

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

June 28, 1983

WBRD-50-390/83-37  
WBRD-50-391/83-37

U.S. Nuclear Regulatory Commission  
Region II  
Attn: Mr. James P. O'Reilly, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30303

83 JUN 29 9:50  
USNRC REGION II  
ATLANTA, GEORGIA

Dear Mr. O'Reilly:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - CROSS-TRAINED DIESEL GENERATOR HEAT EXCHANGER INLET VALVES - WBRD-5C-390/83-37, WBRD-50-391/83-37 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on May 31, 1983 in accordance with 10 CFR 50.55(e) as NCR W-124-P. Enclosed is our final report.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY  
*L. M. Mills*  
L. M. Mills, Manager  
Nuclear Licensing

Enclosure

cc: Mr. Richard C. DeYoung, Director (Enclosure)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Records Center (Enclosure)  
Institute of Nuclear Power Operations  
1100 Circle 75 Parkway, Suite 1500  
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ENCLOSURE  
WATTS BAR NUCLEAR PLANT UNITS 1 AND 2  
CROSS-TRAINED DIESEL GENERATOR HEAT EXCHANGER INLET VALVES  
NCR W-124-P  
WBRD-50-390/83-37, WBRD-50-391/83-37  
10 CFR 50.55(e)  
FINAL REPORT

Description of Deficiency

The unit 1 and unit 2 diesel generator heat exchanger inlet isolation valves FCV-67-66 and FCV-67-67 are to open automatically upon a diesel generator start from relay SSIX in accordance with logic drawing 47W611-67-2 R3. FCV-67-65 and FCV-67-68 open instead. Thus on an A train diesel generator start, the B train heat exchanger valves will open instead of the A train valves.

Investigation into the cause has shown that in late 1978 engineering change notice (ECN) 1731 was written to delete the automatic diesel start signal from two of the four subject valves. On completion of ECN 1731 the electrical drawings were correct and compatible. In early 1980 ECN 2259 was written to realign each subject valve with its true header. To accomplish this the TVA valve numbers were switched on the valve schematic (45W750-67-04). The valve schematic shows the auto start and non-auto start configuration on the same presentation. The auto start feature is encircled with a dotted line and flagged to define the applicable valve. That identification was inadvertently switched which caused the auto start feature to be applied to the incorrect valve. This error was not discovered during checking process due to inadequate knowledge of engineering procedures governing the review and checking of design drawings on the part of the checker.

Safety Implications

With a "B" train diesel generator inoperable for whatever cause, upon loss of all offsite power, the "A" diesel generator would start and the diesel generator would tie on the shutdown board without automatic initiated flow through its heat exchanger. The shutdown board could be deenergized if the situation were not corrected by operator action. Thus, the loss of a single component could result in the loss of total system function and, therefore, the safety of plant operations would be jeopardized.

Corrective Action

All logic, schematic and connection drawings have been reviewed and checked against the mechanical flow diagrams for compatibility. ECNs 3968 (unit 1) and 3969 (unit 2) have been written to revise applicable drawings to apply the diesel start signal to the correct valve. Field change request (FCR) FS-151 has been initiated to allow immediate correction by the field. All corrections will be completed by September 16, 1983.