

UNIVERSITY OF MISSOURI RESEARCH REACTOR

OPERATIONS MONTHLY SUMMARY

PRIORITY ROUTING

First		Second	
RA		RC	
DRA		EIC	
DRP		SGA	
DRS		OI	
UNMS		PAO	
DRMA			

FILE

February 1996

Prepared by:  
Operations Staff

February 1996

The reactor operated continuously in February with the following exceptions: four shutdowns for scheduled maintenance and refueling.

On February 5, 1996, after shutting down the reactor for a regularly scheduled maintenance day, the control room operator found that anti-siphon valve V543A failed to open as expected while securing the primary system. The redundant anti-siphon valve V543B opened as expected.

The air operator for V543A had not cycled, which indicated a failure of its three-way solenoid valve to operate normally to vent the air operator and allow spring force to open V543A.

Compliance testing of the anti-siphon system was performed to verify that V543B was operable. This test verified that the siphon break system was operable as required in Technical Specification 3.9.a.

The failure of the three-way solenoid valve for V543A was investigated by the Reactor Manager to determine if the previous week's maintenance on this solenoid had been performed correctly. A new seal kit had been installed and was verified to be installed correctly. Subsequent rebuilding of the solenoid valve on February 5 resulted in the valve failing to vent after several successful cycles of operation. The entire three-way solenoid for V543A was replaced. Valve 543A was cycled successfully over twenty times. Compliance testing was completed to verify that both anti-siphon valves were operable prior to resuming reactor operation. Subsequent testing of the three-way solenoid valve indicated an O-ring seal problem associated with the operating piston in the valve. This operating piston will be discarded.

Details of the failure and corrective actions were reviewed by the Reactor Action Subcommittee on February 12, 1996. The details will be reviewed by the full Safety Subcommittee at the next meeting.

Major maintenance for the month included: re-installing old G and H graphite wedges; replacing the shear pins on the personnel airlock doors; replacing the leading trolley hanger bolt and tensioning spring on the inner personnel airlock door.

### OPERATION SUMMARY

HOURS OPERATED THIS PERIOD	645
TOTAL HOURS OPERATED	194,214
HOURS AT FULL POWER THIS PERIOD	643
TOTAL HOURS AT FULL POWER	191,212
INTEGRATED POWER THIS PERIOD	268 MWD
TOTAL INTEGRATED POWER	73,820 MWD

### MAINTENANCE ACTIVITIES

2/5/96 Refueled - removed core 96-6, loaded core 96-7. Reinstalled old G and H graphite Wedges; replaced valve 543A solenoid valve.

2/12/96 Refueled - removed core 96-7, loaded core 96-8.

2/19/96 Refueled - removed core 96-8, loaded core 96-9. Replaced the shear pins on the personnel airlock doors.

2/26/96 Refueled - removed core 96-9, loaded core 96-10. Replaced the leading trolley hanger bolt and tensioning spring on the inner personnel airlock door.