UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-327/90-14 and 50-328/90-14

Licensee: Tennessee Valley Authority
6N38 A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Docket Nos.: 50-327 and 50-328 License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah 1 and 2

Inspection Conducted: March 26-30 and April 9-13, 1990

Inspector: S. Sparks 5/3/90
S. Sparks, Lead Inspector Date Signed

Team Members: P. Taylor (March 26-30, 1990)
H. Whitener (April 9-13, 1990)

Approved by: for 5-3-90
G. A. Belisle, Chief Date Signed
Test Programs Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of inservice testing, containment integrity, and followup on previous inspection findings.

Results:

A violation was identified for failure to perform TS surveillance 4.6.4.2.a on the hydrogen recombiners at the required frequency, paragraph 3.

The AFW system inservice test program appeared to be adequate to ensure that the system's components are maintained in an operational readiness state, paragraph 2.

An unresolved item was identified concerning whether a 10 CFR 50.59 safety evaluation was required for an inadvertent CSP impeller replacement, paragraph 2.b. Weaknesses were identified in the area of configuration control, paragraph 2.b, and review of test results, paragraph 3.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

M. Ahamd, Maintenance Engineer
K. Allen, Supervisor, Periodic Test Group
M. Anderson, Design Control Manager
R. Campbell, System Engineer
M. Chattin, Mechanical Engineer, Periodic Test Group
*M. Cooper, Acting Site Licensing Manager
R. Edlund, Principal Mechanical Engineer
*T. Flippo, Quality Assurance Manager
*J. Gates, Technical Support Superintendent
H. Koehler, System Engineer
*S. Long, Technical Support
*J. Proffitt, Site Licensing
*H. Rogers, Technical Support Supervisor
M. Skarzinski, System Engineer
*C. Vondra, Plant Manager
P. Ward, System Engineer
*C. Whittemore, Licensing Engineer
R. Witthauer, Project Engineering Controls Manager

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, mechanics, technicians, and administrative personnel.

NRC Resident Inspectors

P. Harmon, Senior Resident Inspector
K. Jennison, Senior Resident Inspector
D. Loveless, Resident Inspector

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Inservice Testing (73756)

10 CFR 50.55a(g) and TS Surveillance Requirement 4.0.5 require that ASME Code Class 1, 2, and 3 pumps and valves be inservice tested in accordance with Section XI of the ASME Boiler and Pressure Vessel Code to assess operational readiness. During this inspection, the inspectors reviewed

the licensee's Inservice Test Program, implementing procedures, and test results that accomplish Section XI pump and valve IST for pumps and valves that are in the AFW system. In addition, selected CAQRs associated with IST were reviewed.

a. Check Valve Testing

The inspectors reviewed procedures and results for the following check valves located in the AFW system:

3-508	3-509	3-510	3-511	3-805	3-820
3-806	3-810	3-814	3-815	3-818	3-821
3-830	3-831	3-832	3-833	3-861	3-862
3-864	3-871	3-872	3-873	3-874	3-891
3-892	3-894	3-895	3-921	3-922	

Requirements for full stroke and reverse flow exercising check valves are contained in Section XI, Subsection IWV-3520 of the 1974 ASME Code.

The inspector's review of current testing procedures for check valves located in the AFW system indicated that stroke testing using design accident flow was performed at the required frequency. Reverse flow testing of the above check valves was also verified. Check valves which could not be reverse flow tested were identified in the licensee's IST Program, and alternative methods such as disassembly were specified and performed.

b. Pump Testing

The inspectors reviewed inservice testing for the steam and motor driven auxiliary feedwater pumps to determine if periodic testing of these components is being conducted in accordance with ASME Code Section XI, Subsection IWP requirements, 1974 Edition through the Summer 1975 Addenda (Unit 1) and the 1977 Edition through the Summer 1978 Addenda (Unit 2). In addition, the inspectors reviewed relief requests submitted to NRR for approval and noted that safety evaluation reports had been issued finding them acceptable.

