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

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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 20503.

LICENSEE EVENT REPORT (LER)

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

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TITLE (4)

Components Not Included In The In-Service Test Program As A Result Of Programmatic Deficiencies

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	28	96	96	021	01	12	13	96	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
		20.2201(b)	20.2203(a)(2)(v)	[X] 50.73(a)(2)(i)	50.73(a)(2)(viii)
POWER LEVEL (10)	000	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)
J.M. Peschel, MP3 Nuclear Licensing Manager	(860)437-5840

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

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION	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)

On June 28, 1996 with the unit in mode 5 of an extended cold shutdown, a review of the Inservice Test Program was completed. This review identified multiple Inservice Test (IST) Program deficiencies which consist of incomplete implementation of several licensing commitments, the omission of several valves from the program, testing inadequacies for valves already in the program, inconsistent or missing documentation in the Inservice Test Manual and IST surveillance procedures, and lack of adequate process control procedures which would ensure effective maintenance of the program. Based on the results of this program review it was determined that the IST requirements have not been performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code as required by 10CFR50, section 50.55a(f) and the unit Technical Specifications. Because this condition was discovered when the unit was in an extended cold shutdown, no immediate operator action was required.

The causes of this condition were a lack of management commitment to support these programs, inadequate program monitoring, and a failure to evaluate the program effectiveness. Correction of individual discrepancies and programmatic enhancements to prevent recurrence are being incorporated into the IST manual and applicable surveillance procedures.

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

I. Description of Event

On June 28, 1996 with the unit in mode 5 of an extended cold shutdown, a review of the Inservice Test (IST) Program was completed. This review identified multiple Inservice Test Program deficiencies which consist of incomplete implementation of several licensing commitments, the omission of several valves and specific testing for valves already in the program, inconsistent or missing documentation in the Inservice Test Manual and IST surveillance procedures, and lack of adequate process control procedures which would ensure effective maintenance of the program. The initial identification of these deficiencies was made during the 50.54f review effort of the Inservice Test Program in June 1996.

In accordance with the Northeast Utilities Configuration Management Plan, the Inservice Test Program was reviewed to support unit startup. The focus of the review was concentrated on 1) identification of Inservice Test Program licensing commitments, 2) a review of implementing procedures for each component in the program, including those components and additional testing identified in the IST Bases Document, 3) a sample audit review of component test methods of selected systems and 4) a review of Inservice Test Program process controls.

The Inservice Test Program review was conducted over a several week period in June 1996. The deficiencies identified consist of several issues in which corrective actions are considered necessary prior to unit startup. The other issues have been identified as long term which are primarily enhancements to the program which will be prioritized accordingly. The following items were identified as deficiencies in the IST Program:

A. Use of Root Mean Square (RMS) Vibration Values and Comparison to a Single Point

This item is being reported since the original IST Program Safety Evaluation Report (SER) states that "ANSI/ASME OM-6, draft 10, provides a set of allowable ranges for pump vibration velocity measurements that has been found to be acceptable by the NRC". The (SER) granted relief from pump vibration amplitude measurement and allowable range requirements of Section XI of the Code of the American Society of Mechanical Engineers (ASME), provided that pump vibration velocity measurements were performed in accordance with draft 10 of ANSI/ASME OM-6 which specifies acceptance criteria in peak values. The relief request and SER referenced the pump vibration acceptance criteria as root mean square (RMS) and as a result the Inservice Test program specified acceptance criteria in RMS rather than in peak values.

The ANSI/ASME OM-6 code also requires that velocity measurements must be compared at multiple points and must not exceed absolute values. Although multiple points were taken, only one vibration point was compared to the reference value and the maximum absolute value.

B. Components Not Included in the IST Program

1. Component Cooling Water system (CCP) valves CCP*AOV31C/D, CCP*AOV178A-D and CCP*V27,V38,V63,V74.

2. Charging system valves CHS*AV8146, CHS*AV8147, CHS*V396, CHS*V397, CHS*V436, CHS*V437, CHS*V469, CHS*V470, CHS*V503, CHS*V504, CHS*FCV111A/B and Reactor Coolant System check valves RCS*V31, RCS*V32, RCS*V147, RCS*V148.

