



in a SAFSTOR condition. Components that remain on-site include the reactor vessel, steam generators, and the primary system piping, which are to be removed following the permanent shutdown of Units 2 and 3.

In the end, Peach Bottom Unit 1 was successful in the demonstration of HTGR design code verification. For the first time, commercial operation of an HTGR was demonstrated and proven successful. Lessons learned from the operation of the Peach Bottom HTGR were incorporated in the Fort St. Vrain nuclear power plant, which was also an HTGR.

Peach Bottom-1 also proved that, despite fuel element failures in Core 1, plant operation could continue after the failed fuel elements were removed and studied and a new core installed. It should also be noted that the Philadelphia Electric Company demonstrated the ability of an HTGR to operate in a load-following manner, as this is how the plant was operated for the majority of its eight-year life. Many systems in the plant

performed exceptionally well during the life of the plant, including the steam generator, which lasted nearly eight years without tube leaking or plugging. Core 2 was also responsible for testing 30 fuel elements that were irradiated as part of an advanced HTGR fuel testing program.

Author's note: Operating History Report for the Peach Bottom HTGR (1976; Vol. 1, OSTI ID 7136159; Vol. 2, OSTI ID 7336303), Peach Bottom HTGR Decommissioning and Component Removal (1977; OSTI ID 7096078), and Fuel Summary for Peach Bottom Unit 1 High-Temperature Gas-Cooled Reactor Cores 1 and 2 (2003; OSTI ID 910718) served as the primary sources of information for this article. All can be found online at osti.gov. ☒

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