UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 2, 2003

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC INSPECTION REPORT 50-327/03-02 AND 50-328/03-02

Dear Mr. Scalice:

On February 28, 2003, the Nuclear Regulatory Commission (NRC) completed a safety system design and performance capability inspection at your Sequoyah Nuclear Plant, Units 1 and 2. The enclosed report documents the results of this inspection which were discussed on February 28, 2003, with Mr. D. Koehl and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

No findings of significance were identified during this inspection.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Charles R. Ogle, Chief
Engineering Branch 1
Division of Reactor Safety

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

Enclosure: (See page 2)

Enclosure: NRC Inspection Report 50-327/03-02
50-328/03-02 w/Attachment

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-327, 50-328
License Nos.:	DPR-77, DPR-79
Report No.:	50-327/03-02, 50-328/03-02
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Sequoyah Nuclear Plant, Units 1 & 2
Location:	Sequoyah Access Road Soddy-Daisy, TN 37379
Dates:	February 10-14 and February 24-28, 2003
Inspectors:	J. Moorman, Lead Inspector C. Smith, Senior Reactor Inspector R. Moore, Reactor Inspector F. Jape, Senior Project Manager G. Skinner, Contractor
Accompanied by:	D. Mas-Peñaranda, Intern
Approved by:	Charles R. Ogle, Chief Engineering Branch 1 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000327/2003-002, IR 05000328/2003-002; Tennesee Valley Authority; on 02/10-14/03 and 2/24-28/03; Sequoyah Nuclear Plant, Units 1 and 2; Safety System Design and Performance Capability Inspection.

This inspection was conducted by regional reactor inspectors and a contractor. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversite Process," Rev. 3, dated July 2000.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events and Mitigating Systems

1R21 Safety System Design and Performance Capability (71111.21)

This team inspection reviewed selected components and operator actions that would be used to prevent or mitigate the consequences of a steam generator tube rupture (SGTR) event. Components in the main steam (MS), auxiliary feedwater (AFW), steam generator glowdown (SGBD), chemical and volume control (CVCS), reactor coolant (RCS), and radiation monitoring systems were included. This inspection also covered supporting equipment, equipment which provides power to these components, and the associated instrumentation and controls. The SGTR event is a risk-significant event as determined by the licensee's probabilistic risk assessment.

.1 System Needs

.11 Controls

a. Inspection Scope

The team reviewed mechanical logic diagrams and electrical elementary diagrams of selected safety related components to verify that the components' operation was consistent with the Updated Final Safety Analysis Report (UFSAR) description and the General Design Criteria (GDC) document for each process system. This review was conducted for the following equipment:

- PCV 1-5, steam generator 1 power operated relief valve
- FCV 1-4, steam generator 1 main steam isolation valve
- FCV 147, steam generator 1 main steam isolation block valve
- FCV 1-181 and FCV 1-7, steam generator 1 blowdown isolation valves
- FCV 3-33, steam generator 1 feed water isolation valve
- FCV 3-35 and FCV 3-35A, steam generator 1 feed water flow control valves
- FCV 1-51, auxiliary feed water pump turbine trip and throttle valve
- motor driven auxiliary feed water pump 1A-A
- LCV 3-164, steam generator 1 level control valve from motor driven auxiliary feed water pump 1A-A
- LCV 3-164A, motor driven auxiliary feed water bypass level control valve for steam generator 1
- LCV 3-174, turbine driven auxiliary feed water steam generator 1 level control valve
- PCV 68-340A, pressurizer power operated relief valve

b. Findings

No findings of significance were identified.

