NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20603.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)

INCOMPLETE SURVEILLANCE INSTRUCTION

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
04	28	97	97	011	04	10		97	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)	100		20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
R. A. Stockton, Licensing Engineer	(423)-365-1818

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
B	BE	HS	W120	N						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

The purpose of this LER is to report findings in accordance with 10 CFR 50.73 associated with Generic Letter (GL) 96-01, "Testing of Safety Related Logic Circuits" reviews. GL 96-01 requires each licensee to compare electrical schematic drawings and logic diagrams for the Reactor Protection System, Emergency Diesel Generator load shedding and sequencing, and actuation logic for the Engineered Safety Feature Actuation System (ESFAS) against plant surveillance test procedures to ensure that all portions of the logic circuitry including the parallel logic, interlocks, bypasses and inhibit circuits are adequately covered in the surveillance procedures to fulfill the Watts Bar Technical Specification requirements. The first surveillance deficiencies identified involved unverified parallel circuit paths and were discovered on April 28, 1997. Some additional findings have been discovered since April 28 and have been included in the report. The cause of the surveillance instruction deficiencies have been attributed to inadequate technical reviews. Corrective actions consist of completing the reviews, addressing verification of any unverified logic circuits, informing technical reviewers of the requirements of GL 96-01, and correcting any hardware deficiencies found.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

I. PLANT CONDITIONS:

Watts Bar Nuclear Plant Unit 1 has been operating in various Mode conditions during the course of GL 96-01 review.

II. DESCRIPTION OF EVENT

A. Event

The purpose of this LER is to report findings in accordance with 10 CFR 50.73 associated with Generic Letter (GL) 96-01, "Testing of Safety Related Logic Circuits" reviews. GL 96-01 requires each licensee to compare electrical schematic drawings and logic diagrams for the Reactor Protection System (Energy Industry Identification System (EIIS) code JC/JG), Emergency Diesel Generator (EIIS code EK) load shedding and sequencing, and actuation logic for the Engineered Safety Feature Actuation System (ESFAS) (EIIS code JE) against plant surveillance test procedures to ensure that all portions of the logic circuitry including the parallel logic, interlocks, bypasses and inhibit circuits are adequately covered in the surveillance procedures to fulfill the Technical Specification (TS) requirements. It was established to address industry problems with testing of safety related logic circuits. TVA's letter to NRC dated April 18, 1996, indicated that WBN GL 96-01 reviews would be completed by startup after the first refueling outage currently scheduled to begin in September 1997. As a result of ongoing reviews, the first reportable GL 96-01 findings were identified on April 28, 1997. The findings have been listed in Section II.C by the date of discovery.

B. Inoperable Structures, Components, or Systems that Contributed to the Event

None

C. Dates of Discovery and Reportable Findings

Each finding is listed in a table by the date of discovery.

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II. DESCRIPTION OF EVENT (continued)

C. Dates of Discovery and Reportable Finding

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
1	4/28/97	1-SI-99-5	The surveillance instruction did not verify that the manual handswitches for Phase A Containment Isolation (EIIS code JM), Containment Vent Isolation (EIIS code JM), and Containment Spray (EIIS code BE) functioned properly. The trip actuating device operational test (TADOT) to satisfy SR 3.3.2.8 and SR 3.3.6.6 was incomplete. Specifically, the procedure did not include: (1) Verification that 1-HS-30-63A successfully initiates Containment Isolation Phase A and Containment Vent Isolation to Train A and Train B of the Solid State Protection System (SSPS) (EIIS code JC/JG). (2) Verification that 1-HS-30-63B successfully initiates Containment Isolation Phase A and Containment Vent Isolation to Train A and Train B of SSPS. (For items 1 and 2 above, simultaneous action of handswitches as performed in the surveillance instruction did not verify operability of each switch because Containment Isolation Phase A and Containment Vent Isolation manual signals occur through parallel logic circuit paths.) (3) Verification that 1-HS-30-64A in combination with 1-HS-30-64B successfully initiates a Containment Spray signal to Train A and Train B of SSPS. (4) Verification that 1-HS-30-68A in combination with 1-HS-30-68B successfully initiates a Containment Spray signal to Train A and Train B of SSPS. (For items 3 and 4 above, Containment Spray initiation as performed in the surveillance instruction did not verify operability of each switch because Containment Spray and Containment Isolation Phase B signals occur through parallel circuit paths. (continued)

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II. DESCRIPTION OF EVENT (continued)

Item 1 (continued)

Applicable LCOs

LCO 3.3.2 The ESFAS instrumentation for each function in Technical Specification (TS) Table 3.3.2-1, "Engineered Safety Feature Actuation Instrumentation," shall be operable.