3. Charging system valve CHS*V42.

4. Charging System valve CHS*HCV182, Component Cooling Water system valves CCP*TV32A/B/C, CCP*LV61, CCP*LV91 and Control Building Chilled Water System valves HVK*PDV32A/B, HVK*TV39A/B, HVK*TV41A/B,

HVK*TV68A/B, HVK*TV69A/B, HVK*TV70A/B, HVK*TV71A/B, HVK*TV72A/B, HVK*TV73A/B, HVK*TV74A/B, HVK*TV75A/B, HVK*TV76A/B, HVK*TV77A/B.

5. Emergency Diesel Generator system excess flow check valves EGA*EFV35A1/A2/B1/B2.

6. Service Water system motor operated butterfly valves SWP*MOV57A-D.

7. Hydrogen Recombiner system valves HCS*V4,V5,V11,V12, Control Building Chilled Water system valves HVK*V1,V39,V37,V75 and Service Water system valves SWP*V104, and SWP*V109.

8. Service Water system check valves SWP*V836,V837.

C. ADDITIONAL TESTING NOT INCLUDED IN IST PROGRAM

The following is a list of valves and their additional tests that were not included within the IST program.

1. High Pressure Safety Injection check valves SIH*V81,V83 have an exercise to close safety function to prevent diversion of water through an idle SIH pump.

2. Service Water system valves SWP*MOV54A-D have a safety function to close to prevent release of radioactivity from the containment recirculation coolers.

3. Charging system motor operated valves CHS*LCV112D/E have a safety function to close on recirculation to prevent sump recirculation water from being diverted to the Refueling Water Storage Tank (RWST).

4. Charging system check valves CHS*V394,V434,V467,V501 have a safety function to open to provide a flow path for safety grade cold shutdown.

5. Charging system check valve CHS*V58 has a safety function to open to provide flow during safety grade cold shutdown.

6. Charging system check valve CHS*V261 has a safety function to close to prevent sump recirculation water from being diverted to the RWST.

7. Safety Injection system check valve SIH*V11 has a safety function to close to prevent sump recirculation water from being diverted to the RWST.

8. Reactor Coolant System valves RCS*HCV442A/B, RCS*SV8095A/B, RCS*SV8096A/ have a safety function to close to isolate the reactor from the Primary Relief Tank (PRT).

9. Reactor coolant system motor operated valves RCS*MV8000A/B have a safety function to isolate the Pressurizer in the event a Power Operated Relief Valves (PORV) is leaking.

10. Containment Recirculation motor operated valves RSS*MV38A/B have a safety function to close when the applicable RSS pump reaches a discharge flow rate of 2000 gallons per minute (gpm).

11. Safety Injection motor operated valves SIH*MV8801A/B have a safety function to close to provide containment isolation.

12. Safety Injection motor operated valves SIH*MV8802A/B have a safety function to close to provide containment isolation in the event the safety injection pump was not operating.

13. Spent fuel pool cooling system valves SFC*V3,V6 have a safety function to close to prevent diversion of flow through an idle pump.

14. Main steam motor operated valves MSS*MV74A-D have a safety function to close to control decay heat removal during safety grade cold shut down.

15. Emergency Diesel Generator Starting Air system valves EGA*V4,V11,V30,V37 have a safety function to remain leak tight to assure sufficient starting air.

16. Emergency Diesel Generator Fuel Oil Transfer system valves EGF*V1,V3,V7,V9 have a safety function to close to prevent reverse flow through an idle pump.

17. Control Building Ventilation system valves HVC*AOV25 and AOV26 have a safety function to open manually one hour after an accident to allow natural ventilation of the control room.

Since the unit was in a cold shutdown at the time of completion of the review, there were no operator actions required as a result of this condition.

II. Cause of Event

The cause of this condition was initially identified as a programmatic deficiency due to lack of adequate resources to assess the quality of the existing program, evaluate the interpretations employed during development of the program, implement more effective process controls, and complete required changes to implementing procedures. Due to the significant number of discrepancies, a root cause evaluation was performed to identify the underlying deficiencies that led to this event. This evaluation determined that there were two primary causes for this event:

1. A lack of management commitment to support the IST program.

2. Inadequate program monitoring and a failure to evaluate the program effectiveness.

Contributing causes that led to the failure of the IST program are:

1. Insufficient detail contained with the procedures utilized;

2. Inadequate supervisory oversight;

3. Inadequate documentation of component level credited safety functions.

III. Analysis of Event

This condition is being reported pursuant to the requirements of 10CFR50.73(a)(2)(i) which identifies any operation or condition prohibited by the plant's Technical Specifications. Technical Specification 4.0.5 requires that Inservice

testing of ASME Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10CFR50, Section 50.55; (f).