.12 Energy Source

a. Inspection Scope

The team reviewed the electrical systems used for operation of critical equipment needed to mitigate a SGTR to verify the systems' design, reliability, and availability were consistent with the design assumptions and licensing basis as described in the UFSAR. Specific power availability for equipment reviewed included the charging pumps, motor driven AFW pumps, and AFW motor operated valves (MOVs). The team evaluated the 6900 volt (v) medium voltage system to assess vulnerabilities due to loss of the preferred offsite source and the standby onsite sources (diesel generators). In particular, the team evaluated adequacy of undervoltage protection and vulnerability to spurious separation from the offsite source. Documents reviewed included single line drawings, load flow calculations, protective device selection and coordination calculations, setpoint calculations, and design criteria documents.

The 125v vital direct current (DC) system, which is necessary to supply both motive and control power for SGTR mitigating systems, was evaluated by review of battery sizing calculations, voltage drop calculations, and protective device sizing and coordination studies. In addition, the team evaluated the 120v alternating current (AC) vital power system including inverter sizing, voltage drop, and transfer schemes for standby sources.

The team reviewed the availability, reliability and quality controls for the air system required for operation of air operated valves used to mitigate the SGTR event. Valve design drawings, vendor manuals, and periodic air quality test results were reviewed to verify that station air quality standards were consistent with vendor recommendations, regulatory guidance, and industry standards.

b. Findings

No findings of significance were identified.

.13 Process Medium

a. Inspection Scope

The team reviewed selected net positive suction head (NPSH) and tank volume calculations, design criteria information, drawings, and vendor manuals to verify that system design and UFSAR accident analysis assumptions were consistent with the actual capability of systems and equipment required to mitigate the SGTR event. This review included the refueling water storage tank (RWST) and its refill capability and the emergency raw cooling water (ERCW) supply as the assured source for the AFW system. The team also reviewed the volume control tank, condensate storage tank, and licensee's actions to monitor and prevent degradation of the ERCW supply piping to the AFW pumps.

b. Findings

No findings of significance were identified.

.14 Operator Actions

a. Inspection Scope

The team reviewed selected portions of emergency operating procedures (EOPs), abnormal procedures (APs), annunciator response procedures (ARPs), and operating procedures (OPs) that operators would use to detect and mitigate a steam generator tube leak or tube rupture event. This review was conducted to verify that the procedures were consistent with guidance in the UFSAR and the EOP basis documents. This review included a team observation of the operators' use of the procedures during a simulator exercise of a SGTR event. The team also reviewed the EOP setpoints calculation to verify that the EOPs contained the correct setpoints.

b. Findings

No findings of significance were identified.

.15 Heat Removal

a. Inspection Scope

The team reviewed vendor manuals, design documentation, drawings, surveillance and test procedures, and equipment operating data to assess the reliability and availability of cooling for equipment and equipment spaces required to mitigate the SGTR event. This review was also conducted to verify that equipment operating conditions were consistent with design requirements and vendor recommendations. The equipment reviewed was cooling water to the AFW, safety injection (SI), and centrifugal charging pumps (CCPs).

b. Findings

No findings of significance were identified.

.2 System Condition and Capability

.21 Installed Configuration

a. Inspection Scope

The team performed field walk downs of accessible components in the AFW, CVCS, MS, and SGBD systems to assess general material condition, identify degraded conditions, and verify that the installed configuration was consistent with design drawings and design inputs to calculations. The team performed field walk downs of accessible electrical equipment to assess whether the installed configuration will support system functions under accident conditions. The components inspected included 6900v switchgear, 480v switchgear, AFW pump motors, AFW MOVs, the Unit 2 125v vital

batteries, and their environs. Additionally, the team assessed potential flooding and missile impact on SGTR mitigation equipment. The team also inspected selected controls and indicators for appropriate human factors such as labeling, arrangement, and visibility.

b. Findings

No findings of significance were identified.

