Topic Area 4 Q&A

Q: Is development of tools for SIC-SIC composite tubing for detection of corrosion is of relevance to this project?
A: Would be good to look at the NEUP list and work with a fuel vendor. We do have autoclaved methods being done for heat-up at Westinghouse and General Atomics. We have some corrosion testing planned at MIT. If you have a specific technique that is new, there would be interest in hearing of that.

Q: Looking at the guidance document, MSR Fuel Cycle document, is there any sorting of the document which focuses on a higher priority?
A: No, it is possible that some activities may check several boxes. It doesn't have to be just pick one thing. If there is a coordinated effort that check multiple boxes, that is not forbidden. They are all generally important.

Q: Is there interest in "surrogate" (no added uranium) salt instead of the uranium added salt?
A: That could be purchased in high quality from vendors but ensuring and verifying that it meets the proper specs and is dry, has no water in it, and purity levels are acceptable would be important.

Q: For molten salt fuels, is there a particular feedstock of interest?
A: You can buy UCL4 from vendors. UCL3 is more difficult to obtain. The chemistry of going from oxides to fluorides and fluorides back to oxides is well established in terms of conversion and deconversion chemistry. There is the typical lattices built to some degree on pyroprocessing but the salt is the process fluid, not the end product. It is what you run things through to do your separations. In this case we are looking at the salt as the product. We are not going from metal to metal or oxide to metal through a molten salt. We're looking at dirty salt to clean salt, oxide to salt, metal to salt, or carbide to salt. There are different additional paths that can be developed rather than falling into historically developed ones. However, if it is appropriate, it is fine.

Q: For fuel qualification or characterization, are there particular properties that are of more interest?
A: Viewing the Holcomb report would give a good idea on how to approach the proposed project. It has collected all of the different properties. A lot is tied more to the safety basis. Vendors still need to know what the properties are. The reactor performance and reactor safety and licensing will focus more on the safety and the vendors have to show the design and fuel performance. Holcomb report: Pub141807.pdf (ornl.gov)