

and smaller, modular reactors that could be shop-fabricated with improved quality controls and reduced construction costs.<sup>119</sup>

## FALLOUT FROM CHERNOBYL

The Chernobyl accident in the Soviet Union on April 26, 1986, focused attention on both the Department's nuclear facilities and the nuclear power industry's perceived safety problems. In the aftermath, Secretary Herrington intensified safety reviews of the Department's large production and research reactors. He also established a special safety panel to review the N-reactor near Richland, Washington, the only American graphite production reactor even remotely similar to the Chernobyl reactor. The N-reactor, a dual purpose reactor dedicated by President John F. Kennedy in 1963, produced both weapon-grade plutonium and electrical power. Besides the Department's internal safety review, Herrington requested the National Academy of Sciences and the National Academy of Engineering to make an independent assessment of the Department's production reactors in Washington and South Carolina. In response, the National Research Council formed a committee to conduct an eighteen-month study.<sup>120</sup>

The Department's Civilian Reactor Research and Development Program had been pursuing the development of passively safe nuclear power plants even before Chernobyl. These would be simpler to build and operate, and therefore less costly, than light water reactors. Tests of the Experimental Breeder Reactor (EBR-II) had demonstrated that the small, experimental sodium-cooled fast test reactor, operating at full capacity, would automatically shut down when power was cut off to all cooling systems. Natural laws of physics, not engineered safety systems, kept reactor core temperatures within safe limits. The successful shutdown of the EBR-II in Idaho confirmed that such passively, or inherently, safe reactors might play a role revitalizing the nuclear power industry.<sup>121</sup>

## HIGH-LEVEL NUCLEAR WASTE

Nuclear waste management became a key administration project to secure energy strength through nuclear power. Signed by the President on January 7, 1983, the Nuclear Waste Policy Act of 1982 had enjoined the Department of Energy to site, design, construct, and operate the Nation's first geologic repositories for permanent disposal of spent fuel and high-level waste from civilian nuclear reactors.

On May 28, 1986, President Reagan approved the selection of three sites for detailed study, or "site characterization": Yucca Mountain, Nevada; Deaf Smith County, Texas; and Hanford, Washington. After several years of study, the Department, according to the procedure established by the 1982 act, would recommend one site to the President, who in turn might propose the site to Congress. In addition, the Department on May 28 announced that it had postponed indefinitely nominating sites for a second repository in the east.<sup>122</sup> The selection of three western sites for study and at least temporary suspension of a search for a second site brought sharp criticism from western states. Herrington, a westerner himself, denied that politics had played a role in the Department's decision. Rather, based on projected levels of nuclear waste, the Department estimated that there would be no need to develop a second site study until the mid-1990s. Secretary Herrington admitted it would be easy to dodge this issue, but he saw no point in spending money on a second study with nuclear power itself in the doldrums. "The important thing is to get the first one," he advocated. Subsequently, the Department would develop monitored retrievable storage (MRS) and a second site, if necessary.<sup>123</sup>

Congress simplified the selection process for a high-level waste site with the Nuclear Waste Policy Amendments Act of 1987. The act designated the Yucca Mountain site in Nevada as the only candidate site to be considered. Activities at the Texas and Washington sites were halted. The Department and the nuclear