.22 Testing

a. Inspection Scope

The team reviewed surveillance testing and inspection documentation to verify design criteria were properly translated into acceptance criteria, were verified by test and maintenance activities, and that system and equipment function was maintained and performance degradation would be identified. This review included response time testing of valves, MOV torque and limit switch settings established in the MOV switch setting calculations, and selected controls and indicators in the control room that operators would use during a SGTR. This review also included selected surveillance procedures which are used for the calibration and functional test of post-accident monitoring (PAM) instruments

The team reviewed data sheets for the last two functional tests and calibrations for the following indication equipment: radiation monitors, steam generator level, steam generator pressure, pressurizer level and RCS cold leg temperature. This review was conducted to determine if the functional test and calibrations were performed at intervals specified by the Technical Specifications (TS) and that any out-of-tolerance measurements or anomalies were addressed within the test procedure or following completion of the procedure.

b. Findings

No findings of significance were identified.

.23 Operation

a. Inspection Scope

During the in-plant procedures walk through and simulator exercise, the team assessed procedure adequacy, operator knowledge, and human factors design of the procedures and related equipment against Nuclear Regulatory Commission (NRC) requirements and guidelines for procedure quality. The team also observed simulator fidelity with the plant as needed to support effective operator training on EOPs. The team performed a walk through and verification of the procedure for refilling the RWST which could be used during a SGTR, to verify accessibility of equipment to be operated and the adequacy of guidance for this activity. Additionally, the team reviewed documented performances of this activity to verify that the licensee had demonstrated successful performance.

b. Findings

No findings of significance were identified.

.24 Design

a. Inspection Scope

The team reviewed load flow and voltage drop calculations to verify that supporting electrical systems would have sufficient capacity and capability to perform under the most limiting conditions required by the design and licensing bases. Calculations were reviewed to verify that they considered degradation of the offsite power source as well as limiting alignments of onsite electrical distribution equipment. The team reviewed operating procedures to verify that appropriate compensatory measures would be implemented when automatic voltage control equipment is out of service. The team reviewed calculation parameters subject to change, or subject to TS required surveillance, to verify that they were periodically verified and adjusted within required limits. Specifically, setpoints and intervals for under voltage relays, and on-load tap changer control calibrations were checked. In addition, the team reviewed outputs of electrical voltage drop calculations to verify that they were properly translated into MOV torque calculations.

The team reviewed design calculations, specifications, and UFSAR accident analysis to identify the design criteria which defined the required capacity and capability of SGTR mitigation equipment. Surveillance test procedures and equipment monitoring activities were reviewed to verify the design criteria was appropriately translated into acceptance criteria. The team reviewed NPSH calculations for the SI, AFW, and CCPs to verify that adequate NPSH was available from each of the applicable water sources. Design changes were reviewed to verify that system and equipment design functions were appropriately evaluated and maintained.

Instrument accuracy calculations prepared for process transmitters, 2-LT-3-43, 2-LT-68-320, 2-LT-3-42, and 2-PT-1-2A were reviewed by the team. This review was performed to verify that design input information required for determining the transmitters' accident accuracy had correctly incorporated accident parameters for which the transmitters had been qualified. Component data sheets for the selected transmitters contained in the calculations were evaluated in order to verify that the design input information was consistent with values contained in the environmental qualification (EQ) binders. Additionally, the team reviewed the accident accuracy calculation for the transmitters in order to verity that inaccuracies due to accident radiation exposure and temperature effect at accident conditions had been included in the analysis.

b. Findings

No findings of significance were identified.

.3 Selected Components

.31 Component Degradation

a. Inspection Scope

The team reviewed maintenance and testing documentation, performance trending, and equipment history as identified by in-service test program trending, work orders, system health reports, and PERs to assess the licensee's actions to verify and maintain the safety function, reliability and availability of selected components. Also reviewed was the potential for common cause failure mechanisms due to flooding, maintenance, parts replacement and modifications. The selected components included: SG PORVs/secondary atmospheric reliefs (PCV-1-5,-12,-23,-30), PORV block valves (VLV-1-619,-620,-621,-622), SG safety valves (AFV-522 thru 526, et. al), SG blowdown isolation valves (FCV-1-181 thru 184), AFW SG inlet Iso valves (LCV-3-174, -64-,164A, et. al), TDAFW pump steam supply isolation valves (FCV-1-15,-16), AFW pumps, and charging pumps. Electrical equipment included switch yard and safety related portions of the electrical distribution system, including load tap changers, under voltage relays, vital batteries, and power circuit breakers.

b. Findings

No findings of significance were identified.