LCO 3.3.6 The containment vent isolation instrumentation for each function in TS Table 3.3.6-1, "Containment Vent Isolation Instrumentation," shall be operable.

A continuity problem was encountered during the testing of 1-HS-30-68A (EIIS code HS). Entry into LCO 3.0.3 was required briefly because the manual handswitch circuits were not restored to service within 24 hours after discovery (SR 3.0.3) of the missed surveillance. A 20 minute delay beyond the 24 hours was encountered during restoration of the switch operability. Handswitch 1-HS-30-68A was replaced. All four listed handswitch functions were verified and returned to operable status.

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
2	5/1/97	1-SI-92-41 1-SI-92-42 1-SI-92-43 1-SI-92-44 1-SI-92-141 1-SI-92-142 1-SI-92-143 1-SI-92-144	There was no verification in surveillance instructions that indicated the Power Range Protection (P-10) interlock (EIIS code IEL) was in the required state for existing unit conditions. Thus, the channel operability test (COT) to satisfy SR 3.3.1.7 was incomplete.

Applicable LCO

LCO 3.3.1 RTS instrumentation for each function in TS Table 3.3.1-1, "Reactor Trip System Instrumentation," shall be operable.

Plant Engineering Data System (PEDS) (EIIS code ID) archive data indicated that the P-10 interlock (EIIS code IEL) was in the required state for existing unit conditions at the time of the channel operational test (COT) for SR 3.3.1.7.

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II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
3	5/1/97	1-SI-92-131 1-SI-92-132	There was no verification in surveillance instructions to indicate the Intermediate Range Neutron Flux (P-6) interlock (EIIS code IEL) was in the required state for existing unit conditions during performance of the COT. Thus, the COT to satisfy SR 3.3.1.8 was incomplete.

Applicable LCO (Applicable to items 3, 4, and 5 respectively)
LCO 3.3.1 RTS (EIIS code JC/JG) instrumentation for each function in TS Table 3.3.1-1, "Reactor Trip System Instrumentation," shall be operable.

PEDS (EIIS code ID) computer point archive data indicated the P-6 interlock (EIIS code IEL) was in the required state for existing unit conditions at the time of the previous COT for SR 3.3.1.8.

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
4	5/1/97	1-SI-92-31 1-SI-92-32 1-SI-92-131 1-SI-92-132	There was insufficient testing in surveillance instructions to completely demonstrate Intermediate Range Neutron Flux, and Source Range Neutron Flux in the COT and channel calibration respectively to satisfy SR 3.3.1.8 and 3.3.1.11. Surveillance instructions did not completely verify Source Range Channel I high flux reactor trip, Source Range Channel II high flux reactor trip, Intermediate Range Channel I high flux reactor trip, Intermediate Range Channel II high flux reactor trip, Intermediate Range Channel I P-6 interlock, and Intermediate Range Channel II P-6 interlock. Thus, it was not conclusively demonstrated that Train B of the SSPS input relays (EIIS code RLY) for Intermediate Range Neutron Flux, and Source Range Neutron Flux were verified as required by SR 3.3.1.8 and 3.3.1.11.

PEDS (EIIS code ID) computer point archive data from the previous COT performance indicated the correct state change for Source Range, Intermediate Range, and P-6 outputs. Emergency Response Facility Data System (ERFDS) (EIIS code ID) data from April 24, 1997, during the performance of 1-SI-92-131 demonstrated that the SSPS Train B input relay operated.

II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
5	5/1/97	1-SI-47-28 1-SI-47-30 1-SI-47-32 1-SI-47-34 1-SI-47-73 1-SI-47-74 1-SI-47-75	There was insufficient testing in the Channel Calibration / Trip Actuating Device Operational Test surveillance instructions for Turbine Trip Low Fluid Oil Pressure (EIIS code IT/TA), and Turbine Trip Turbine Stop Valve Closure (EIIS code IT/TA) to completely demonstrate verification to satisfy SR 3.3.1.10 and 3.3.1.14. The test methodology used in these instructions did not conclusively demonstrate verification of the subject inputs to Train B SSPS.
			Archived computer data from PEDS (EIIS code ID) indicates that during the last performance of the subject instructions the plant process computer received the proper signals, thus indicating that Train B SSPS received the proper signals.

