of energy on September 23, 2019, the Nuclear Waste Technical Review Board identified 30 technical issues that the Department of Energy needs to address in preparing to transport spent nuclear fuel and high-level radioactive waste to a repository or interim storage site.

Among the issues the NWTRB identified as needing to be addressed in preparing for spent fuel and HLW transportation include the need to (1) complete more detailed neutronics calculations (to demonstrate criticality safety) for some commercial spent fuel, (2) refurbish or re-establish transportation infrastructure at commercial nuclear power plant sites where that infrastructure is no longer functional, and (3) complete existing designs or develop and license new designs for casks and canisters used for transporting DOE-managed spent fuel and HLW. For more, turn to "Preparing for Nuclear Waste Transportation," starting on page 52.

The full report, *Preparing for Nuclear Waste Transportation: Technical Issues That Need to Be Addressed in Preparing for a Nationwide Effort to Transport Spent Nuclear Fuel and High-Level Radioactive Waste*, can be accessed online at www.nwtrb.gov/our-work/reports.

Used nuclear fuel

Idaho Gov. Brad Little and Attorney General Lawrence Wasden announced on November 7, 2019, that the state has reached an agreement with the Department of Energy that paves the way for Idaho National Laboratory to receive 25 spent nuclear fuel rods from the Byron nuclear power plant in Illinois. The spent fuel will be used at INL for fuel cycle research and development, including the testing of high-burnup nuclear fuel.

The DOE first proposed bringing two shipments of small quantities of spent fuel to INL for two separate research projects in December 2014. While a 1995 settlement agreement between the state of Idaho, the DOE, and the U.S. Navy prohibited INL from accepting any shipments of commercial spent fuel, a 2011 memorandum of agreement allowed for waivers from the terms of the 1995 agreement. The waivers would allow INL to accept limited quantities of spent fuel, as long as the DOE was making progress in removing radioactive waste from the state.

In 2015, however, Idaho declined to grant the DOE a waiver, citing the department's failure to treat 900,000 gallons of sodium-bearing liquid high-level waste at the INL site by the end of 2012. The state also noted that the DOE missed a 2018 deadline to remove all transuranic waste from Idaho after the Waste Isolation Pilot Plant (WIPP) in New Mexico suspended operations in 2014 because of a radiological release in the repository's underground. WIPP resumed waste operations in January 2017.

Under the agreement, Idaho will grant INL a one-time waiver to accept the approximately 100 pounds of spent fuel from Byron. Before it can do so, however, the DOE must begin treating the sodium-bearing waste at Idaho's Integrated Waste Treatment Unit (IWTU), operation of which has been delayed due to technical issues. The agreement also allows for the potential shipment of additional research quantities of spent fuel to INL after the DOE has produced 100 canisters of IWTU waste. The DOE will continue to be prohibited from bringing spent nuclear fuel into the state for any purpose other than research. The new agreement also keeps in place the requirements of the 1995 agreement for the removal of spent fuel from Idaho by 2035.

● Used fuel with a higher than usual heat load was transferred from wet to dry storage at a U.S. nuclear power plant in Orano TN's final dry storage loading campaign of 2019, the company announced on January 15. Orano TN said that it completed the