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INL INITIAL NOTIFICATION REPORT

Entered By:	E. J. Schuebert
Date Entered:	29 September 2009
Site:	ATR Complex
Responsible Organization:	ATR Operations
Title:	Loss of Diesel Bus power to affected Experiment loop Operating Pumps results in automatic shutdown of the Advanced Test Reactor
Discussion of Event/Condition:	**Summary:** At 0833 on 29 September breaker B-1 on Diesel Bus 670-E-9 tripped open on a ground fault indication and resulted in an automatic scram (shutdown) of the Advanced Test Reactor. The breaker trip resulted in a loss of power to the operating diesel powered pumps in three of five pressurized water experiment operating loops and actuation of the associated pump under voltage scram signals. The three affected experiment loops (1D-N, 2E-NW, and 1C-W) each had a combination of diesel and commercial powered pumps operating to provide flow. Commercial power was uninterrupted and forced flow was maintained in all affected loops. No reactor 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. Management was informed and the cause of the ground fault trip of breaker B-1 on Diesel Bus 670-E-9 is under investigation. Preliminary investigation revealed a grounded motor for the 1C-W diesel powered pump motor M-3. The associated diesel powered loop pump individual breakers located on Panel 670-E-21 between breaker B-1 and the operating loop pump motors (e.g., 1C-W pump M-3) do not have individual breaker ground fault protection. Once the cause is fully determined and corrected the reactor can be restarted to continue the current Operating Cycle.
Safety Significance:	Low. The reactor shutdown system and breakers with ground fault protection operated as designed.
Reportability:	Group 4 – Facility Status, Subgroup B – Operations, Sequence Number (2), Significance Category 2. Actuation of a Safety Class SSC, or its alarms, resulting from an actual unsafe condition. Breaker B-1 on 670-E-9 is a safety related (safety class) Structure, System, or Component (SSC) as listed in Safety Analysis Report 153, chapter 3A, since it forms boundary between safety-related and non-safety-related portions of system.