.32 Equipment/Environmental Qualification

a. Inspection Scope

The team reviewed load flow calculations, vendor correspondence, and qualification documentation to verify that the increased horsepower requirements for the charging pump motors, resulting from replacement of the pump impeller, did not shorten the qualified life of the motor, or increase motor running temperature beyond acceptable limits.

The team reviewed EQ binders SQNEQ-XMTR-001 and SQNEQ-1PT-002 in order to verify the accident parameters involving temperature, pressure, humidity, radiation and spray type for which selected instrument loops components were qualified. The scope of the review included the following field installed transmitters used during an SGTR event; 2-LT-3-43, 2-LT-68-320, 2-LT-3-42, and 2-PT-1-2A.

b. Findings

No findings of significance were identified.

.33 Operating Experience

a. Inspection Scope

The team reviewed the licensee's applicability evaluations and corrective actions for

selected industry experience issues related to turbine driven AFW pumps, MOVs, and service water system piping as related to SGTR mitigation equipment. Additionally, operating experience issues related to other SGTR equipment for the past two years were reviewed. The team reviewed the licensee response to Information Notice 95-05 regarding the effect of harmonic distortion on under voltage relays.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed selected SGTR mitigation equipment problems identified in the licensee's corrective action program to assess the adequacy of the corrective actions to prevent recurrence and the scope of broadness reviews to other plant equipment. In addition, the team reviewed work orders on risk significant equipment to evaluate failure trends. The team also reviewed the licensee's performance in the identification of procedural deficiencies.

b. Findings

No findings of significance were identified.

4. Other Activities

40A6 Meetings, Including Exit

The lead inspector presented the inspection results to Mr. D. Koehl, and other members of the licensee staff, at an exit meeting on February 28, 2003. The licensee acknowledged the findings presented. Proprietary information is not included in this inspection report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Beasley, Site Quality Manager
R. Gladley, Electrical Engineering Design Manager
R. Goodman, Training Manager
J. Hamilton, Site Support Manager
D. Koehl, Plant Manager
M. Lorek, Assistant Plant Manager
D. Lundy, Engineering Manager
R. Proffitt, Nuclear Engineer
R. Rodgers, Engineering Design Manager
P. Salas. Licensing Manager
J. Thomas, Mechanical Engineering Supervisor
E. Truman, Operations Manager
J. Wilkes, Maintenance Manager

NRC (attended exit meeting)