Implementation of the 50.54(f) Inservice Test Program review, and development of the Inservice Test Bases Document have provided an assessment of the overall condition of the IST program. Multiple deficiencies were identified with some involving the addition of new components to the program and some involving additional testing of components already included in the IST Program. The number of deficiencies is significant in that the failure to adequately test components has the potential to allow reliance on components that may not be capable of performing their intended safety function. An description of each of the identified deficiencies follows:

A. Use of RMS Vibration Values and Comparison to a Single Point

Millstone Unit 3 is currently upgrading the program to the requirements of ASME Section XI 1989 Edition. A review of previous pump vibration analysis results showed that acceptance criteria were not exceeded when the data was converted from RMS values to peak values.

B. Components Not Included in the IST Program

1. CCP*AOV31C/D are radiation sample isolation valves located off the CCP pump's discharge header. These valves provide the boundary between the safety related and the non safety related portions of the system and belong in the program to verify an isolation function. The valves will fail closed on a loss of control air. Depending upon which CCP train is in service, one of these valves is normally open and the other valve is normally closed.

   CCP*AOV178A-D and CCP*V27,V38,V63,V74 are required to isolate a Reactor Coolant Pump (RCP) thermal barrier leak within a small section of piping rated to Reactor Coolant System (RCS) pressure. CCP*AOV178A-D will automatically close on a high flow indication and fail closed on loss of air. A review of the maintenance history for CCP*AOV178A-D did not indicate any conditions which would have prevented the valves from functioning. The supply tubing for the four air operated valves was replaced during the current shutdown. Each of the four valves was stroked open and closed during the retest to ensure proper operation. CCP*V27,V38,V63,V74 provide automatic isolation on the inlet to the thermal barriers.

2. CHS*AV8146, CHS*AV8147 and RCS*V31, RCS*V32, RCS*V147, RCS*V148 are injection valves in the normal charging flow path and have a safety function to open for safety grade cold shutdown. CHS*AV8146 and CHS*AV8147 will fail open on loss of air. Valves in the operating flow path are normally in service during modes 1 through 5. ASME Section XI does not require any additional testing for these components as long as the observations otherwise required for testing are made and analyzed during such operation. System Engineering does trend this information, however no evaluation or acceptance criteria has been established.

   CHS*V396, CHS*V397, CHS*V436, CHS*V437, CHS*V469, CHS*V470, CHS*V503, CHS*V504 are injection valves in the RCP seal injection flow path and have a safety function to open for safety grade cold shutdown. These check valves are normally in service during modes 1 through 5. ASME Section XI does not require any additional testing for these components as long as the observations otherwise required for testing are made and analyzed during such operation. System Engineering does trend this information, however no evaluation or acceptance criteria has been established.

   CHS*FCV111A/B are isolation valves in the flow path from the boric acid blender to the Volume Control Tank (VCT) and have a safety function to close to prevent diversion of boric acid flow to the Volume Control Tank (VCT). These valves are normally closed and will fail closed on loss of air. The closure function is verified during

normal operations. The valves are periodically opened to allow for boron concentration adjustments in the VCT. Position indication is available on the main control board in the event these valves fail to close.

3. CHS*V42 is a check valve on the discharge of the VCT and has a safety function to open to provide Charging pump minimum flow and to close to prevent diversion of ECCS flow away from the charging pump suction. CHS*V42 closure can only be verified by disassembly. The valve was already included in check valve inspection program and was last inspected in May 1993, during the refueling outage. No adverse conditions were identified during this inspection.

4. The ASME code 1983 Edition specified that control valves were exempt from testing. As a result, control valves that also had a fail safe function were excluded from the Inservice test program. However, subsequent clarification, provided by the NRC in Generic Letter 89-04, stated that control valves that also have a fail safe function should be included in the Inservice test program. Millstone Unit 3 was not required to respond to the Generic Letter because the NRC had recently reviewed the IST program and issued a safety evaluation report (SER)

   Charging system control valve CHS*HCV182 is normally modulated to regulate seal injection flow rates to the reactor coolant pumps. The valve fails open on a loss of control air pressure.

