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To: "Marvin Mendonca" <MMM@nrc.gov> NRR
Date: Tue, Aug 22, 2000 12:34 PM
Subject: 1/M for Six Fuel Elements

Marvin,

You asked how we could document that a six fuel element core could not go critical. Prior to limiting the unirradiated fuel to less than 5 Kg, we would do initial criticals on new eight-element cores. They were performed in three "startups"--first with six fuel elements, then seven, and then eight. I will fax to you the Console log pages and the 1/M plot for the six element startup of an initial critical on core X completed on 11/9/73. The following points can be obtained from the the three pages I have faxed to you:

- * Page 10--The movement of fresh fuel from the fuel vault to the pool is documented starting at 0845.
 - * Page 11--Six fresh elements are then loaded into the core as shown from 0920 to 0937. The rods were pulled starting at 0949. The rods were run-in starting at 1033 because they were full out at 26 inches and the reactor was not critical.
 - * The third page is the 1/M graph for this startup. With the control rods full out, a 1/M of >0.185 was reached.
- This was with our current 775 fuel elements which contains 775 gm of U-235 per element.
Please let me know if you have any additional questions.
Charlie McKibben

CC: "Meyer, Walter A." <MeyerW@missouri.edu>, "Butler,..."

B/S