



Research Reactor Center

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November 5, 2002

50-186

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 September, 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

IE24

*Prepared by:
Operations Staff*

SEPTEMBER 2002

*UNIVERSITY OF MISSOURI
RESEARCH REACTOR
OPERATIONS MONTHLY SUMMARY*

17
15

UNSCHEDULED SHUTDOWNS

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
9/18/02	1146	Scram	Airlock Door Failure

On September 18, a Manual Scram was initiated when the outer airlock door failed to open. Containment Integrity, as defined in Technical Specification 3.5.a, was not lost due to this failure. The Master Control Switch was placed to the OFF position securing the Reactor for airlock door repairs and limit switch adjustments. It was determined that pressure switch B on the outer door had failed. This switch was replaced and the door was cycled several times to verify proper operation. The reactor was subsequently returned to operation.

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
9/19/02	1147	Scram	Master Control Switch Not Fully In Detent

On September 19, a Scram occurred when the Master Control Switch was bumped by an Operator while raising power with the Power Schedule Switch. It was determined that during the previous start-up the Master Control Switch was not placed fully in the ON detent position. The Master Control Switch was checked for proper engagement in all detent positions and the reactor was subsequently returned to operation.

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
9/24/02	1148	Scram	PT-944 (Reactor Loop Low Pressure)

On September 24, a Reactor Scram was automatically initiated by PT-944 (Reactor Loop Low Pressure) when the pressure on the discharge side of the core dropped below the scram setpoint during a scheduled reduction in power. Power was being lowered to allow entry into the Mechanical Equipment Room 114 to reposition the bypass valve for S-1, the primary system temperature control valve, which had been mispositioned after corrective maintenance. With the bypass open, valve S-1 could not keep up with the temperature drop associated with the power reduction resulting in Reactor loop pressure dropping below the scram setpoint. Valve S-1 bypass was repositioned, positions of the valves involved in the corrective maintenance were verified, the primary system was restarted and the Reactor was subsequently returned to operation.

UNSCHEDULED SHUTDOWNS (CONT)

<u>Date</u>	<u>No.</u>	<u>Type</u>	<u>Cause</u>
9/24/02	1149	Scram	Airlock Door Failure

On September 24, the outer airlock door cycled open while the inner airlock door was open resulting in a loss of Containment Integrity as defined in Technical Specification 3.5.a (LER 02-04). The Master Control Switch was immediately placed in the OFF position placing the reactor in a secured condition. It was determined that pressure switch B setpoint had drifted after installation. A new pressure switch was bench tested and installed. The door was cycled several times to verify proper operation. The reactor was subsequently returned to operation. As a corrective action for repeated airlock door failures, all pressure switches associated with the airlock doors, both installed and spare, were checked. In the future, spare switches will be verified at proper setpoint prior to installation.

LICENSEE EVENT REPORTS

<u>Date</u>	<u>No.</u>
9/18/02	02-03

On September 18, a deviation from Technical Specification 3.8.c occurred when a fuel element was mispositioned resulting in a noncompliant core configuration. During a reactor startup following refueling it was observed that there was a difference between the Estimated Critical Position (ECP) and the 1/M predicted critical position with the rods two inches below the ECP. Examination of the Source Range Instrumentation revealed no cause for the discrepancy so the startup was terminated by a Manual Rod Run-In. Troubleshooting revealed no abnormalities with nuclear instrumentation or the rod control system. The pressure vessel head was removed and it was observed that fuel element F5 was not seated in the core. This fuel element was inspected and placed into its proper core position. A root cause analysis determined that the fuel handling tool had not been allowed to float off the element after unlatching. The element was lifted up out of the core position, was released, and became lodged on a point of narrowing of a guide groove in the OD of the inner pressure vessel wall. Subsequent mechanical and visual inspections then failed to detect the mispositioned element prior to reinstalling the pressure vessel head. Additionally, the relationship between the misplaced element and changes in several primary flow related parameters was not seen as indicative of a core discrepancy prior to the reactor startup. Detailed analysis of the events and corrective actions are included in Licensee Event Report 02-03.

<u>Date</u>	<u>No.</u>
9/24/02	02-04

On September 24, a deviation from Technical Specification 3.5.a occurred when a failure of the containment airlock door control circuit allowed the outer airlock door to cycle open while the inner airlock door was open resulting in a loss of Containment Integrity. The Master Control Switch was immediately placed in the OFF position placing the reactor in a secured condition. It was determined that pressure switch B setpoint had drifted after installation. A new pressure switch was bench tested and installed. The door was cycled several times to verify proper operation. The reactor was subsequently returned to operation. Detailed analysis of the events and corrective actions are included in Licensee Event Report 02-04.

OPERATION SUMMARY FOR MONTH OF

Sep-02

University of Missouri Research Reactor Center (MURR)

HOURS OPERATED THIS PERIOD

617.23

TOTAL HOURS OPERATED, REACTOR

245,410.71

HOURS OPERATED AT FULL POWER, THIS PERIOD

612.33

TOTAL HOURS AT FULL POWER, REACTOR

242,150.96

INTEGRATED POWER THIS PERIOD

255.69

MWD

TOTAL INTEGRATED POWER, REACTOR

95,094.22

MWD

Submitted by. Das K
MWD Custodian/Reactor Physicist

Date: 10/2/02