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REVISED SEQUOYAH NUCLEAR PERFORMANCE PLAN

TENNESSEE VALLEY AUTHORITY

JULY 1986



Revision 3

REVISED SEQUOYAH NUCLEAR PERFORMANCE PLAN

PART 2 - UNIT 1 PROGRAMS

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BIT	Boron Injection Tank	Table 2	
CAQR	Condition Adverse to Quality	II	
CCP	Centrifugal Charging Pump	Table 2	
CCTS	Corporate Commitment Tracking System	IV	
CI	Containment Isolation	Table 2	
CNPP	Corporate Nuclear Performance Plan	Executive	Summary
CVCS	Chemical Volume Control System	Table 2	
DBVP	Design Baseline and Verification Program	I.2.0	
DNE	Division of Nuclear Engineering	III.3.0	
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ECN	Engineering Change Notice	II	
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FCV	Flow Control Valve	Table 2	
FSAR	Final Safety Analysis Report	III.1.0	
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IE	Inspection and Enforcement	I.4.1	
LDCR	Local Design Change Request	III.2.0	
NCR	Nonconformance Report	III.2.0	
NRC	Nuclear Regulatory Commission	Executive	Summary
OL	Operating License	III	
ONP	Office of Nuclear Power	III.2.0	
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RCS	Reactor Coolant System	Table 2	
RHR	Residual Heat Removal	Table 2	
RTI	Restart Test Instruction	V	
RWST	Refueling Water Storage Tank	Table 2	
SAL	Sequoyah Activities List	I.4.4	
SALP	Systematic Assessment of Licensee Performance	I.3.0	
SCR	Significant Condition Report	II.2.0	
SG	Steam Generator	Table 2	
SGBD	Steam Generator Blowdown	Table 2	
SIS	Safety Injection System	Table 2	
SNPP	Seguovah Nuclear Performance Plan	Executive	Summary
SON	Seguovah Nuclear Plant	Executive	Summary
TACF	Temporary Alteration Control Form	II.2.0	
TROI	Tracking and Reporting of Open Items	I.4.3	
TVA	Tennessee Valley Authority	Executive	Summary
USOD	Unreviewed Safety Question Determination	II.2.0	
VCT	Volume Control Tank	Table 2	





REVISED SEQUOYAH NUCLEAR PERFORMANCE PLAN PART 2 - UNIT 1 PROGRAMS

EXECUTIVE SUMMARY

The Sequoyah Nuclear Plant (SON) consists of two units each rated at 1148 MW net electrical output. These units were voluntarily shut down by the Tennessee Valley Authority (TVA) in August 1985 because of guestions about the environmental gualification of electrical equipment. Additional questions and concerns were subsequently raised about the overall adequacy of TVA's nuclear program and Sequoyah remained shut down until adequate corrective actions were defined to address the root causes of TVA's nuclear program problems. On September 17, 1985, the Nuclear Regulatory Commission (NRC) requested, pursuant to 10 CFR 50.54(f), that TVA submit information regarding its plans for correcting Sequoyah problems and for correcting problems in the overall management of its nuclear program. The NRC also requested that this information be submitted before TVA restarted Sequoyah. In response to this request, TVA prepared a Corporate Nuclear Performance Plan (CNPP) which identified the root causes of the problems in the management of TVA's nuclear program and described TVA's plans for correcting those problems. Additionally, TVA prepared a Sequoyah Nuclear Performance Plan (SNPP) which identified the root causes of problems specifically related to Sequoyah, plans for correcting these problems, and responded to the NRC's request for Sequoyah-specific information.

The SNPP identifies the root causes of problems specifically related to Sequoyah and the plans for correcting those problems. Part 1 of the SNPP is specifically directed to the programs associated with restart of unit 2. Part 2 of the SNPP is directed to the unit 1 restart programs that are different from unit 2.

The Sequoyah unit 1 restart programs' content, scope and schedule considered the experience gained from the unit 2 restart effort and the completion of the common-unit work necessary for unit 2 restart. An evaluation of the unit 2 programs described in Part 1 of this volume and the correspondence between TVA and NRC was performed to determine their applicability to unit 1. This evaluation concluded that 40 of the 44 unit 1 programs are identical to the unit 2 programs. The remaining four unit 1 programs are different either because of lessons learned from unit 2 or they are unique to unit 1 restart. Since most of the programs associated with unit 2 are the same for unit 1 and have been reviewed and approved by the NRC, Part 2 of the SNPP is only directed to the four unit 1 programs that are different from unit 2.

