



Research Reactor Center

University of Missouri-Columbia

Research Park
Columbia, MO 65211

PHONE (573) 882-4211
FAX (573) 882-6360

April 24, 2000

Mr. Craig Bassett
U.S. Nuclear Regulatory Commission
61 Forsyth Street, SW Suite 23T85
Atlanta, GA 30303

SUBJECT: Monthly Operations Summary

Enclosed is a copy of MURR's monthly operations summary for
March 2000.

Sincerely,

A handwritten signature in cursive script that reads "Charlie".

J. Charles McKibben
Reactor Manager

:lh
encl

UNIVERSITY OF MISSOURI RESEARCH REACTOR

OPERATIONS MONTHLY SUMMARY

March 2000

Prepared by:

Operations Staff

March 2000

The reactor operated continuously in March with the following exceptions: four shutdowns for scheduled maintenance and refueling; and two unscheduled shutdowns.

On March 6, 2000, a spurious intermediate range monitor (Channel #2) short period scram occurred during a normal reactor startup. The reactor was sub-critical at the time. No actual short period was noted or indicated on any instrumentation. Therefore, the scram was felt to be spurious. Channel #2 was tested and checked satisfactorily and a normal startup was subsequently completed with no further problems occurring.

On March 31, 2000, a reactor isolation occurred when the bridge upscale switch was inadvertently turned to the downscale position while an alarm was locked in on the bridge Area Radiation Monitor (ARM). The bridge upscale switch is turned to the upscale position when sample evolutions are performed that may cause temporary elevated radiation levels near the pool surface. There are two bridge ARMs. Placing this switch in the upscale position bypasses the isolation trip function of the bridge ARM with the lower set point. This is to prevent inadvertent reactor isolations. Another bridge ARM with an operable (but higher alarm level) isolation trip continues to function at all times. In this case, an alarm was locked in on the bridge ARM with the low trip set point from handling some samples in the pool. With the sample moves completed, the Reactor Manager mistakenly returned the switch to the downscale position without first checking to see if an alarm trip needed to be cleared.

Major maintenance items for the month included: repairing a leak in the fission product monitor sample line; installing a new reflector wedge in the L-6 position; installing new pool and primary flow recorders; removing, repairing, and reinstalling the row-2 pneumatic tube terminal end; installing a new solenoid test box for the south back-up isolation door; replacing a blown fuse in the uninterruptable power supply 15 KVA transformer disconnect switch; replacing a blown fuse in the control circuit for isolation door 504.

UNSCHEDULE SHUTDOWNS

<u>Date</u>	<u>#</u>	<u>Type</u>	<u>Cause</u>
3/6/00	1108	Scram	Spurious Channel #2 period.
3/31/00	1109	Scram/Isolation	Operator error.

MAINTENANCE ACTIVITIES

<u>Date</u>	
3/1/00	Repaired a leak in the fission product monitor sample line.
3/6/00	Refueled - removed core 00-09, loaded core 00-10. Installed new reflector wedge in L-6 position.
3/13/00	Refueled - removed core 00-10, loaded core 00-11. Installed new pool flow recorder. Removed row 2 P-tube terminal end.
3/20/00	Refueled - removed core 00-11, loaded core 00-12.
3/27/00	Refueled - removed core 00-12, loaded core 00-13. Repaired and reinstalled row 2 P-tube terminal end. Replaced blown fuses in the UPS 15 KVA transformer disconnect switch and in the control circuit for isolation door 504. Installed new primary flow recorder.
3/31/00	Refueled - removed core 00-13, loaded core 00-14.

OPERATIONS SUMMARY

HOURS OPERATED THIS PERIOD	658	
TOTAL HOURS OPERATED	226,395	
HOURS AT FULL POWER THIS PERIOD	656	
TOTAL HOURS AT FULL POWER	223,237	
INTEGRATED POWER THIS PERIOD	273	MWD
TOTAL INTEGRATED POWER	87,205	MWD