (ultimate) decommissioning.

The above innovations are examples of the fruits from our sustained R&D program that, we assure our readers, will continue to be introduced in the decommissioning industry to make nuclear energy cost-competitive and to help restore its standing as the storied font of economical and clean energy that it was envisioned to be six decades ago. Our readers should be aware that all of Holtec's novel discoveries of significant commercial value are subject to intellectual property protection provided by the USPTO and other foreign national jurisdictions with nuclear plants.



*Top Guide is Prepared for Segmentation as Part of the Reactor Vessel Internals Work at the Pilgrim Decommissioning Site*