I. INTRODUCTION

1.0 PURPOSE

Since submission of the original Sequoyah Nuclear Performance Plan (SNPP), TVA has significantly changed its nuclear management, highlighted by the contract with Mr. Steven A. White to be the Manager of Nuclear Power. Mr. White, the primary motivating force behind TVA's program improvements, directed a reevaluation of TVA's approach for correcting the problems that have arisen. The results of the reevaluation for Sequoyah were addressed in revision 1 to the SNPP (reference 1). The revised plan completely superseded and replaced the SNPP submitted on November 1, 1985. Revision 2 to the SNPP was submitted on July 2, 1987 to correct editorial errors and update Part 1 Section IV, Summary of Sequoyah Activities (reference 2). This revision to the SNPP provides a new Part 2 which covers the unit 1 restart programs that are different from the unit 2 restart programs described in Part 1.

This revised SNPP in combination with the most recent revision of the CNPP describes the measures which TVA is taking to improve its nuclear program for Sequoyah. It identifies actions to correct the problems which have impacted management and operation of Sequoyah. The SNPP not only responds to the NRC's specific request (reference 3) for information under 10 CFR 50.54(f) on TVA's Sequoyah specific activities but also presents an integrated plan for addressing the NRC's general interest in the safe operation of the plant.

2.0 PLAN ARRANGEMENT

The SNPP is arranged into two major parts. Part 1 - which addresses the unit 2 programs required for restart. Part 2 - which addresses the four unit 1 restart programs that are different from the unit 2 programs as identified in R. L. Gridley's letter to NRC dated March 31, 1988 (reference 4). Part 2 is divided into five major sections. This introductory section (Section I -Introduction) discusses the purpose of Part 2 of the SNPP, the background of SQN operation, and outlines TVA's approach to identifying unit 1 restart program differences.

The second section (Section II - Civil Engineering Program) describes the activities that comprise the civil engineering program for unit 1.

The third major section (Section III - Design Baseline and Verification Program) addresses the design baseline and verification program (DBVP) for unit 1.

The fourth section (Section IV - Restart Activities List) addresses the identification and tracking of the important activities ongoing at Sequoyah including both long-term and those required for plant restart. This section includes a discussion of the methodology used to identify restart items that are applicable to Sequoyah unit 1 including commitments both internal to TVA and those made by TVA to the NRC. The Restart Activities List also classifies each item on it as restart or non-restart and it reports the current status of each item.

The fifth section (Section V - Operational Readiness Program) describes the program which will provide the Site Director with ma agement review to ensure that activities, programs, and commitments required for restart are completed. The Operational Readiness Program will provide information on which the Site Director will recommend to the Manager of Nuclear Power that unit 1 is ready for restart.

A references section following Section V includes a composite listing of the references used in Part 2 of the SNPP.

3.0 BACKGROUND

The Sequoyah Nuclear Plant is a two-unit nuclear power plant located approximately 7.5 miles northeast of the city limits of Chattanooga in Hamilton County, Tennessee. Each of the two identical units employs a pressurized water reactor nuclear steam supply system with four coolant loops furnished by Westinghouse Electric Corporation. The balance of plant has been designed, built, and is operated by TVA. Each of the two reactor cores is rated at 3411 MWt and each unit is rated at 1148 MW net electrical output.

Unit 1 began commercial operation on July 1, 1981, and unit 2 began commercial operation on June 1, 1982. Because of questions about the environmental qualification of electrical equipment at Sequoyah, TVA voluntarily shutdown unit 2 on August 21, 1985, and unit 1 on August 22, 1985. These and other events, which reflected adversely upon the quality of performance of TVA's nuclear activities, led to a thorough evaluation of the TVA nuclear program, including its management and operation of Sequoyah.

On September 17, 1985, NRC issued a Systematic Assessment of Licensee Performance (SALP) report of TVA's nuclear activities (enclosure 1 to reference 3). This report identified a number of weaknesses in the conduct of TVA's nuclear activities. Based upon the conclusions in this report and the history of TVA's nuclear activities, NRC concluded that TVA had "demonstrated ineffective management of its nuclear program." NRC requested that TVA develop corrective action for the "programmatic and management deficiencies that have contributed to the continued poor direction and control of nuclear activities, and for the Sequoyah specific deficiencies that have contributed to weaknesses in the areas of maintenance and quality assurance and administrative controls affecting quality." Although the NRC recognized that TVA had already taken some actions to address these issues, the NRC requested pursuant to 10 CFR 50.54(f) that TVA specify in writing its corrective actions before restart.