   CCP*LV61 AND CCP*LV91 regulate the water level in the Charging pump cooling and Safety Injection pump cooling surge tanks. The valves are normally closed and would fail in the closed position on a loss of control air. These valves are occasionally opened to increase surge tank level. Whenever the valves are opened, subsequent closure of the valves is verified by a stable surge tank level. The valves are closed by de-energizing the solenoid valve controlling the air pressure to the actuator. This simulates a loss of control air and verifies the valve goes to its fail safe position. A review of the maintenance history for these valves did not indicate any conditions which would have prevented the valves from functioning.

   Valves HVK*TV68A/B, HVK*TV69A/B, HVK*TV70A/B, HVK*TV71A/B, HVK*TV72A/B, HVK*TV73A/B, HVK*TV74A/B, HVK*TV75A/B provide a cooling flow path for the east and west switchgear rooms and isolation for an off line train. Components failing to operate properly would be identified by indication on the main control board.

   Valves HVK*PDV32A/B provide a recirculation flow path which will fail closed to prevent diversion of cooling flow. These valves ensure maximum cooling to the air coolers.

   Valves HVK*TV39A/B, HVK*TV41A/B, HVK*TV76A/B, HVK*TV77A/B isolate the individual air coolers in the east and west switchgear rooms, control room area and the computer and instrument rack area and will fail open on a loss of power. There are two trains, one of which is normally in operation, with the cross tie valves open. The valves automatically actuate on a chilled water pump start or stop. The trains are started and stopped on a periodic basis, which causes each of the train related valves to exercise..

5. Emergency Diesel Generator system excess flow check valves EGA*EFV35A1/A2/B1/B2 are required to remain leak tight to assure adequate starting air. The valves are located in a sensing line from the air receiver to the air compressor. In addition, air receiver pressure is monitored by operations. A low pressure alarm is generated when the air pressure reaches 350 pounds per square inch gauge (psig). Diesel Generator alarms are monitored on the main control board. The air compressors are set to start at 375 psig to refill the air receivers. A leak test has been developed to verify the air receivers can maintain adequate volume on a loss of the air compressors. All four of these valves have been successfully tested.

6. Service Water system valves SWP*MOV57A-D have a safety function to close to isolate containment recirculation cooler leakage. The valves were previously considered passive. The valves are normally open during operation and do not receive a safety signal to close. These valves are included in the GL 89-10 program.

7. Hydrogen Recombiner valves HCS*V4,V5,V11,V12 are manual process valves that have a safety function to open to allow operation of the Hydrogen Recombiners. These valves are cycled quarterly during the Hydrogen Recombiner operability test. These valves have been tested at the code required frequency by existing unit procedures however the data has not been recorded or analyzed.

   HVK*V1,V39,V37,V75 are check valves on the discharge and suction sides of the Control Building Chilled Water pumps and have a safety function to open to provide system cooling flow. These valves have been tested at the code required frequency by existing unit procedures however the data has not been recorded or analyzed.

   SWP*V104,V109 are check valves on the bypass line around the Control Building Air Conditioning water chiller and have a safety function to open to supply heated service water to the inlet of the booster pumps and to close to prevent diversion of flow from the water chiller. Valve V104 was disassembled during the current shutdown with no degradation identified. Valves V104 and V109 were also inspected in 1995 during RFO5. Valve V109 was found not seating properly. A new seat was installed and the valve was re-inspected.

8. SWP*V836,V837 are check valves in the cross-tie lines between the A and B trains of service water and have a safety function to close to provide train isolation. These valves were disassembled and visually inspected during the current shutdown. V836 was identified with severe erosion of the disc body and as a result the valve was replaced. Because of the excessive erosion both valves will be inspected during RFO6. However, based on the inspection, it was determined that the valve could have performed its safety function to close. Valve SWP*V837 was inspected with satisfactory results.

C. ADDITIONAL TESTING NOT INCLUDED IN IST PROGRAM

1. High Pressure Safety Injection (SIH) check valves SIH*V81 and SIH*V83 are on the SIH minimum flow lines and have been verified to open during the quarterly safety injection pump flow test. However, the closure function can not be verified unless the valves are disassembled.