The inspectors reviewed the following administrative controls for the inservice testing of selected pumps in the program and surveillance instructions used to conduct quarterly testing of the AFW pumps:

TI-88, Rev. 5, 11/25/88, Inservice Testing Requirements by ASME Code Section XI

TI-103, Rev. 0, 4/10/87, Establishment and PMT Update of ASME Pump Reference Values

TI-99, Rev. 2, 12/22/89, Ultrasonic Flow Measurement

SI-130.2.1, Rev. 1, 6/29/89, and SXP-003-002.B, Rev. 0, 8/14/89, Unit 1 Motor Driven AFW Pump 1A-A, 1B-B Quarterly Operability Test

SI-130.1.1, Rev. 0, 11/16/88, Unit 1 Turbine Driven AFW Pump 1A-S Quarterly Operability Test

SI-130.2.3, Rev. 2, 5/23/89, and SI-130.2.4, Rev. 2, 5/25/89, Unit 2 Motor Driven AFW Pump 2A-A, 2B-B Quarterly Operability Test

SI-130.1.2, Rev. 2, 6/27/89, Unit 2 Turbine Driven AFW Pump 2A-S Quarterly Operability Test

The inspectors verified that these implementing procedures incorporated ASME Code requirements regarding IWP acceptance criteria, test frequency, test duration, instrumentation calibration, and corrective action if measured test quantities entered the alert or required action range. The inspectors reviewed maintenance activities for the Unit 1 AFW pumps and noted that appropriate post maintenance testing was identified and completed following maintenance.

The inspectors reviewed CAQR SQP900078, which was issued after the MDAFWP mini-flow capacity recorded during IST fell below the manufacturer's minimum recommended flow rate. NRC Bulletin 88-04, Potential Safety-Related Pump Loss, dated May 5, 1988, identified a concern in this area in which pump damage can result due to inadequate mini-flow capacity. Damage could result in the form of long-term internal damage (e.g., impeller erosion), or pump overheating and subsequent failure due to thermal expansion or steam binding.

The inspectors reviewed the licensee's response to this Bulletin for the AFW pumps, and vendor information obtained by the licensee as a result of Bulletin 88-04. Vendor information stated that the minimum flow through the pump which would not result in pump failure due to flashing is 24 gpm, given a minimum inlet static head and an AFW design temperature of 120 degrees. The vendor also stated that every effort should be made to raise the minimum flow to safer levels. IST data indicated that MDAFWP 1B-B flow rate was 24.1 gpm on 1/18/90, and 2B-B flow rate was 24.9 gpm on 12/7/89 and 24.4 gpm on 9/14/89. Other IST data revealed flow rates approximately 25-30 gpm.

The licensee's response to Bulletin 88-04, dated March 15, 1990, identified short-term and long-term corrective actions to preclude pump damage or failure due to inadequate mini-flow. Actions included continued periodic IST to detect degradation, full-flow testing during RFO, MDAFWP 1A-A disassembly and inspection, and modifications to install additional mini-flow capacity during the Cycle 5 RFO

(upcoming outage). The inspectors observed a portion of the pump 1A-A inspection after disassembly during the week of April 9-13, 1990, and did not note any major degradation. In addition, discussions with a vendor representative from Ingersoll-Rand, indicated that no significant damage was evident. The licensee also recently replaced the pump internals for the Unit 2 MDAFWPs.

The inspectors concluded that the licensee's actions to preclude significant pump damage were satisfactory, based on obtaining pump vendor information for minimum required mini-flow, current IST and full-flow testing, results of pump 1A-A disassembly, and long-term modifications to install additional mini-flow capacity.

The inspectors also reviewed CAQR SQP900071, issued 2/12/90, after licensee review of IST data performed on 12/15/88 indicated that the discharge pressure of the 1B CSP exceeded the system design pressure. The system design pressure is 220 psig, and IST performed 12/15/88 as part of a post maintenance test measured the pump discharge pressure to be 226 psig. The licensee identified the problem on 2/12/90 to be the installation of an incorrectly sized impeller, which occurred prior to the 12/15/88 inservice test. The licensee had intended to perform a like-for-like impeller replacement; however, the 530 mm diameter impeller was inadvertently replaced with a 553 mm impeller. Subsequent investigations determined that the vendor shipped two full diameter impellers (553 mm) in 1975, and one was used for the impeller replacement. The licensee's contract requested equipment by referencing the original contract for the pumps, but the vendor mistakenly shipped an untrimmed impeller (553 mm) instead of a trimmed impeller (530 mm).