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
6	5-9-97	1-SI-99-300-A 1-SI-99-300-B	The Volume Control Tank (VCT) (EIIS code CB/TK) to Refueling Water Storage Tank (RWST) (EIIS code CA/TK) swapover of the Centrifugal Charging Pump (CCP) (EIIS code CB/P) suction was not conclusively determined to occur via the safety related interlock. There was insufficient testing in surveillance instructions to verify that 1-LCV-62-135-A (EIIS code LCV) provided the close interlock signal to 1-LCV-62-132-A. There was insufficient testing in surveillance instructions to verify that 1-LCV-62-136-B provided the close interlock signal to 1-LCV-62-133-B. Thus, it was not conclusively demonstrated that the VCT to RWST swapover of the CCP suction was completely tested to satisfy SR 3.3.2.7.

(continued)

II. DESCRIPTION OF EVENT (continued)

Item 6 (continued)

Applicable LCO
LCO 3.3.2 - ESFAS (EIIS code JE) for each function in TS Table 3.3.2-1 shall be operable.

1-SI-99-603-A response time test of slave relay K603A was reviewed and it was determined that 1-LCV-62-135-A provided the closed interlock for 1-LCV-62-132-A. PEDS data for the March 6, 1997 inadvertent safety injection was reviewed and it was determined that 1-LCV-62-136-B initiated the closing of 1-LCV-62-133-B. Since acceptable documentation/data has been extracted from 1-SI-99-603-A and also from the March 6, 1997 inadvertent Train B safety injection, the VCT to RWST swapover is considered to be satisfactorily tested.

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
7	6/26/97	1-SI-211-3-A 1-SI-211-3-B 2-SI-211-3-A 2-SI-211-3-B	Test insufficiencies have been identified with degraded voltage and loss of voltage relay (EIIS code RLY-27) logic verification in situations where the 6.9 KV shutdown board (EIIS code EB) is fed from its alternate feeder breaker (EIIS code BKR). The length of time that the alternate feeder breaker could have been used in the plant is indeterminate. Therefore, LCO 3.8.9, Action A.1 (to restore the AC electrical power distribution subsystem to operable status within 8 hours when one or more AC electrical power distribution subsystems is inoperable) has potentially been exceeded.

Applicable LCO
LCO 3.8.9 - Train A and Train B AC, four channels of vital DC, and four channels of AC vital bus electrical power distribution subsystems shall be operable.

When a 6.9 KV shutdown board is fed from its normal feeder breaker, the loss of voltage and degraded voltage functions have been satisfactorily tested by 1-SI-211-3-A, -B, 2-SI-211-3-A, -B, and 0-SI-82-3, 0-SI-82-4, 0-SI-82-5, and 0-SI-82-6.

A night order/caution order has been issued to enter LCO 3.8.9, Condition A, if a 6.9 KV shutdown board is fed from its alternate feeder breaker. The testing was subsequently completed during the refueling outage.

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II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
8	7/22/97 (9/19/97 for the PASF Supply Fan C1 condition)	0-SI-30-7-A 0-SI-30-7-B 1-SI-99-300-A 1-SI-99-300-B 1-SI-99-306-A 1-SI-99-306-B	Test insufficiencies identified in the listed surveillance instructions prevented the verification of shunt trip circuit breaker trips for Auxiliary Building General Exhaust Fans 1A, 1B, 2A, 2B, Fuel Handling Exhaust Fans A and B, and Post Accident Sampling Facility (PASF) Supply Fan C1. In addition, these deficiencies also prevented verification of the starting of Penetration Room Elevation 737 Cooler Fan 2B-B in the test sequence. Due to these test deficiencies, Technical Specification Surveillance Requirement 3.3.2.5 was not completely satisfied.

Applicable LCO

LCO 3.3.2 - The ESFAS instrumentation for each Function in Technical Specification Table 3.3.2-1 shall be operable.

Upon discovery of this condition, Operations personnel entered TS SR 3.0.3 for a missed surveillance and the above described circuit verifications were subsequently satisfactorily performed.