2. Service Water system valves SWP*MOV54A-D are normally closed motor operated butterfly valves on the inlet side of the containment recirculation coolers. They are stroke tested in the open direction on a refueling outage frequency. The valves are exercised to the closed position during the restoration phase of the surveillance procedure. These valves may have to reclose in the event of a leak in the containment recirculation coolers. These valves are also part of the Generic Letter 89-10 program which verifies adequate design of the motor actuator.

3. Charging system valves CHS*LCV112D/E are normally closed motor operated valves which are on the charging pump suction header and are stroke tested in the open direction on a quarterly basis. The valves are exercised in the closed direction after the stroke testing. These valves are also part of the Generic Letter 89-10 program which verifies adequate design of the motor actuator. These valves would automatically open, on a safety injection signal, to align the charging pump suction to the RWST. During the recirculation phase of a large break LOCA event these valves reclose to prevent diversion of containment sump water back to the RWST.

4. Charging system valves CHS*V394,V434,V467,V501 are in the RCP seal injection flow path. These valves are exercised to close and Appendix J leak tested. Normal operation has verified that these valves can open to provide the required seal flow.

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5. Charging system check valve CHS*V58 is in the normal charging supply path. This valve is exercised to close and Appendix J leak tested.

6. Charging system check valve CHS*V261 is on the Refueling Water Storage Tank (RWST) supply line to the charging pumps and has been exercised in the open direction during the full flow test of the Charging pumps each refueling outage. This valve would be required to close in the event the downstream motor operated valves CHS*LCV112D/E failed to close. The valve can not be easily disassembled for inspection because it would require isolation of the RWST, which is used for a water inventory source during modes 1 through 6.

7. Safety Injection system check valve SIH*V11 is on the RWST supply line to the SIH pumps and has been exercised in the open direction during the full flow test of the Safety Injection pumps each refueling outage. This valve would be required to close in the event the downstream motor operated valves SIH*MV8806 failed to close. The valve can not be easily disassembled because it would require isolation of the Refueling Water Storage Tank (RWST), which is used for a water inventory source during modes 1 through 6.

8. Reactor Coolant system valves RCS*HCV442A/B, RCS*SV8095A/B and RCS*SV8096A/B are on the Reactor head vent to the Primary Relief Tank (PRT) and have been stroke time tested in the open direction on a cold shutdown frequency. During this testing the valves are exercised to the closed position which verifies the fail safe position of the valve. However, the stroke time of the valves in the closed direction was not measured.

9. Reactor Coolant system motor operated gate valves RCS*MV8000A/B are on the Pressurizer relief line and are stroke time tested in the open direction. These valves are used to isolate a leaking or stuck open power operated relief valve. The valves are normally open during operation and are exercised closed prior to stroke time testing in the open direction. Additionally, these valves are included in the Generic Letter 89-10 program.

10. Containment Recirculation Spray system (RSS) motor operated gate valves RSS*MV38A/B are on the RSS pump minimum flow lines and have been stroke time tested to open quarterly. The valves would have to reclose to prevent a diversion of RSS flow following an RSS pump start, when the discharge flow rate exceeded 2000 gpm. The valves are closed during the performance of the open stroke time surveillance. These valves are included in the GL 89-10 program.

11. Safety Injection motor operated valves SIH*MV8801A/B are on the charging pump discharge to High Pressure Injection line and are stroke time tested in the open direction. These valves are identified as containment isolation valves and would have to close in the event a Safety injection pump is not operating. These valves automatically open on a safety injection signal to align for cold leg. In addition, these valves are included in the Generic Letter 89-10 program. These valves were successfully stroke time tested in the closed direction.

12. Safety Injection motor operated valves SIH*MV8802A/B are on the SIH pump discharge to hot leg injection line and are stroke time tested in the open direction. These valves are identified as containment isolation valves and would have to close in the event a Safety injection pump is not operating These valves open to align for long term recirculation. In addition these valves are included in the Generic Letter 89-10 program. These valves were successfully stroke time tested in the closed direction.