The licensee's corrective actions involved a JCO, which evaluated the increased pump performance, its effect on system design pressure, motor loading and emergency diesel generator loading, and accident flow rate. The JCO identified no operability concerns, and as such, corrective action was to initiate a work request to install a properly sized impeller in the 1B CSP by start up from Unit 1 cycle 5 RFO, scheduled for 12/15/91. The inspectors review of the JCO revealed that the licensee had not obtained the vendor head curve of estimated pump performance. Thus, the licensee's JCO, based on engineering judgement, assumed the pump was operating on the estimated pump head curve, pump efficiency had not changed, and net positive suction head requirements had not increased significantly. The inspectors requested the licensee to obtain the vendor information to verify that the above assumptions were correct. Review of this vendor information supported these assumptions.

The licensee, however, had not performed a 10 CFR 50.59 evaluation prior to the NRC inspection to determine if the condition involved an unreviewed safety question. 10 CFR 50.59 requires a written safety evaluation to determine if an unreviewed safety question exists for changes in the plant as described in the FSAR.

Licensee procedure AI-12, Adverse Conditions and Corrective Actions, Rev. 26, states that when a CAQR identifies a plant/FSAR discrepancy, a review shall be performed in accordance with the licensee's 50.59 evaluation procedure, SQA-119, Evaluation of Changes, Tests, or Experiments, Rev. 19. This evaluation is to be completed prior to the CAQR closure. A plant/FSAR discrepancy is defined in AI-12 as a condition in which the as-built facility differs to the degree that the FSAR statement is invalid, or was not introduced through a design change. Table 6.2.2-1 of the FSAR identifies the CSP design parameters to be 4750 gpm and 370 feet of head. The installation of a larger diameter impeller increased the CSP performance, in that, with the same flow rate, the pump head increased by approximately 20 percent, based on IST data. As such, the inspectors consider the condition to be a plant/FSAR discrepancy, in that the pump performance identified in the FSAR is no longer valid.

The inspectors considered procedure AI-12 to be inadequate in that it did not identify a time period in which the 10 CFR 50.59 analysis is to be performed, other than prior to closure of the CAQR. In this case, closure of the CAQR may not occur until the work request had been completed to install a properly sized impeller, approximately 18 months after issuance of the CAQR. As such, a 10 CFR 50.59 evaluation had not been performed at the time of the inspection.

Although the licensee's JCO appeared to adequately evaluate pump operability, it did not address the issue of whether an unreviewed safety question existed. The licensee stated that a 10 CFR 50.59 evaluation was not performed because the change was not a permanent facility change. The inspectors stated that the licensee needed to perform a 50.59 analysis after realization that the plant condition differed from the description in the FSAR. However, the question of whether a 10 CFR 50.59 evaluation is a requirement for the plant discrepancy described above, or whether a JCO is sufficient, will require further review. Pending further review by Region II and NRR, this item will be identified as Unresolved Item URI 50-327/90-14-01, Plant Discrepancy Requiring a 10 CFR 50.59 Evaluation.

The licensee did perform a 10 CFR 50.59 safety evaluation prior to the end of the inspection and verified that an unreviewed safety question did not exist. In addition, the licensee is currently assessing their 10 CFR 50.59 program in the area of design changes, plant discrepancies, and CAQRs.

The inspectors also questioned the licensee on the process used to ensure that the actual plant configuration is accurately reflected on plant drawings. At the time of the inspection, neither the actual plant configuration of the CSPs nor the increase in system pressure above the design pressure had been incorporated into any permanent or temporary plant drawings. Approximately 10/89, the licensee identified a similar problem with actual versus documented plant configuration, and issued CAQR SQQ890550. Corrective actions included posting

drawing deviations in the Design Change Drawing Tracking System, as a result of open CAQRs. Until this is fully implemented, the inspectors consider the licensee's lack of adequate configuration control between the actual CSP condition, design conditions, and plant drawings to be a weakness.

