

Facts

from the **Savannah River Site**

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HB Line

The Savannah River Site's (SRS) HB Line is located on top of H Canyon and is the only chemical processing facility of its kind in the Department of Energy (DOE) complex. The facility was built in the early 1980s to support the production of plutonium-238 (Pu-238), which is a power source for the nation's deep space exploration program, and to recover legacy materials stored in H Canyon.

HB Line has three process lines: Phase I, also called the Scrap Recovery Line, became operational in the late 1980s. Phase I was used to dissolve and dispose of legacy plutonium materials, and to dissolve legacy uranium for blending into low enriched uranium (LEU). LEU can be converted to fuel for commercial power reactors at the Tennessee Valley Authority. HB Line has successfully dispositioned materials from SRS, Lawrence Livermore, Hanford, Rocky Flats and Y-12 through Phase I. In 2011, DOE directed HB Line to cease chemical processing in Phase I and utilize the gloveboxes to perform dry blend-down of high impurity plutonium oxide for disposal at the Waste Isolation Pilot Plant in New Mexico. Although HB Line is still operational, the last dissolution in Phase I was completed on Feb. 11, 2011.

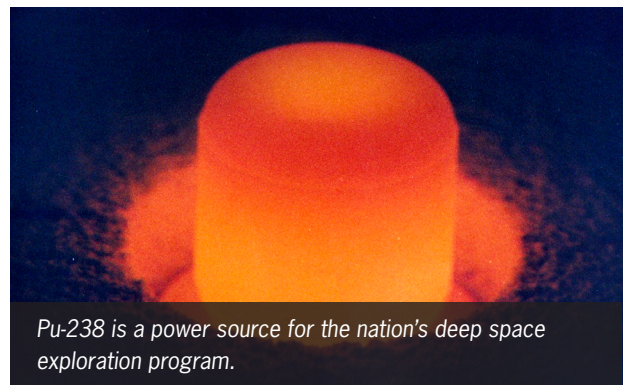
Phase II started operations in November 2001 and is used to create plutonium and neptunium oxides from nitrate solutions. The plutonium oxide is packaged and shipped to interim storage in K Area. The neptunium material was shipped to the Idaho National Laboratory for further processing and conversion to reactor targets for future Pu-238 production and space exploration. All neptunium materials have now been completed, with approximately 325 kilograms shipped. Most recently, Phase II has been used to support plutonium oxide production that can be used to feed facilities to make fuel for commercial power reactors, or shipped for final disposal in a repository.

Phase III has been converted into a processing facility to open storage containers when necessary, and to oxidize metals to allow for them to be dissolved in the Phase I process areas or the H Canyon dissolvers. Phase III is specially equipped to support the preparation and repackaging of excess plutonium and uranium metals and oxides in various forms, which are packaged in various containers and configurations.

HB Line also has the capability to continue processing and packaging plutonium that does not meet fuel material specifications.



A shipment of low enriched uranium on its way to TVA



Pu-238 is a power source for the nation's deep space exploration program.

The Savannah River Site is owned by the U.S. Department of Energy. Savannah River Nuclear Solutions is the management and operations contractor at the Savannah River Site.

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