



U.S. DEPARTMENT OF
ENERGY



Maximize Utilization of H-Canyon to eliminate **Department's Inventory of Aluminum Based Highly** Enriched Uranium Spent Nuclear Fuel

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Purpose

- To meet a Nuclear Materials Work Plan item
- To provide an understanding of the 45-day response to the proposal submitted by SRS



Environmental Management 45-day Response Plans

- In Summer of 2017, EM sites were requested to submit plans which could improve the effectiveness of the EM mission by emphasizing more timely decisions on complex cleanup challenges.
- SRS submitted 5 plans, 2 of them in the Nuclear Materials area:
 - Maximizing Utilization of H-Canyon (Disposition of Spent Nuclear Fuel (SNF))
 - Accelerating disposition of EM owned Plutonium



L-Basin Spent Nuclear Fuel racks

Maximizing Utilization of H-Canyon

- Background:
 - H-Canyon's current mission is to process 1000 Material Test Reactor Bundles and 200 High Flux Isotope Reactor Cores (2013 Amended Record of Decision (AROD))
 - At the completion of the AROD campaign, L-Basin is anticipated to be storing over 3000 bundles of Aluminum-based SNF
 - Processing of SNF in H-Canyon is a technically mature process used for over 50 years, which renders the SNF into a form no longer useable for proliferation, remaining material is converted to an acceptable disposal form, and allows recovery of the uranium for reuse as future energy production
 - Other options for disposition of SNF are Dry Storage and Melt and Dilute.
- Proposal and Benefits:
 - Positions H-Canyon to utilize its full capacity
 - Allows the Department to disposition Aluminum based HEU SNF in L- Basin
 - Provides uranium for reuse

Path Forward

- Funding will be considered in future budgets
- The Department will evaluate the need for any additional National Environmental Policy Act (NEPA) analysis

Summary

- DOE-SR understands the vital role of H-Canyon in disposition of Special Nuclear Materials, the largest one being SNF.
- DOE-SR believes this use of H-Canyon is consistent with the Recommendations received from the Citizens Advisory Board regarding H-Canyon
- If implemented, the uranium will be recycled from the SNF and the remaining nuclear materials will be dispositioned into a more stable waste form