In addition, the licensee made a verbal commitment to evaluate receipt of spare parts, maintenance controls to insure like-for-like replacement of equipment, and post-maintenance testing, as part of corrective actions to prevent recurrence of conditions similar to the installation of an incorrect CSP impeller.

c. Power Operated Valve IST

The inspectors reviewed IST for the following MOVs and AOVs located in the AFW system:

LCV-3-171	LCV-171A	LCV-3-172	LCV-3-173
LCV-3-174	LCV-175	LCV-3-116A	LCV-3-116B
LCV-3-126A	LCV-126B	LCV-3-136A	LCV-3-136B
LCV-3-179A	LCV-179B	LCV-3-148	LCV-3-148A
LCV-3-156	LCV-156A	LCV-3-164	LCV-3-164A
FCV-1-15	FCV-1-16	FCV-1-17	FCV-1-18

Licensee personnel were interviewed regarding the general methods used to stroke time power operated valves. The inspectors also reviewed appropriate relief requests, and implementing procedures which accomplish IST.

Criteria for IST power operated valves is contained in Subsection IWV-3400 of the ASME Code, which specifies stroke timing, fail-safe testing, and corrective action requirements. Subsection IWV-3300 addresses valve position indicator verification which checks remote position indicators once every two years to verify that valve operation is accurately indicated.

The inspectors verified that testing frequency, results, and post-maintenance testing as a result of corrective actions were performed satisfactorily.

Within the areas inspected, one unresolved item was identified.

3. Containment Integrity (61715)

The purpose of inspection activities in this area was to verify that the licensee had developed and implemented procedures and controls to meet the TS requirements that are intended to ensure the operability of those containment related systems designed to prevent or mitigate the release of radioactivity from the containment post accident. For this purpose, portions of containment related systems designed to mitigate the consequence of a LOCA were inspected for compliance with the plant TSs.

Inspection of these systems was initiated in a previous inspection and reported in NRC Inspection Report Nos. 50-327/90-10 and 50-328/90-10. At that time the following containment related systems or mechanisms designed to mitigate the consequences of contamination releases following a LOCA were reviewed for compliance with TS requirements:

Containment airlocks
Containment temperature and pressure limits
Containment spray
Containment vent coolers

During this inspection, additional containment related systems designed to mitigate the consequences of a LOCA were inspected for operability and conformance with plant TSs as follows:

Containment Building and Auxiliary Building Ventilation Systems

Containment Vacuum Relief System

Containment Shield Building Emergency Gas Treatment System

Containment Vessel and Shield Building (structural) integrity verification

Containment divider barriers and access doors and seals

Containment Combustible Gas Monitoring System

Containment Combustible Gas Treatment system

Ice Condenser system.

For selected TS requirements on these systems, the inspector reviewed surveillance test procedures and records for 1989 (except for daily or weekly tests) to verify that:

Surveillance test procedures were established which address the TS requirements and demonstrate system operability.

The test procedures contained technically adequate instructions, acceptance criteria, and limits appropriate to the TS requirements.

The surveillance tests were performed at the frequency required by the TSs.

Corrective action and retests were performed when problems were identified.

The sample of surveillance records reviewed by the inspector included the following:

SI-193.2, Revision 1:	Containment Building and Auxiliary Building Ventilation Systems (Vacuum Relief Automatic Valve Activation Test)
SI-151, Revision 17:	Six Month Test Requirement on Electric Hydrogen Recombiner System (Functional Test)
SI-62, Revision 14:	Primary Containment Vacuum Relief Valves Auto-Open
SI-17, Revision 24:	Containment Shield Building Emergency Gas Treatment System Flow
SI-254, Revision 4:	Containment Vessel and Shield Building Integrity Verification (Verification of Structural Integrity)
SI-19, Revision 11:	Containment Systems Divider Barrier, Removable Curbs, Personnel Access Doors, and Equipment Hatches.
SI-103, Revision 9:	Divider Barriers, Personnel Hatches and Equipment Hatches Inspections

The inspector reviewed the controls in effect to assure that surveillance instructions were performed as required by plant conditions and TSs. The prime control for routine surveillances is the Surveillance Instruction Program which generates the routine surveillance schedules. This is a computerized data base which indicates the current status and past test history for all required surveillance tests.

For plant startup, GOIs are the controls. These instructions implement checklists of required surveillances for each mode of operation. The surveillances are verified to be complete prior to mode change by comparing the check list requirements with the test status in the surveillance program data base. Where maintenance and retest of a system is required the MWO system controls the post maintenance testing. The maintenance planning group identifies the required post maintenance test on the MWO. Sign off of the MWO by operations signifies a successful retest has been performed. Also, the test status for a failed surveillance is identified as deficient in the surveillance instruction data base until a successful retest is complete.