II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
9	8/14/97	0-SI-82-3 0-SI-82-4 0-SI-82-5	A review determined that: 1) for the 480V Shutdown boards 1A1-A, 1A2-A, 1B1-B, and 1B2-B the current limiting reactor bypass breaker 52T has not been tested to close when a loss of offsite power load shed occurs, and 2) the following loads had not been load shed tested: 480V C&A Vent Board 1A1-A, compartment 13C (1-MTR-65-77) 480V C&A Vent Board 1B1-B, compartment 13C (1-MTR-65-74) 480V Reactor MOV Board 1A1-A, compartment 17E (power outlets) 480V Reactor MOV Board 1A1-A, compartment 18F2 (power outlets) 480V Reactor MOV Board 2A1-A, compartment 16F1 (0-CHGR-252-1) 480V Reactor MOV Board 2A1-A, compartment 18F1 (0-CHGR-253-A) 480V Reactor MOV Board 1B1-B, compartment 16E (power outlets) 480V Reactor MOV Board 1B1-B, compartment 17E (power outlets) 480V Shutdown Board 1A1-A, compartment 17A (Spent Fuel Pit Pump C-S) 480V Shutdown Board 1A1-A, compartment 10D (Alternate Feeder to C&A Vent Board 1A2-A) 480V Shutdown Board 1A2-A, compartment 10D (Alternate Feeder to Reactor Vent Board 1A-A) 480V Shutdown Board 2A2-A, compartment 10A (Alternate Feeder to Reactor Vent Board 2A-A) 480V Shutdown Board 2A1-A, compartment 10D (Alternate Feeder to C&A Vent Board 2A2-A) 480V Shutdown Board 1B2-B, compartment 9A (Alternate Feeder to C&A Vent Board 1B2-B) 480V Shutdown Board 1B1-B, compartment 10D (Alternate Feeder to Reactor Vent Board 1B-B) 480V Shutdown Board 2B2-B, compartment 9A (Alternate Feeder to Reactor Vent Board 2B-B) 480V Shutdown Board 2B1-B, compartment 9A (Alternate Feeder to C&A Vent Board 2B2-B)

Applicable LCO

LCO 3.8.1 - The following AC electrical sources shall be operable:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and

b. Four diesel generators (DGs) capable of supplying the onsite Class 1E AC Electrical Power Distribution System.

Upon discovery of this condition, Operations personnel entered TS SR 3.0.3 for missed surveillances (3.8.1.11 and 3.8.1.19) and the above described circuit verifications were subsequently satisfactorily performed within the 24 hour time limit or the appropriate LCOs were entered if the alternate board feeders were needed.

II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
10	8/28/97	0-SI-82-3 0-SI-82-4 0-SI-82-5 0-SI-82-6	A review determined that the start lock out feature for black out relays BOX and BOY has not been demonstrated for the following pieces of equipment: Pressurizer Heater Backup Groups 1A-A, 1B-B, and 1C, Pressurizer Heater Control Group 1D, Control & Service Air Compressors A and B, Auxiliary Building General Supply Fans 1A, 2A, 1B, and 2B, Auxiliary Building General Exhaust Fans 1A, 2A, 1B, and 2B, Fuel Handling Exhaust Fans A and B.

Applicable LCO

LCO 3.8.1 - The following AC electrical sources shall be operable:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and

b. Four diesel generators (DGs) capable of supplying the onsite Class 1E AC Electrical Power Distribution System.

Upon discovery of this condition, Operations personnel entered TS SR 3.0.3 for missed surveillances (3.8.1.11 and 3.8.1.19) and the above described circuit verifications were subsequently satisfactorily performed within the 24 hour time limit.

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II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
11	9/23/97	1-SI-99-300-A 1-SI-99-300-B 0-SI-82-3 0-SI-82-4 1-TRI-0-3 1-TRI-0-4	A review determined that the 480 VAC loads listed below have not been verified to shed when a safety injection occurs. This load shed by safety injection is actuated by slave relays K609A and K609A via the Thermal Overload (TOL) By pass relays K1 and K9. Slave Relay K609A via TOL bypass relays K1 and K9 on 480V Reactor MOV Board 1A1-A 480V Reactor MOV Board 1A1-A compartment 16B2, 1-MTR-31-303B 480V Reactor MOV Board 1A1-A compartment 17R, Power Outlets 480V Reactor MOV Board 1A1-A compartment 18F2, Power Outlets Slave Relay K609B via TOL Bypass relays K1 and K9 on 480 V Reactor MOV Board 1B1-B 480 V Reactor MOV Board 1B1-B compartment 17F2 1-MTR-31-324B 480 V Reactor MOV Board 1B1-B compartment 16E, Power Outlets 480 V Reactor MOV Board 1B1-B compartment 17E, Power Outlets

Applicable LCO

LCO 3.3.2 - The ESFAS Instrumentation for each function in Table 3.3.2-1 shall be Operable:

Upon discovery of this condition, Operations personnel took action to track completion of the required testing prior to entering Mode 4 from the refueling outage. The testing was subsequently completed.

