



Research Reactor Center

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Mr. Alexander Adams, Jr.
U.S. Nuclear Regulatory Commission
Mail Stop 012-D3
Washington, D.C. 20555-0001

SUBJECT: Monthly Operations Summary

Enclosed is a copy of MURR's monthly operations summary for April 2001.

Sincerely,

Paul S. Hobbs, PE
Reactor Manager

PSH:dcp

Enc.

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UNIVERSITY OF MISSOURI RESEARCH REACTOR

OPERATIONS MONTHLY SUMMARY

April 2001

Prepared by:
Operations Staff

April 2001

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

On April 6, a reactor scram and isolation occurred due to the failure of a rectifier diode in the uninterruptible power supply (UPS) inverter. The diode failure caused the UPS to shift to its alternate power source which subsequently caused a fuse to blow in the alternate source circuit. This blown fuse created a loss of power to the Area Radiation Monitoring System which, in its fail-safe mode, initiated a reactor isolation. All personnel exited the containment building according to procedure. The faulty diode and blown fuse were replaced and the reactor was returned to normal operation. The electrical distribution and loads on the UPS are being evaluated to place non-reactor instrumentation loads on another UPS system.

Major maintenance items for the month included: preparing depleted pool deionization bed "w" for disposal; replacing a faulty rectifier diode in the inverter and a blown fuse in the alternate circuit of the UPS; replacing the coil and contact block on containment ventilation supply fan #2 breaker; replacing the outboard fan bearing in facility ventilation exhaust fan (EF-13); applying a synthetic metal compound (metal-tech EG) patch on a pin-hole leak on the secondary side of primary heat exchanger 503A; rebuilding the solenoid-operated air control valve for in-pool heat exchange valve 546 A; rebuilding secondary isolation valve to heat exchanger 503A (S-39); installing an air flow meter on the main compressed air line to the containment building; replacing the valve body gaskets and valve diaphragm on valve DI-2 on the DI-202 column.

UNSCHEDULED SHUTDOWNS

<u>Date</u>	<u>#</u>	<u>Type</u>	<u>Cause</u>
4/6/01	1126	Scram/Isolation	Failure of diode in UPS

MAINTENANCE ACTIVITIES

Date

04/02/01 Refueled - removed core 01-15, loaded core 01-16.

04/04/01 Placed depleted pool deionization bed "w" in drying barrels.

04/06/01 Refueled – removed core 01-16, loaded core 01-17.

04/07/01 Loaded new pool deionization bed "v".
Replaced faulty rectifier diode (D-2) in the UPS inverter and a 50 amp alternate source fuse in the UPS.
Replaced the coil and contact block on containment ventilation supply fan #2.

04/09/01 Refueled – removed core 01-17, loaded core 01-18.

04/16/01 Refueled – removed core 01-18, loaded core 01-19.
Replaced outboard bearing on facility exhaust fan EF-13.
Applied a synthetic metal compound patch on primary heat exchanger 503A-secondary side.
Rebuilt solenoid-operated air control valve for valve 546.
Installed a new intercom base station and some remote stations.

04/23/01 Refueled – removed core 01-19, loaded core 01-20.
Rebuilt secondary to primary heat exchanger 503A valve S-39.

04/30/01 Refueled – removed core 01-20, loaded core 01-21.
Installed flow meter on main compressed air line to containment building.
Replaced gaskets and valve diaphragm on valve DI-2 (D1-202 column)

OPERATIONS SUMMARY

HOURS OPERATED THIS PERIOD	593	
TOTAL HOURS OPERATED	234,527	
HOURS AT FULL POWER THIS PERIOD	590	
TOTAL HOURS AT FULL POWER	231,327	
INTEGRATED POWER THIS PERIOD	246	MWD
TOTAL INTEGRATED POWER	90,581	MWD