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INL INITIAL NOTIFICATION REPORT	
Entered By:	Ed Schuebert
Date Entered:	13 October 2009
Site:	ATR Complex
Responsible Organization:	ATR Programs Operations
Title:	Enterprise Diesel Generator M-43 Under Voltage Protection Results In Automatic Shutdown Of The Advanced Test Reactor
Discussion of Event/Condition:	**Summary:** At 1809 on 12 October 2009, an under voltage condition on the diesel generator powered electrical distribution bus caused an automatic scram (shutdown) of the Advanced Test Reactor (ATR). At 1800 an operator informed the shift supervisor that the instrument air pressure to the AMOT was indicating 20 psig vice the normal 40 psig. (AMOT is the brand name of the safety control device used to automatically shutdown the diesel engine in the event of a low lubricating oil pressure). A maintenance mechanic was requested by the shift supervisor to adjust the regulator back to 40 psig. As the mechanic started adjusting the pressure up to 40 psig the diesel engine was noted to begin shutting down (i.e., audible indication of lowering engine speed was noted). The mechanic adjusted pressure back to the original value and the engine speed recovered, but not before the bus voltage dropped to a value that caused an under voltage trip of the diesel powered pumps on the five pressurized water experiment loops. An under voltage condition on the loop pumps is an automatic scram signal. All loops operate with a combination of diesel and commercial power supplied pumps. The commercial powered pumps continued to provide loop flow. No reactor systems were affected. Operating Cycle experiments were not adversely affected. This regulator adjustment had been performed once earlier in the day after a determination that it met the requirements of "tool pouch maintenance" per Laboratory Wide Procedure-6200, "Maintenance Integrated Work Control Process" and after it was included on the Plan of the Day. The mechanics have a history of performing this adjustment under similar circumstances. **Action Taken:** Established procedures for a reactor scram were performed and the reactor was verified to be in safe shutdown condition. Management was informed, a critique was conducted and the cause of the engine speed to reduce during this regulator adjustment has yet to be determined. A work order is being issued to govern the troubleshooting necessary to determine the problem. Following determination and correction of the cause for the diesel engine shutdown, and when the xenon precluded reactor start-up time (approximately 41 hours) has lapsed, the reactor will be restarted to continue the current operating cycle.
Safety Significance:	Low. Diesel generators are not safety related and do not have a significant safety impact. All safety related systems responded as expected to the condition.
Reportability:	No reportability criteria were met.

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INL INITIAL NOTIFICATION REPORT	
Entered By:	Ed Schuebert
Date Entered:	15 October 2009
Site:	ATR Complex
Responsible Organization:	ATR Programs Operations
Title:	Manual Scram of the Advanced Test Reactor due to Relay Failure
Discussion of Event/Condition:	**Summary:** At 1220 on 14 October 2009, during performance of a reactor startup, one of eight pairs of Outer Shim Control Cylinders (OSCC) were observed to stop moving in the withdraw direction. The OSCCs remained responsive to insertion commands. OSCC movement failures can be caused by electrical problems in the control circuitry or mechanical problems with items such as the drive shaft or gears. Established Abnormal Operating Procedure (AOP)-1.2, "OSCC Movement Failure" was performed and indicated a problem with the electrical control circuitry. Visual inspection revealed the relay that actuates to initiate the affected OSCC movement in the withdraw direction had mechanically failed. The spring clip that holds the relay assembly together had failed and allowed the relay assembly to come apart. Management was consulted and concurred with the shift supervisor's recommendation to shutdown the reactor in order to effect repairs. The reactor was manually scrammed (shutdown) at 1247, 14 October 2009. No reactor other systems were affected. Operating Cycle experiments were not adversely affected. **Action Taken:** Established procedures for a reactor scram were performed and the reactor was verified to be in safe shutdown condition. A work order is being issued to repair the failed relay and to replace the spring clip in 15 other like relays in the OSCC circuitry. Following replacement of the 16 relay spring clips the reactor will be restarted to continue the current operating cycle.
Safety Significance:	Low. OSCCs are not safety related and do not have a significant safety impact. All safety related systems responded as expected to the condition.
Reportability:	No reportability criteria were met.