13. Fuel Pool Cooling check valves SFC*V3 and SFC*V6 are located on the pump discharge prior to a common discharge line and are exercised to open during the quarterly pump operability test. The manual isolation valves downstream of each check valve are normally open during operation, creating a cross-tie between the two trains. Therefore, the check valves are required to close to prevent diversion of flow. These valves are exercised to close during the pump surveillance test, however the close test was not included in the program.

14. Main Steam motor operated valves MSS*MV74A-D on the Main Steam (MSS) relief lines and are credited to modulate as a decay heat removal path during a safety grade cold shutdown. The valves are closed during operation and are exercised closed each quarter during the restoration from the stroke to open surveillance test. In addition these valves are included in the Generic letter 89-10 program.

15. Emergency Diesel Generator Starting Air system check valves EGA*V4,V11,V30,V37 are located on the supply line to the diesel starting air receiver tanks and have a safety function to remain leak tight to assure sufficient starting air. These valves were disassembled to verify closure, during RFO4 or RFO5. In addition, air receiver pressure is monitored by operations. A low pressure alarm is generated when the air pressure reaches 350 psig. Diesel Generator alarms are monitored on the main control board. The air compressors are set to start at 375 psig to refill the air receivers.

16. Emergency Diesel Generator Fuel Oil Transfer system check valves EGF*V1, V3, V7, V9 are on the discharge of the fuel oil transfer pumps and have a safety function to close to prevent diversion of flow. The proper performance of the fuel oil transfer pump surveillance verifies that the idle pump check valve is closed by monitoring pump discharge flow rates. In addition, this surveillance does verify that the idle pump does not rotate in the reverse direction.

17. Control Building Ventilation valves HVC*AOV25 and AOV26 are inlet isolation valves to control room ventilation and are stroke time tested open and closed on a quarterly frequency. The valves will fail closed on a loss of control air pressure. The air supply to these valves is not safety related. These valves are credited in the FSAR to open manually one hour into a design basis accident to allow control room ventilation.

IV. Corrective Action

This condition was discovered when the unit was in an extended cold shutdown and as a result no immediate operator action was required. The results of the Inservice Test Program review are documented in an internal report. This report is part of the 50.54(f) effort. Completion of the following corrective actions prior to entry into mode 4 (unless otherwise stated) and assignment of specific programmatic responsibilities will effectively implement and maintain the IST program.

1. The existing IST documents and procedures will be reviewed and revised as required to ensure program addresses all of the requirements of 10CFR50.55a(f) by May 31, 1997.

2. A procedure will be developed and implemented to administer and monitor the IST program by May 31, 1997.

3. Staff will be assigned to implement and manage the IST program by May 31, 1997.

4. The seventy one (71) individual discrepancies identified during the review of the IST program against surveillance procedures will be corrected.

5. The seven (7) licensing commitments discrepancies identified during the review of the Inservice Test Program will be corrected.

6. The IST surveillance procedures, the IST Manual and IST Bases Document will be revised to include the components identified during the review of the Inservice Test Manual, Revision 4.

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7. The twenty eight (28) individual discrepancies identified in the selected system review of the IST program component test methods performed as part of the Inservice Test program review will be corrected.

8. The IST program component test methods will be reviewed and identified deficiencies will be corrected.

In addition the following specific corrective actions will be taken to correct the deficiencies noted prior to entry into mode 4.

1. The pump vibration velocity measurements test procedures will be revised to incorporate the acceptance criteria of ASME Section XI 1989 Edition.

2. A procedure will be implemented to verify the open safety function for valves CHS*V58, AV8146, AV8147, RCS*V31, V32, V147, and V148.

3. A procedure will be implemented to test Charging system control valve CHS*HCV182 during refueling outages or whenever seal injection is not required.

4. Component Cooling Water system valves CCP*TV32A/B/C will be modified to include a solenoid valve which will allow adequate testing of the fail safe function.

5. Procedures will be revised to require that data be recorded and analyzed for Service Water system valves SWP*MOV57A-D, Hydrogen Recombiner valves HCS*V4,V5,V11,V12, and Control Building Chilled Water valves HVK*V1,V39,V37,V75.

6. Service Water system valves SWP*V104,V109 will be added to the check valve disassembly and inspection matrix.

7. High Pressure Safety Injection check valves SIH*V81 and SIH*V83 will be disassembled, inspected, and added to the check valve disassembly and inspection matrix.

