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Date: March 14, 2025

To: Jimmy Stone

c: John Gearhart, Richard Ibberson, Fulvia Pilat, Balendra Sutharshan, John Taylor, Brian Weston

From: Jens Dilling

Subject: **Charge for SNS Continuous Commissioning Review**

The Spallation Neutron Source (SNS) is the world's most powerful hadron accelerator and pulsed neutron source. Since SNS operations began, SNS has provided nearly 19 years of safe and reliable operation. In June 2024, the facility returned to operation following an extended outage for the Proton Power Upgrade (PPU) that increased accelerator energy levels from 1.0GeV to 1.3GeV. The Department of Energy (DOE) and Neutron Sciences Directorate (NScD) implemented a rigorous readiness review process prior to returning to operation, and the facility has now operated well for several months at increased power.

Along with increased power come new operating conditions and new challenges. For example, increased power requires increased helium gas injection for the mercury target, which has resulted in gas accumulation and the need for periodic degassing. Increased neutron intensity is resulting in radiation hot spots under some beamline operating configurations, necessitating additional fault studies on the beamlines; and the increased counts observed in stack effluents are necessitating changes to ventilation systems to increase hold-up time for decay of short-lived isotopes. This last change was also a factor in a recent Radiological Event Report involving personnel contamination, and an internal engineering evaluation and causal analysis are currently underway to generate appropriate actions in response. Staff are working diligently to manage these challenges and ensure long-term safe and reliable operation.

To help ensure continued success, NScD would like to gain independent perspective on how we are managing post-PPU operations. To this end, I am asking that you lead a team to perform a Continuous Commissioning Review at SNS. The focus of this review is to answer the following questions:

1. Is the organization managing operations at increased power effectively?
2. Is leadership appropriately engaged in operational decision-making and oversight?
3. Is the organization demonstrating the Safe Conduct of Research principles?
4. Are processes (work control, design control, and conduct of operations) working effectively to maintain safety and compliance under changing conditions?

I would like to thank you for agreeing to lead this review. Efforts to assemble the team will begin immediately with a goal of holding the review in early April.