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Evolution of an Execution Strategy Analysis (ESA) Capability and Tool for the Disposition of Spent Nuclear Fuel (SNF) and High Level Waste (HLW)

Thursday, 27 June 2019 14:00 (20 minutes)

Since 2013 the U.S. Department of Energy's Office of Nuclear Energy began developing the Execution Strategy Analysis (ESA) tool that is both a subject matter expert elicitation process and a dynamic simulation modelling capability for use in the analysis of alternative implementation strategies and plans associated with an integrated nuclear waste management program. Early ESA models were used to evaluate potential alternatives for deploying consolidated interim storage for commercial Spent Nuclear Fuel (SNF). There have been several iterations of the ESA tool since 2013. In 2017 the ESA model was further enhanced by developing a stand-alone ESA Origin Sites Readiness Model. This model represents all the activities and milestones necessary to establish at-reactor and near-reactor site transportation infrastructure. By complementing the main ESA model and other Integrated Waste Management logistics tools, this new stand-alone model provides a structured, systematic methodology for evaluating potential SNF transportation campaigns associated with comprehensive disposition strategy alternatives.

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Country or International Organization

United States of America

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