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II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
12	9/24/97	0-SI-82-3 0-SI-82-4	ESF Pumps are started from accident signals by slave relays in the Solid State Protection System. When the ESF pump starts an ESF pump circuit breaker 52STA contact closes in the ESF pump room cooler start circuit to start the cooler. A review identified that the surveillance instructions that perform slave relay testing verify the ESF Pumps start but do not verify the ESF pump room coolers start.

Applicable LCO
LCO 3.3.2 - The ESFAS Instrumentation for each function in Table 3.3.2-1 shall be Operable:

Upon discovery of this condition, Operations personnel took action to track completion of the required testing prior to entering Mode 4 from the refueling outage. The testing was subsequently completed.

II. DESCRIPTION OF EVENT (continued)

Item	Date of Discovery	Incomplete Procedures	Test Deficiency
13	9/26/97	1-SI-99-307-A 1-SI-99-307-B	A review identified that the listed surveillance instructions have not verified slave relay K647 contact operation. To swap the ECCS pumps to the containment sump, valves 1-FCV-73-72-A and 1-FCV-63-73-B must be opened. To open these valves two slave relays K647 and K648 must be actuated. Review of the surveillance indicated that contact operation was verified for the K648 relay but no verification was performed for the K647 relay.

Applicable LCO
LCO 3.3.2 - The ESFAS Instrumentation for each function in Table 3.3.2-1 shall be Operable:

Upon discovery of this condition, Operations personnel took action tc track completion of the required testing prior to entering Mode 4 from the refueling outage. The recently performed 18 month surveillance instructions as part of the refueling outage verified proper contact operation.

D. Other Systems or Secondary Functions Affected

No other systems or secondary functions were affected.

E. Method of Discovery

GL 96-01 reviews.

F. Operator Actions

Entry into applicable TS actions upon notification as applicable.

G. Automatic and manual safety system responses

No automatic or manual safety system responses have been associated with the subject LER.

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III. CAUSE OF EVENT

The cause of this event has been attributed to inadequate technical reviews similar in nature to the GL 96-01 issues.

IV. ANALYSIS OF EVENT - ASSESSMENT OF SAFETY CONSEQUENCES

There was no safety significance for the circuits identified in the subject LER that were successfully tested or verified and documented as being operable by alternate means.

1-HS-30-68A (EIIS code HS)
There was no decrease in nuclear safety associated with the inoperability of handswitch 1-HS-30-68A. The continuity problem encountered during testing indicated that the circuit involving 1-HS-30-68A in combination with 1-HS-30-68B required to successfully initiate a Containment Spray signal to Train A and Train B of SSPS was not functional. However, manual initiation is not credited in any accident events analyzed in the Safety Analysis Report (SAR). Therefore, the consequence of failure of 1-HS-30-68A does not represent a decrease in nuclear safety.

Redundant manual initiation switches are also provided in the control room (1-HS-30-64A and (1-HS-30-64B). In addition, capability for manual initiation of containment spray is provided at the system level via control room operation of the containment spray header isolation valves and containment spray pumps.

Item 7

This issue is of limited safety significance because the design and construction of the alternate feeder breaker circuits are identical to the normal feeder breaker circuits. Thus, there is no reason to suspect that they would not function properly. Also, LCO 3.8.1, Condition A, places limitations on the amount of time that one offsite circuit can be inoperable, thereby reducing the time of operation on the alternate fed.

The surveillance test insufficiencies in Item 7 were tested during of the first refueling outage. No circuit problems were identified.

Item 8

Since the previously unverified circuit portions were subsequently tested and functioned correctly with no deficiencies identified, there is no safety significance associated with this condition.

Items 9 and 10

Since the previously unverified circuit portions were subsequently tested and functioned correctly with no deficiencies identified (excluding the alternate feeders), there is no safety significance associated with this condition.

