entered and exited the intermediate heat exchanger with no net temperature reduction. The primary sodium coolant increased in temperature to the point that the fuel temperature also increased, resulting in thermal expansion, at which point the reactor shut itself down.

In a pool-type reactor, there is a vast amount of sodium coolant available to absorb and disperse the generated heat via natural convection. Sodium has much more heat absorption capacity, and in this design never approaches the boiling limit. Before the sodium coolant can boil, thermal expansion would expand the fuel to the point that the reactor shuts itself down.

The legacy of EBR-II in the nuclear industry is simply unparalleled. The reactor was instrumental in demonstrating the passive safety that liquid metal pool-type reactors can provide. During EBR-II's long run from 1964 until 1994, over 35,000 fuel elements and 366 subassemblies were irradiated. EBR-II provided critical information for advanced fuel development and materials testing, including serving as a prototype for the Integral Fast Reactor. In addition to producing 2 billion kilowatt-hours of electricity, EBR-II also helped demonstrate advanced reactor control and instrumentation technology.

In 1994, federal funding for EBR-II was cut, and the reactor had to be shut down. The American Nuclear Society was instrumental in declaring EBR-II a Nuclear Historic Landmark on December 14, 1995. If you ever find yourself driving along Highway 20 through the Snake River Plain, look northward, you may just spot the silver dome of EBR-II.

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