C. Casto, RII, Division of Reactor Safety, Director
S. Freeman, Senior Resident Inspector

LIST OF DOCUMENTS REVIEWED

Procedures

NADP-3, Managing the Operating Experience Program, Rev. 3
OPL271S607, AOP(S.01, R.01, C.03), Rev. 1
OPL2730134, Steam Generator Tube Rupture, Rev. 1
OPL271S636, SGTR (E-3, AOPs, R.01, S.01, C.01) Rev. 1
OPL271S642, SGTR (E-3, AOPs, C.01, S.01), Rev. 1
E-2, Faulted Steam Generator Isolation, Rev.10
E-3, Steam Generator Tube Rupture, Rev. 13
1-SI-CEM-068-137.5, Primary-to-Secondary Leakage vis Steam Generator, Rev. 18
0-SI-CEM-030-415.0, Gaseous Effluent Requirements (Noble and Tritium), Rev. 17
0-SI-CEM-000-050.O, 72-Hour Chemistry Requirements, Rev. 14
0-SI-CEM-077-400.1, Liquid Waste Effluent Batch Release, Rev. 13
AOP-R.01, Steam Generator Tube Leak, Rev. 13
0-SI-OPS-068-137.0, Reactor Coolant System Water Inventory, Rev.10
1-SI-IFT-090-099.0, Functional Test Of Condenser Vacuum Pump Air Exhaust Radiation Monitor1-R-90-99, Rev. 12
1-SI-ICC-090-099.0, Channel Calibration of Condenser Vacuum Pump High Range Air Exhaust Radiation Monitor 1-R-90-99, Rev. 3
1-RA-90-99B, CNDS VAC PMP LO RNG AIR EXH MON INSTR MALFUNC
TI-16.1.3, Sampling Methods-Condenser Vacuum Exhaust Radiation Monitors, Rev.6
2-SI-SXP-003-201.B, Motor Driven AFWP 2B-B Performance Test, Rev. 8
2-SI-SXP-003-201.S, Turbine Driven AFWP 2A-S Performance Test. Rev. 13
1-PI-OPS-000-002.0, Monitoring of EOI Support Items, Rev. 12
SEQ-SQS2-0110, Emergency Operating Procedure Setpoints, Rev. 8
CRP-LIC-00-006, Use of NER Information and Effective Closure of Significant Issues at BFN, SQN, WBN, September 1, 2000
1-SI-ICC-068-018.1, Channel Calibration of RCS Cold Leg Temperature Loop 1, Rev. 5
1-SI-OPS-082-026.A, Loss of Offsite Power with Safety Injection-D/G 1A-A Test, Test Sequence Four, Rev. 24
1-SI-OPS-003-005.M, Auxiliary Feedwater Valve Position Verification, Rev. 1
0-SI-SXP-067-201.J, Essential Raw Cooling Water Pump J-A Performance Test, Rev. 4
Surveillance Procedure, 2-SI-ICC-003-043,Channel Calibration of Steam Generator Level, (Wide Range) Channel II Loop1 Rack 6, Loop L-3-43, Rev. 6
Surveillance Procedure, 2-SI-ICC-001-02A.1,Channel Calibration of Steam Generator Loop 1 Steam Pressure, Channel 1 Rack 3 Loop P-1-2A,Rev. 7
Surveillance Procedure, 2-SI-ICC-090-120.0,Channel Calibration of Steam Generator Level 1 Channel IV Rack 12 Loop L-3-42,Rev. 6
Surveillance Procedure, 2-SI-ICC-001-02A.1,Channel Calibration of Steam Generator Blow down Liquid Sample Monitor 2-R-90-120,Rev. 10
Surveillance Procedure, 2-SI-ICC-068-320.3,Channel Calibration of Steam Generator Pressurizer Level 1, Channel III Rack 9 Loop L-68-320,Rev. 9
Surveillance Procedure 2-SI-ICC-003-043,Channel Calibration of Steam Generator Level (Wide Range) Channel II Loop1 Rack 6, Loop L-3-43, Start date 4/24/2, Completion Date 5/1/2

