Department of Energy
Savannah River Operations Office
P.O. Box A
Aiken, South Carolina 29802

SEP 14 2016

Mr. Harold Simon, Chairperson
Savannah River Site Citizens Advisory Board
P.O. Box A
Aiken, South Carolina 29802

Dear Mr. Simon:

SUBJECT: Citizens Advisory Board (CAB) Recommendation Number 337 – Improving H-Canyon Throughput (Your letter 07/26/16)

Thank you for your recommendation on improving the throughput of H-Canyon.

Department of Energy (DOE) accepts this recommendation in its entirety.

Regarding parts #1 and #2, earlier this year, a small team of Savannah River Nuclear Solutions personnel with pertinent experience and expertise worked in sequestration for eight weeks using a defined process which analyzed the "baseline", or current plan, for processing Spent Nuclear Fuel (SNF) through H-Canyon; generated alternative ideas; tested seemingly viable ideas by reaching out to other subject-matter experts; and identified throughput improvement options for further consideration by an Advisory Board. The team consisted of operations, engineering and laboratory personnel.

Initially the team thoroughly scrutinized the baseline for processing SNF bundles through H- Canyon, examining each of the major unit operations and their interactions. Utilizing sources such as the Savannah River Site (SRS) Nuclear Materials Planning Roadmap (the Roadmap), the SNF schedule, and experienced H-Canyon personnel, the team examined inputs and outputs (primarily volumes and product constituents) as well as current constraints and requirements such as hold points for sampling of the major unit operations.

Based on its comprehensive examination of the individual unit operations and the integrated system, the team developed a general timeline of nominal processing and sampling times. The SNF processing timeline developed by the team is a model of plant capability. The timeline was developed to confirm that processing bundle throughputs projected in the current plan could be achieved and as a tool to compare improvements proposed by the team. The times associated with both unit operations and specific tasks were conservative estimates.

Assuming that all equipment and instruments are operational and available and full staffing with requisite qualifications are available, the team identified improvements to unit operations that have the potential to increase throughput. Examples include:

- Better characterizing the hydrogen off-gas to increase the number of bundles in each batch.
- Increasing the 70 ton cask car capacity and/or reworking H-Canyon bundle storage to handle the larger batch size.
- Implementation of an on-line monitoring program.

DOE-Savannah River Operations Office (SR) will schedule a briefing to the CAB on the results of the analysis.

In response to part #3, DOE-SR agrees and the modifications identified to eliminate bottlenecks in the spent fuel processing analysis will be added to the site Integrated Priority List.

The Department values the CAB's position on SRS programs and appreciates the CAB's desire to improve the throughput of H-Canyon.

If you have any questions, please contact me or have your staff contact Patrick McGuire (803) 208-3927.

Sincerely,

BW Jack R. Craig
Savannah River Site Manager

AMNMS-16-0012

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