8. The measurement of the closed stroke time for Service Water system valves SWP*MOV54A-D will be added to the IST Program.

9. The measurement of the closed stroke time for Charging system valves CHS*LCV112D/E will be added to the IST Program.

10. An exercise to open test, which can be verified quarterly by normal operation, will be added to the IST program for Charging system valves CHS*V394,V434,V467,V501, V396, V397, V436, V437, V469, V470, V503, and V504.

11. A procedure will be implemented to test Charging system check valve CHS*V261 and Safety Injection system check valve SIH*V11 during refueling outages.

12. The closed function of Reactor Coolant system valves RCS*HCV442A/B, RCS*SV8095A/B and RCS*SV8096A/B will be added to the IST Program and the valves tested.

13. The measurement of the closed stroke time for the Reactor Coolant system motor operated gate valves RCS*MV8000A/B will be added to the Inservice test program.

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

14. The measurement of the closed stroke time for the Containment Recirculation valves RSS*MV38A/B will be added to the Inservice test program.

15. The surveillance procedure will be revised to add the stroke time to close function for Safety Injection motor operated valves SIH*MV8801A/B and SIH*MV8802A/B.

16. An exercise to close requirement for the Fuel Pool Cooling check valves SFC*V3 and SFC*V6 will be added to the Inservice test program.

17. A stroke time to close test will be added to the Inservice test program for Main Steam motor operated valves MSS*MV74A-D.

18. A surveillance procedure to verify leakage limits for the Emergency Diesel Generator Starting Air system check valves EGA*V4,V11,V30,V37 will be implemented.

19. An exercise to close requirement for the Emergency Diesel Generator Fuel Oil Transfer system check valves EGF*V1, V3, V7, V9 will be added to the Inservice test program.

20. A test to manual exercise Control Building Ventilation valves HVC*AOV25 and AOV26 on a refueling frequency will be added to the surveillance program.

Additionally, the Service Water system valves SWP*V836,V837 will be inspected during RFO6.

V. Additional Information

None

Similar Events

LER 96-023 Failure to Include Fuel Transfer Tube Bellows within Containment Penetration Test Program

On July 1, 1996, with the unit in mode 5 of an extended plant shutdown, an independent assessment of the containment system identified that the fuel transfer tube bellows, containment penetration number 88, had not been included in the 10CFR50 Appendix J Test Program. An individual Type B leak test had not been performed on the fuel transfer tube bellows located inside containment. This containment penetration had not been identified in the Appendix J program as requiring leak testing since the initial unit startup. The Unit Technical Specification requires that type B and C tests shall be conducted at intervals not greater than 24 months. The cause of this event was a programmatic deficiency resulting from an incomplete test procedure. Since all prior Integrated Leak Rate Tests had been successful, the containment leak tight integrity, including the expansion bellows, was verified. No safety consequences existed due to the omission of the expansion bellows from the test program. This penetration leak path was added to the Appendix J program and a local leak rate test was performed. An independent assessment of the containment system penetrations concluded that all other type B and type C penetrations were included in surveillance procedures and tested in accordance with 10CFR50 Appendix J.

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LER 96-024 Missed Inservice Testing of a Stop Check Valve in the Steam Supply to the Turbine Driven Auxiliary Feed Water Pump due to Programmatic Weakness

On July 12, 1996 with the unit in mode 5 cold shutdown, it was discovered that a motor operated stop check valve had not been inspected in accordance with the Inservice Test (IST) Program. The IST program required that one of three motor operated stop check valves in the main steam supply to the turbine driven Auxiliary Feedwater pump be disassembled and visually inspected each refuel outage (RFO). One of these valves (3MSS*MOV17D) was scheduled for inspection during RFO5 in May 1995. This inspection was to be performed concurrent with other maintenance activities scheduled to be performed on this valve. When the maintenance work on this valve was canceled, the visual inspection was not completed. This missed inspection resulted in the IST requirements not being performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code as required by 10CFR50, section 50.55a(g) and the unit Technical Specifications. The cause of this event was a programmatic deficiency which resulted in the inadequate scheduling and completion of an IST check valve surveillance. Completion of the missed inspection was performed. Programmatic enhancements to the check valve program were incorporated to prevent recurrence.

Manufacturer Data

Not applicable.