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To: O"Bryan, Phil; Montgomery, Cindy; Schuster, William; Borromeo, Joshua
Cc: Kim, Seungjin; Stylianos Chatzidakis; Storz, David L
Subject: [External_Sender] NRC meeting summary
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Hello all,

This email is to summarize the discussion we had earlier today.

Since February 28th, 2021 when operator Clive Townsend noticed that the rate of temperature change of the coolant was greater than expected, PUR-1 has been shut down and remained shut down. Since then, multiple independent assessments on the reactor power have been performed, which include: Hand calculations, MCNP simulations, analysis on activity measurement of the irradiated materials, and a thermal-hydraulic analysis using a CFD model of PUR-1. As the final and more physical assessment, we are currently in preparation for experiments using resistance heaters as heat sources. The goal is to submerge the heaters inside the reactor pool and measure the corresponding coolant temperature change rates at various heater power levels. Then, compare those with the data recorded on February 28th. Therefore, upon completion of the heater experiments, together with other assessment results, we will be able to draw a reliable conclusion on the actual reactor condition and the potential need for a new gold-foil calibration correlation. We anticipate the heater experiments to be completed before August, 2021.

In view of all of this, we will not be operating PUR-1 until we have a good understanding of the reactor condition and have a plan to conservatively restart PUR-1 once the issue is understood.

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