Surveillance, Procedure 2-SI-ICC-001-02A.1, Channel Calibration of Steam Generator Loop 1 Steam Pressure, Channel 1 Rack 3 Loop P-1-2A, Start date 1/7/2, Completion Date 1/7/2
Surveillance Procedure 2-SI-ICC-090-120.0, Channel Calibration of Steam Generator Level 1 Channel IV Rack 12 Loop L-3-42, Start date 4/23/2, Completion Date 4/24/2
Surveillance Procedure 2-SI-ICC-001-02A.1,Channel Calibration of Steam Generator Blow down Liquid Sample Monitor 2-R-90-120, Start date 3/27/2, Completion Date 3/30/2
Surveillance Procedure 2-SI-ICC-068-320.3,Channel Calibration of Steam Generator Pressurizer Level 1 Channel III Rack 9 Loop L-68-320,Start date 5/7/2, Completion Date 5/15/2
PM# 058640000, CSST A Tap Changer Relay Calibration, Rev. 11
PM# 053960021, CSST A Tap Changer Inspection, Rev. 02
0-AR-55-ECB6-A, Electrical Control Board, Rev. 26
0-AR-ECB6-A, Electrical Control Board 0-XA-44-ECB6-A, Rev. 26
0-GO-10, Electrical Apparatus Operation, Rev. 14
0-SI-OPS-082-007.W, AC Electrical Power Source Operability Verification, Rev. 6
1-SI-EDC-202-220.A, Setpoint Verification and Calibration for Time Delay Relays Associated with Automatic Sequence Timers. Rev. 8
1-SI-OPS-000-003.W, Weekly Shift Log, Rev. 31
1-SI-OPS-082-026.A, Loss of Offsite Power with Safety Injection – D/G 1A/A Test, Rev. 27
1-SI-OPS-202-253.A, Functional Test of Loss of Voltage Relays on 6.9kV Shutdown Board 1A-A, Rev. 5
1-SI-TDC-202-235.A, 6.9kV Shutdown Board Loss of Voltage and Degraded Voltage Relay Calibration train A (18 Months), Rev. 8
GOI-6, Apparatus Operations, Rev. 87
MI-10.5, Westinghouse Type DS Breaker Maintenance, Rev. 61
SWYD-18, Plant Voltage Schedule, Rev. 20\
2-SI-OPS-082-026.A, Loss of Offsite Power with Safety Injection-D/G 2A-A Test, Rev. 27
1-PI-TFT-082-102.A, Functional Test of the Diesel Generator 1A-A Protective Relays, Rev. 1
-SI-OPS-000-009.0, Actuation of Automatic valves Via SO Signal for Non-testable Boric Acid and ECCS Flow Path Valves, Rev. 19
0-SI-SXV-001-266.0, ASME Section XI Valve Testing, rev. 16
EA-1-2, Local Control of S/G PORVs, Rev. 2
EA-63-2, Refilling the RWST, Rev.2
0-MI-IDC-001-001.0, Adjustment of Main Steam Atmospheric Relief and Steam Dump Valves, Rev. 2
0-PI-CEM-032-002.0, Auxiliary Building Control Air Quality Test, performed 7/9/02, 7/12/01
MI-10.38, Maintenance Instruction - ASCO Solenoid Valves, Rev. 13
0-MI-EMV-317-144.0, Procedure for Testing MOVs using MOVATS Signature Analysis System, Rev. 1
O-SO-62-7, Boron Concentration Control, Rev. 20
2-SI-SXV-068-201.0, Pressurizer PORV Operability Test, Rev.3
0-SI-SXV-068-266.0, ASME Section XI Valve Testing, Appendix E, PRZR PORV Block Valve, Rev. 7
1-SI-SXV-000-201.1, Full Stroking of Category A and B Valves Required in All Modes, Rev. 4

PERs (Problem Evaluation Reports)

