



Research Reactor Center

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December 30, 2002

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Mr. Alexander Adams, Jr.
U.S. Nuclear Regulatory Commission
Mail Stop O12-G13
Washington, DC 20555-0001

SUBJECT: Monthly Operations Summary

Enclosed is a copy of MURR's Monthly Operations Summary for November, 2002. If you have any questions, please contact me at (573) 882-5264.

Sincerely,

Paul S. Hobbs, PE
Reactor Manager

PSH/lmcg
cc. Craig Bassett
Enclosure

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*UNIVERSITY OF MISSOURI
RESEARCH REACTOR*

OPERATIONS MONTHLY SUMMARY

NOVEMBER 2002

*Prepared by:
Operations Staff*

INTRODUCTION

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

MAINTENANCE ACTIVITIES

- 11/4/02 Refueled - removed core 02-58, loaded core 02-59.
- 11/10/02 Refueled - removed core 02-59, loaded core 02-60.
Replaced P501A (primary system pump) coupling flex element.
Burnished Rod Run-In contacts.
- 11/13/02 RAK Stack Monitor taken out of service indefinitely for repairs.
- 11/18/02 Refueled - removed core 02-60, loaded core 02-61.
Refurbished P-501B (primary system pump) motor contacts.
- 11/24/02 Refueled - removed core 02-61, loaded core 02-62.
Replaced P501A (primary system pump) coupling flex element.
- 11/25/02 Replaced P501A (primary system pump) coupling flex element.

UNSCHEDULED SHUTDOWNS

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
11/10/02	1152	Scram	P501A flexible coupling failure.

On November 10, a Reactor Scram was automatically initiated when the flexible coupling on primary coolant system pump P501A failed resulting in a reduction in primary coolant system flow. The pump and motor were inspected and it was determined the failure was most likely due to a defective coupling flex element. The coupling was replaced and P501A was tested satisfactorily. The reactor was refueled and returned to operation.

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
11/10/02	1153	RRI	RRI TAA failure.

On November 10, a Rod Run-In was automatically initiated. Investigation revealed bad contacts in the RRI circuit. The contacts were burnished, all connections tightened and all relays inspected and tested for operability. All Scram and RRI signals were cleared and all relays reset normally. The failure did not recur. The reactor was subsequently returned to operation.

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
11/24/02	1154	Scram	P501A flexible coupling failure.

On November 24, a Reactor Scram was automatically initiated when the flexible coupling on primary coolant system pump P501A failed resulting in a reduction in primary coolant system flow. The pump and motor were thoroughly inspected. A small amount of play between the shaft and impeller was found. The coupling and pump internals were replaced and P501A was tested satisfactorily. The reactor was subsequently refueled and returned to operation. The pump's internal assembly will be overhauled.

Unscheduled Shutdowns (cont'd)

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
11/25/02	1155	RRI	P501A flexible coupling failure.

On November 25, a Reactor Scram was automatically initiated when the flexible coupling on primary coolant system pump P501A failed resulting in a reduction in primary coolant system flow. The pump and motor were inspected and it was determined the failure was due to a misalignment between the pump and motor. The coupling flex element was replaced and the motor re-shimmed. The realignment was verified and the pump was tested satisfactorily. The reactor was subsequently returned to operation.

OPERATION SUMMARY FOR MONTH OF University of Missouri Research Reactor Center (MURR)	Nov-02
HOURS OPERATED THIS PERIOD	628 35
TOTAL HOURS OPERATED, REACTOR	246,692 46
HOURS OPERATED AT FULL POWER, THIS PERIOD	626 70
TOTAL HOURS AT FULL POWER, REACTOR	243,426 47
INTEGRATED POWER THIS PERIOD	261.20 MWD
TOTAL INTEGRATED POWER, REACTOR	95,625 90 MWD

Submitted by. Das K
MWD Custodian/Reactor Physicist

Date: 12/2/02