



# Research Reactor Center

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February 12, 2002

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Mr. Alexander Adams, Jr.  
U.S. Nuclear Regulatory Commission  
Mail Stop O12-D3  
Washington, DC 20555-0001

SUBJECT: Monthly Operations Summary

Enclosed is a copy of MURR's monthly operations summary for January 2002. If you have any questions, please contact me at (573) 882-5264.

Sincerely,

Paul S. Hobbs, PE  
Reactor Manager

Please check  
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PSH/djr

Enclosure

A020

UNIVERSITY OF MISSOURI RESEARCH REACTOR

OPERATIONS MONTHLY SUMMARY

January 2002

Prepared by:  
Operations Staff

## INTRODUCTION

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

On January 20, a manual scram was initiated by the Lead Senior Reactor Operator due to erratic indication on Reactor Inlet Temperature Instrument 980B.

On January 26, a manual scram was initiated by the Lead Senior Reactor Operator due to a recurrence of the erratic indication on Reactor Inlet Temperature Element 980B.

Licensee Event Report No. 02-01, providing a description of these events and the corrective actions taken, is being prepared and will be submitted within the technical specification thirty day time requirement.

## MAJOR MAINTENANCE ITEMS

1. Completing modification record 01-09, "Installation of Emergency Lighting Panel No. 1."
2. Loading new pool deionization bed "P".
3. Rebuilding primary heat exchanger 503A drain valve 515A.
4. Completing Deionization Tank-201 valve and flange gasket replacement.
5. Completing modification record 01-09, addendum 1, "Relocation and Replacement of Emergency Lighting Panel No. 2."
6. Replacing Reactor Inlet Temperature Instrument 980B meter relay unit, transmitter, and RTD.
7. Completing modification record 01-11, "Replace K Relay Sockets with an Improved Design."

## UNSCHEDULED SHUTDOWNS

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
1/20/02	1132	Manual Scram	Erratic Reactor Inlet Temp. Indication

On January 20, a manual scram was initiated by the Lead Senior Reactor Operator upon discovering that Reactor Inlet Temperature Instrument 980B indication had become erratic. Electronics technicians were called in to assist with trouble-shooting. Compliance Procedure CP-8B, which tests the 980 A and B temperature instrument safety system functions, was performed satisfactorily. The instrument indication returned to normal shortly after the shutdown and the malfunction could not be duplicated. The 980B meter relay unit was replaced and Compliance Procedure CP-8B was performed satisfactorily. The reactor was subsequently refueled and returned to normal operation. During the next scheduled maintenance shutdown, on January 21, the calibration of the 980 temperature instruments was again checked by electronics technicians and found to be satisfactory.

1/26/02	1133	Manual Scram	Erratic Reactor Inlet Temp. Indication
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On January 26, the Lead Senior Reactor Operator initiated a manual scram after discovering that Reactor Inlet Temperature Element 980B indication had again become erratic. A calibration check performed by electronics technicians showed no indication of failure and the calibration data were within established specifications. Electronics technicians replaced the 980B transmitter and Resistance Temperature Detector (RTD) unit. CP-8B was performed satisfactorily. No further problems with erratic indications have occurred.

Licensee Event Report No. 02-01, providing a description of these events and the corrective actions taken, is being prepared and will be submitted within the technical specification thirty day time requirement.

## MAINTENANCE ACTIVITIES

1/7/02	Refueled – removed core 01-61, loaded core 02-01.
1/10/02	Completed Modification Record No. 01-09, "Installation of Emergency Lighting Panel No. 1."
1/13/02	Loaded new pool deionization bed "P."
1/14/02	Refueled – removed core 02-01, loaded core 02-02. Rebuilt primary heat exchanger 503A drain valve 515A. Completed DI-201 valve and flange gasket refurbishment.
1/16/02	Completed modification record No. 01-09 addendum 1 "Relocation and Replacement of Emergency Lighting Panel No. 2."
1/20/02	Refueled – removed core 02-02, loaded core 02-03. Replaced Reactor Inlet Temperature Instrument 980B meter relay unit.
1/21/02	Refueled – removed core 02-03, loaded core 02-04.
1/26/02	Refueled – removed core 02-04, loaded core 02-05. Replaced Reactor Inlet Temperature Instrument 980B transmitter and RTD unit.
1/28/02	Refueled – removed core 02-05, loaded core 02-06. Completed modification record No. 01-11 "Replace K Relay Sockets with an Improved Design."

## OPERATIONS SUMMARY

HOURS OPERATED THIS PERIOD	656	
TOTAL HOURS OPERATED	240,399	
HOURS AT FULL POWER THIS PERIOD	653	
TOTAL HOURS AT FULL POWER	237,167	
INTEGRATED POWER THIS PERIOD	272	MWD
TOTAL INTEGRATED POWER	93,016	MWD