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Future Needs and Plans for RH TRU at the Auxiliary Hot Cell Facility (AHCF) and Spent Fuel

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Nuclear Material Management

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Topics

- Full Project Plan description
- Project goals - FY 2019 to the end of the project
- Risk management/mitigation
- Project schedule - FY 2019 to the end of the project
- Projected FY 2019 Milestones
- Projected funding request - FY 2019 to the end of the project
- G2 and G3 Container Status
- Spent Fuel Shipment to INL

Project Plan Description

- The Auxiliary Hot Cell Facility (AHCF) has been operating under a Basis of Interim Operation (BIO) and is exceeding its proposed operational life.
- Goal:
 - Remove Remote Handled TRU materials from the facility
 - Place the AHCF in warm or cold standby
 - Downgrade to a radiological facility
 - Downgrade the BIO



Project goals - FY 2019 - end of project

- Complete enhanced AK documentation
- Procure shielded containers
 - SC-30G1 containers in FY 2018
 - G2 and G3 variants in FY 2021-2022
- Repackage 25 containers of Remote Handled (RH) TRU waste into shielded configurations.
- Obtain certification to ship waste stream
- Ship material to the WIPP

Risk management/mitigation

- A risk assessment was performed in early FY 2018 for *Disposition of RH TRU Waste at the AHCF* at SNL
 - Thirty-nine risks and opportunities were identified for the project as shown in Table
 - Risk mitigation plans were developed for the 10 High and Very High risks and opportunities.
 - If the risk response plans are implemented, it is expected that all but 3 of the risks can be reduced to below the High risk level.

Risk/Opportunity Statement	Unmitigated Overall Risk Rating	Overall Post-Mitigation Risk Rating	Risk Response Plan
NMED does not approve permit for new shielded containers within 18 months	High [48]	High [48]	Accept risk. Stay engaged with WIPP/CBFO but there is little that can be done to reduce risk.
WIPP staff does not certify all waste as is based on previous AK without repackaging	High [25]	High [25]	Accept risk. Hot cell facility will remain open to repackage waste if needed.
WIPP WAC changes and requires repackaging	Very High [50]	Very High [50]	Accept risk. Hot cell facility will remain open to repackage waste if needed.

Project schedule - FY 2019 - end of project

Activity	Due Date
Perform EPA baseline (note: this activity has not yet been scheduled)	3/1/2019
Complete TRAMPAC Process	3/31/2019
Waste Loaded at Sandia and Shipped	4/9/2019
WIPP Receives waste from 12 containers	4/10/2019
CBFO Tabletop Audit to Maintain Baseline	7/31/2019
CBFO Tabletop Audit to Maintain Baseline	7/31/2020
G2 and G3 Containers Developed, Tested and Approved	6/30/2021
CBFO Tabletop Audit to Maintain Baseline	7/31/2021
G2 and G3 Containers Delivered	12/28/2021
Repackage 13 remaining containers	3/1/2022
Complete TRAMPAC Process	5/31/2022
Waste Loaded at Sandia and Shipped	6/8/2022
WIPP Receives waste from 13 containers	6/9/2022

Projected FY 2019 Milestones

Activity	Due Date
Perform EPA baseline (note: this activity has not yet been scheduled)	3/1/2019
Complete TRAMPAC Process	3/31/2019
Waste Loaded at Sandia and Shipped	4/9/2019
WIPP Receives waste from 12 containers	4/10/2019
CBFO Tabletop Audit to Maintain Baseline	7/31/2019

Projected funding request - FY 2019 end of project

COST ELEMENTS FOR NMMT FUNDED PROJECT	FY 2019 COST	FY 2020 COST	FY 2021 COST	FY 2022 COST	FY 2023 COST	FY 2024 – Completion COST
Project Management and Technical Support	\$20K	\$20K	\$20K	\$20K	\$20K	
Craft Labor						
Subcontracting	\$100K					
Materials			\$500K			
Transportation and Disposal						
TOTAL NMMT FY COST	\$120K	\$20K	\$520K	\$20	\$20K	

G2 Container Status

- SC-30G2
 - G2 development and testing has been funded
 - All design work and pre drop analysis is complete
 - Next step → start the fabrication of the prototype containers, perform the drop testing and then revise the SAR based on the results of the testing once compared to the model projections
 - Expect to submit to the NRC in early 2020 (as of now).

G3 Container Status

- SC-30G3
 - Prototype and fabrication for Type A and B not currently planned do to funding constraints
 - Design of the payload container is complete
 - Shielding calculations and MCNP models are complete
 - Design of the dunnage assemblies are 80% complete
 - Currently running models to see if the G2 will bound the G3 for NRC approval

Estimated Funding Required for G3

- ROM - \$195,430
 - Subcontract (includes Fabrication of 2 prototypes, drop testing, and gamma scans) - \$163,875
 - In House QA - 10 hrs
 - In House Packaging Engineering - 20 hrs
 - Labor - \$3,071
 - Travel - \$7,000
 - Overhead/QA adder - \$8,698
 - Management Fee - \$12,786

Spent Fuel Shipment to INL

- Certificate of Compliance for NAC-LWT cask pending NNSA Office of Packaging and Transportation
- Requested formal notification from INL DOE site office that shipment is imminent.
- Shipment from SNL to INL estimated to be \$500K
 - Date unknown

Questions?