

ELECTROREFINING PROJECT



The Electrorefining Project (ER) will secure technology critical to nuclear stockpile management. The installation of electrorefining technology will replace existing technologies with a safer and more cost-effective method of converting impure uranium metal into purified uranium metal.

Developed by Argonne National Laboratory and advanced by a team at the Y-12 National Security Complex (Y-12), the electrorefining process is based on well-established commercial processes used to purify metals such as aluminum, titanium, nickel, and copper. Once operational, new electrorefiners will replace a portion of current aqueous solution-based purification methods with electrorefining technology that allows workers to simplify processing and eliminate several high-risk operations.

Installation of electrorefining technology is scheduled to be complete by 2023 and will allow for the transition of related operations from Building 9212.

The Y-12 National Security Complex has three primary national security missions that protect the U.S. and its allies around the world: maintaining the U.S. nuclear deterrent, reducing global nuclear threats, and fueling the U.S. nuclear Navy. Currently, key operations that support these missions are conducted in buildings that originated in the 1940s and are costly to operate and maintain.

Y-12 is one of six production facilities in the NNSA's Nuclear Security Enterprise. Its unique emphasis is the processing and storage of uranium and development of technologies associated with those activities. Decades of precision machining experience make Y-12 a production facility with capabilities unequalled nationwide.

MORE INFORMATION

www.y12.doe.gov

Eric Thompson
Eric.Thompson@upo.doe.gov
865.241.2775

Steven Wyatt
Steven.Wyatt@npo.doe.gov
865.574.1640