

## **NE-22-28754 Criticality Safety Evaluation of NuCycle™**

Curio Solutions, located in Washington D.C., is a nuclear technology development and innovation company focused on the deployment of its used nuclear fuel (UNF) recycling process called NuCycle™. Curio is committed to commercializing the case for a closed fuel cycle.

The project will evaluate the criticality safety limits of the conceptual equipment designs for NuCycle™. This technology is a modular, integrated, compact, and proliferation-hardened process that can accommodate commonly used fuel types with minimal changes. The features of this product will create a commercial case for UNF reprocessing in the U.S.

Curio will work with the Nuclear Criticality Safety Group at Oak Ridge National Laboratory (ORNL) to perform evaluations of the equipment containing fissile material in the expected chemical forms. This work will help determine necessary steps that must be taken to ensure a commercial scale reprocessing facility can be brought to market.