Based on this sample review, the inspector concluded that the licensee had established and implemented periodic test procedures and administrative controls to ensure that the operability requirements specified in the TSs for containment systems designed to mitigate the consequences of an accident are maintained. However, during this inspection several problems were identified and the resolutions discussed with the licensee as follows:

a. SI-193.2 (Unit 2) requires that the automatic vacuum breaker valves are verified to open on a high containment pressure signal in mode 6 or 5. Verification of this surveillance was on the mode 4 to 3 GOI checklist. The licensee changed this surveillance verification to the mode 5 to 4 checklist immediately. This matter is closed.

b. Technical specification 4.6.4.2.a requires that for the hydrogen recombiner six month functional test, the licensee verify that the minimum heater sheath temperature increases to 700°F or greater within 90 minutes. The licensee's procedure, SI-151, for both Units, requires only two of three TCs be at 700°F or greater. On three Unit 1 tests reviewed, the No. 1 TC was less than 700°F while the No. 2 and No. 3 TCs were slightly greater than 700°F.

From discussions of this condition with NRR and review of the hydrogen recombiner technical manual, the inspector concluded that while there appears to be a literal conflict between TS 4.6.4.2.a and procedure SI-151, there is no safety significance involved. Specifically, the technical manual shows that the three TCs are redundant in that they measure the temperature of the same heater sheath. The manual recommends averaging the TCs. The licensee will review this matter to resolve any conflict between TSs and the procedure.

c. Technical Specification 4.6.4.2.a requires that the functional test of the hydrogen recombiner be performed at least once each six months. SI-151 includes both the train A and train B recombiner functional tests for both units. In review of test results on Unit 1 for 1989, the inspector found that train A was not tested between January 11, 1989, and October 15, 1989, a nine month interval. Review of the printout of the test schedule and performance dates shows that for SI-151, both train A and B were performed at six month intervals on Unit 1 on 10/16/88, 4/16/89 and 10/15/89. However, review of test data and surveillance data base history printout for SI-151 shows that while SI-151 was performed 4/16/89 the test only included train B. A special test was performed on train A on 1/11/89 but the surveillance interval was not reset since SI-151 requires testing both trains. SI-151 performed on Unit 1 10/15/89 included both trains A and B; therefore, both trains are considered operable from October 15, 1989, to the shutdown of Unit 1 for refueling in March 1990. No other missed surveillance tests were identified during this inspection.

Subsequent to regional review, the licensee was notified on April 25, 1990, that in accordance with the NRC enforcement policy as stated in 10 CFR Part 2, Appendix C, the failure to perform a surveillance test on the train A hydrogen recombiner each six months is in violation of NRC requirements as specified in Technical Specifications 4.6.4.2.a and 4.0.2.a. The nine months between tests on the train A hydrogen recombiner (Unit 1) exceeds both the six months specified in TS 4.6.4.2.a and the six months plus 25 percent allowed by

TS 4.0.2.a. This violation is identified as 50-327/90-14-02, failure to Perform Surveillance Testing of the Unit 1, Train A, Hydrogen Recombiner at the Required Frequency.

d. The inspector identified a concern related to the quality of review of the test results for SI-62 performed January 30, 1989, on Unit 1. The test involves measuring the force required to open the containment vacuum breaker check valves. The test reviewed by the inspector for both Unit 1 and Unit 2 indicates that the force required to lift these valves was in a range of 15 to 25 pounds. However, in a test on the Unit 1 valve 30-571 performed January 30, 1989, the force required on the first lift was 21.5 pounds. On the second lift the force was 2.5 pounds. There was no deficiency written or comments entered in the test log by either the performer or reviewer as why such an abnormal result would be acceptable. The licensee will review this matter as a weakness in the surveillance instruction and determine appropriate corrective action. The inspector had no further question on this matter.

Within the areas inspected, one violation was identified (paragraph 3.c).