02-001160-000, Operating Experience Item, CST Diaphragm Replaced with Nitrogen Sparger
01-004937-000, 1-FCV-2-35, 1-FCV-2-35 Failed due to Failed Power Supply for Transmitter
00-006348-000, Review of INPO SEN 00-213
01-007255-000, U 1 Inboard Turbine Bearing Near Miss
01-000715-000, TDAFWP New Packing (Rains-Flo)
02-005087-000, 2B-B CCP Pump Run 5-6 Minutes Without a Suction Path
99-001994-000, U2 TDAFWP Trip & Throttle Valve Would Not Open due to Foreign Material
00-002113-000, Valves 1-LCV-3-174 and 175 Slow Stroke Times
00-011625-000, Valve 2-LCV-3-164A Failed Valve Stroke Time Test
02-000785-000, Valve 1-LCV-3-171A Excessive Exhaust From Pilot valve
02-009749-000, AFW Level Control Valves Air Supply Pressure Exceeds Vendor Recommendations
02-013981-000, Unit 1 TDAFWP Sump Degraded
00-001507-000, CCP 1A-A Discharge Check Valve Improperly Assembled
01-008061-000, Operating Experience Item on Borg-Warner Swing Check Valves
02-005418-000, 2B-B CCP Replacement Pump Horse Power Increase ???
01-009704-000, ERCW/AFW Supply Line Piping Silt Build up
02-009559-000, OE Item - NRC IE Notice 2002-18, Effect of Adding Gas into Water Storage Tanks on the NPSH for Pumps
00-001497-000, Auxiliary Building High Energy Line Break Temperature Recorders Calibration Requirements.
02-004810-000, DCN No. D20025A implemented without re-scaling level transmitter.
02-006444-000, Spurious actuation of Unit 1 low NPSH at MFP alarm.
02-003839-000, Design calculation SQN-SQS2-0137 discrepancies related to tritium project and BOP upgrade.
00-005015-000, SSD 2-F-30-157 calibration frequency discrepancy with maintenance procedures.
00-007050-000, CSST “B and C” tap changer control relay calibration PM time delay tolerance.
02-005418-000, Increased brake horsepower for CCP pump motor, 05/14/2002
02-004186-000, Battery post seal corrosion, 04/17/2002

Drawings

Drawing No. 1-47W610-1-1, Mechanical Control Diagram, Main Steam System, Rev. 14.
Drawing No. 1-47W610-1-2, Mechanical Control Diagram, Main Steam System, Rev. 10.
Drawing No. 1-47W610-1-3, Mechanical Control Diagram, Main Steam System, Rev. 4.
Drawing No. 1-47W610-1-5, Mechanical Control Diagram, Main Steam System, Rev. 2
Drawing No. 1,2-47W610-2-1, Mechanical Control Diagram, Condensate System, Rev. 25
Drawing No. 1-47W610-3-1, Mechanical Control Diagram, Main & Auxiliary Feed water System, Rev. 10
Drawing No. 1-47W610-3-2, Mechanical Control Diagram, Main & Auxiliary Feed water System, Rev. 16

Drawing No. 1-47W610-3-3, Mechanical Control Diagram, Main & Auxiliary Feed water System, Rev. 17
Drawing No. 1-47W610-68-1, Mechanical Control Diagram, Reactor Coolant System, Rev. 15
Drawing No. 1-47W610-68-5, Mechanical Control Diagram, Reactor Coolant System, Rev. 19
Drawing No. 1-47W610-68-10, Mechanical Control Diagram, Reactor Coolant System, Rev. 7
Drawing No. 1,2-47W611-1-1, Mechanical Logic Diagram, Main and Reheat Steam, Rev. 13
Drawing No. 1,2-47W611-1-3, Mechanical Logic Diagram, Main and Reheat Steam, Rev. 11
Drawing No. 1,2-47W611-3-1, Mechanical Logic Diagram, Feed water Pump Turbine Aux, Rev. 6
Drawing No. 1,2-47W611-3-2, Mechanical Logic Diagram, Feed water System, Rev. 16
Drawing No. 1-47W611-68-1, Mechanical Logic Diagram, Reactor Coolant System, Rev. 3
Drawing No. 1-47W611-68-3, Mechanical Logic Diagram, Reactor Coolant System, Rev. 1
Drawing No. 1,2-45W668-1, Wiring Diagrams, Reactor Coolant System, Schematic Diagrams, Rev. 20
Drawing No. 1,2-45N779-41, Wiring Diagrams, 480V Shutdown Aux Power, Schematic Diagrams Sheet 41, Rev. 10
Drawing No. 2-45w646-6, Wiring Diagrams, Feed Water Pump & Turbines, Schematic Diagrams, Rev. 14
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