

NE-23-32134 – Metatomic Molten Salt Immersed Hydrochlorination Subsystem Characterization

Metatomic, Inc. is located in Greenville, SC. They were established to address the increasing inventory of commercial light-water power reactor spent nuclear fuel in the United States.

Spent nuclear fuel is currently stored onsite at nuclear power plants in the United States. Metatomic seeks to convert this spent nuclear fuel into fuel for Molten Salt Fast Reactors (MSFRs) using a patented process. Access to a national laboratory provides bench scale demonstration and data generation for their molten salt immersed hydrohalogenation system and cover/off-gas management system.

Savannah River National Laboratory (SRNL) will provide the requisite expertise and spent fuel handling capability to enable the laboratory scale assessment and demonstration. The data generated at laboratory scale would provide confirmation of feasibility and basis for scaling to an industrial scale capability.