4. Bulletin Followup (92701)

a. (Closed) 50-327,328/85-BU-03, TI 2515/73, Motor Operated Valve Common Mode Failure During Plant Transients Due to Improper Switch Settings

The purpose of this bulletin was to require licensees to develop and implement a program to ensure that switch settings for high pressure coolant injection and emergency feedwater systems' motor operated valves, subject to testing for operational readiness in accordance with 10 CFR 50.55a(g), are properly set, selected, and maintained. The inspectors verified that the remaining licensee actions as identified in NRC Inspection Report Nos. 50-327,328/88-19 had been completed. These actions included differential pressure testing of the TDAFWP steam supply valves, revision of plant procedures to specify and administratively control switch settings, an NRC request for additional information, and issuance of a licensee final report.

b. (Closed) 50-327,328/86-BU-02, Static "O" Ring Differential Pressure Switches

The NRC staff issued a Safety Evaluation Report, dated June 23, 1988, on Bulletin 86-02, in which it was concluded that the licensee had satisfactorily addressed all issues identified by the Bulletin.

Within the areas inspected, no violations or deviations were identified.

5. Action on Previous Inspection Findings (92701)

(Closed) URI 50-327,328/89-03-01: Evaluation of M&TE Record Discrepancies

The licensee included the three pieces of equipment identified in NRC Inspection Report Nos. 50-327,328/89-03 in CAQR SQQ880578, which was written to address similar M&TE problems. The CAQR identified that AI-31, paragraph 5.0 was not being satisfied in that all M&TE usages were not recorded to provide traceability of measurements and a means for evaluating that particular M&TE. The licensee identified the root cause as inadequate training of user groups. Corrective actions included a sampling of M&TE records, and revision of AI-31 to include user clarification and subsequent training. In addition, QA performed a surveillance to review accountability records of M&TE. QA identified no accountability deficiencies. Two instances of expired M&TE were found, and corrected on the spot. The inspectors consider the licensee's actions in this area to be satisfactory.

Within the areas inspected, no violations or deviations were identified.

6. Exit Interview

The inspection scope and results were summarized on April 13, 1990, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results listed above. Proprietary information is not contained in this report. Dissenting comments were received from the licensee in that the inadvertent CSP impeller replacement did not constitute a design change to the plant which required a 10 CFR 50.59 evaluation, but rather was identified by the licensee as a plant non-conformance.

Item Number	Description and Reference
327/90-14-01	URI - Plant Discrepancy Requiring a 10 CFR 50.59 Evaluation
327/90-14-02	Violation - Failure to Perform Surveillance Testing of the Unit 1, Train A, Hydrogen Recombiner at the Required Frequency

Licensee management was informed that the following items were closed:

TI 327,328/2515/73, paragraph 4.
IEB 85-BU-03, paragraph 4.
IEB 86-BU-02, paragraph 4.
URI 327,328/89-03-01, paragraph 5.

Licensee management made a verbal commitment to evaluate receipt of spare parts, maintenance controls to insure like-for-like replacement of equipment, and post-maintenance testing as part of corrective actions to

prevent recurrence of the installation of incorrect parts such as the CSP impeller.

Per telecon with M. Cooper on 4/23/90 and C. Whittemore on 4/25/90, licensee management was informed that the inadvertent CSP impeller replacement issue would be identified as an unresolved item. Management was also advised that a violation would be identified regarding the missed TS surveillance on the hydrogen recombiners, and that a violation would not be issued against the procedure used for testing the hydrogen recombiner heaters to satisfy TS 4.6.4.2.a.

7. Acronyms and Abbreviations

AFW	Auxiliary Feedwater
AOV	Air Operated Valve
ASME	American Society of Mechanical Engineers
CAQR	Condition Adverse to Quality Report
CFR	Code of Federal Regulations
CIV	Containment Isolation Valve
CSP	Containment Spray Pump
GOI	General Operating Instructions
gpm	Gallons per Minute
IEB	Inspection and Enforcement Bulletin
IST	Inservice Testing
JCO	Justification for Continued Operation
LLRT	Local Leak Rate Test
MDAFWP	Motor Driven Auxiliary Feedwater Pump
mm	Millimeter
MOV	Motor Operated Valve
MWO	Maintenance Work Request
M&TE	Measure and Test Equipment
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
psig	Pounds per Square Inch, Gage
PT	Periodic Test
QA	Quality Assurance
RCS	Reactor Coolant System
RFO	Refueling Outage
TDAFWP	Turbine Driven Auxiliary Feedwater Pump
TC(s)	Thermocouple(s)
TI	Temporary Instruction
TS	Technical Specifications
FSAR	Final Safety Analysis Report
URI	Unresolved Item