Items 11, 12, and 13

Since the previously unverified circuit portions were subsequently tested and functioned correctly with no deficiencies identified, there is no safety significance associated with this condition.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

Item 1:

A test procedure was written and the logic circuits listed under item 1 were tested. Handswitch 1-HS-30-68A contacts were found unacceptable. Work Order 97007350-01 replaced the handswitch.

Items 8, 9, and 10

Upon discovery of this condition, Operations personnel entered TS SR 3.0.3 for missed surveillances (3.8.1.11 and 3.8.1.19) and the above described circuit verifications were subsequently satisfactorily performed within the 24 hour time limit or the appropriate LCOs were entered if the alternate board feeders were needed.

Items 11, 12, and 13

Upon discovery of this condition, Operations personnel took action to track completion of the required testing prior to entering Mode 4 from the refueling outage. The testing was subsequently completed.

B. Corrective Actions to Prevent Recurrence

In accordance with the schedule provided in TVA's letter to NRC dated April 18, 1996, technical reviews have been performed to compare electrical schematic drawings and logic diagrams for the Reactor Protections System (EIIS code JC/JG), Emergency Diesel Generator (EIIS code EK) load shedding and sequencing, and actuation logic for Engineered Safety Feature Actuation Systems (EIIS code JE) against plant surveillance test procedures to ensure that all portions of the logic circuitry including the parallel logic, interlocks, bypasses, and inhibit circuits are adequately covered in the surveillance procedures to fulfill the TS requirements. The review included relay contacts, control switches, and other relevant electrical components within these systems, utilized in the logic circuits performing a safety function. Upon discovery of questionable items, the conditions have been determined to be valid or invalid.

B Corrective Actions to Prevent Recurrence (continued)

Historical data including PEDS (EIIS code ID), ERFDS (EIIS code ID), and startup test data have been reviewed to determine if questionable logic circuits can be verified by alternate means. Records have been generated to document acceptance of alternate data in lieu of test verification documentation.

In the absence of acceptable verification documentation, the unverified circuit logic paths have been verified via testing for Items 1 through 6.

Item 7

The surveillance test insufficiencies in Item 7 were tested during of the first refueling outage. No circuit problems were identified.

The appropriate Technical Reviewers were informed of the requirements of GL 96-01 prior to restart of the first refueling outage.

Item 8:

Appropriate procedure changes will be made to correct the identified deficiencies.

The appropriate Technical Reviewers were informed of the review requirements as part of the recurrence control actions for Item 7.

Items 9, 10, 11, 12 and 13

Appropriate procedure changes will be made to correct the identified deficiencies.

General Corrective Actions

WBN has completed the GL 96-01 review discovery process. Testing required to establish compliance with the affected Technical Specification requirements will be completed prior to the end of the current Unit 1 cycle 1 refueling outage. Surveillance Instructions which have not been revised prior to the end of the current refueling outage will be placed on administrative hold and updated prior to their next performance.

VI. ADDITIONAL INFORMATION

A. Failed Components

1. Safety Train Inoperability

Item 1:

An inoperable condition existed for handswitch 1-HS-30-68A in combination with 1-HS-30-68B to successfully initiate a Containment Spray signal to Train A and Train B of SSPS. Manual initiation of these two switches to initiate a Containment Spray signal is not credited in any accident event analyzed in the Safety Analysis Report (SAR).

2. Component/System Failure Information

a. Method of Discovery of Each Component or System Failure:

Item 1:
Work Order 97007350-01 found dirty and intermittent contacts on 1-HS-30-68A (EIIS code HS).

b. Failure Mode, Mechanism, and Effect of Each Failed Component:

Item 1:
Switch contacts were intermittent.

c. Root Cause of Failure:

Item 1:
Dirt was observed on the switch contacts.

d. For Failed Components With Multiple Functions, List of Systems or Secondary Functions Affected:

There were no component failures of this nature.

e. Manufacturer and Model Number of Each Failed Component:

Item 1:
Westinghouse type W-2

B. Previous Similar Event

The subject LER is bounded by the findings of GL 96-01 reviews. GL 96-01 findings will be supplemented by the subject LER until the reviews are complete.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

VII. COMMITMENTS

The actions committed to be implemented in response to this event are tabulated in Section V, Corrective Actions.