4.0 OUTLINE OF TVA'S APPROACH TO IDENTIFYING UNIT 1 RESTART PROGRAM DIFFERENCES

In order to develop the Sequoyah unit 1 restart program, an evaluation of the unit 2 programs identified in Part 1 of the SNPP and the correspondence between TVA and NRC was performed. Each unit 2 program was evaluated by the manager responsible for the implementation of that program. These evaluations concluded that 40 of the 44 unit 1 programs are identical to the unit 2 programs and therefore have been reviewed and approved by the staff with the issuance of the unit 2 Restart Safety Evaluation Report (reference 5). The remaining four programs are different because of lessons learned from unit 2 or they are unique to unit 1. Table 1 shows the results of these evaluations.

The four unit 1 programs that are different from unit 2 are: the Civil Engineering Program: the Design Baseline and Verification Program; the Restart Activities List; and the Operational Readiness Program. A brief description of the differences between units 1 and 2 for these four programs is provided below.

4.1 Civil Engineering Program

The Civil Engineering Program for unit 1 is essentially the same as unit 2's program except a final report will be submitted on Inspection and Enforcement (IE) Bulletin 79-14 for unit 1.

4.2 Design Baseline and Verification Program

The unit 1 DBVP is the same as the program for unit 2 with the following two exceptions: the unit 1 DBVP takes credit for reviews already done under the unit 2 program; and responsibility for the review of testing has been transferred to TVA's restart test program.

4.3 Restart Activities List

The identification and tracking of unit 1 restart items are accomplished by the use of TVA's Tracking and Reporting of Open Items (TROI) system rather than the Sequoyah Activities List (SAL) used for unit 2.

4.4 Operational Readiness Program

The unit 1 program focuses on activity closure rather than on program and management system evaluations, which were performed for unit 2 restart. The unit 1 program will be accomplished by implementation of a startup prerequisite checklist similar to that used for unit 2 restart. However, the unit 1 prerequisite checklist will also address the adequacy of staff support for two-unit operation.

TABLE 1 COMPARISON OF UNIT 1 RESTART PROGRAMS WITH UNIT 2 PROGRAMS

	ITEM	UNIT 1 PROGRAMS THAT ARE IDENTICAL TO UNIT 2	UNIT 1 PROGRAMS THAT ARE DIFFERENT FROM UNIT 2
1.	ENVIRONMENTAL QUALIFICATION	X	
2.	DESIGN BASELINE AND VERIFICATION PROGRAM	그는 말 것 같아요. 이 같아.	X ()
3.	CABLE TRAY SUPPORT ANALYSIS	X	
4.	DESIGN CALCULATIONS REVIEW	x	
5.	ALTERNATELY ANALYZED PIPING AND SUPPORTS	X	
6.	MAIN STEAM LINE BREAK TEMPERATURE ISSUES	X	
7.	FIRE PROTECTION-APPENDIX R	X	 A state of the state of the state
8.	PLANT WELDING PROGRAM	X	
9.	SENSE LINE ISSUES		
	a) SENSE LINE SLOPE	X	
	b) COMPRESSION FITTING PROBLEM	X	the state of the state
	C) TEFLON TAPE	X	
10.	WALL THINNING ASSESSMENT PROGRAM	X	
11.	RESTART TEST PROGRAM	X	
12.	COMPONENT AND PIECE PART QUALIFICATION	X	
13.	ELECTRICAL ISSUES		
	a) CABLE AMPACITY	X	
	b) CABLE PULLING	X(2)	
	c) FUSES	X	
14.	CONTAINMENT ISOLATION DESIGN REVIEW	X	
15.	MISCELLANEOUS PROGRAM		
	a) MISC CIVIL ENGINEERING ISSUES		X(3)
	b) MODERATE ENERGY LINE BREAK FLOODING	X	
	C) CONTAINMENT COATINGS	x	
	d) ECCS WATER LOSS OUTSIDE THE CRANE WALL	1 x	
	e) PLATFORM THERMAL GROWTH	l û	
	F) HEAT CODE TRACEABILITY	ÎŶ	
16.	TECHNICAL SPECIFICATIONS	Ŷ	
17.	TRAINING	l Q	
18.	PROCEDURES	l û	
19.	CORRECTIVE ACTION	Q	
20.	QUALITY ASSURANCE		
21.	EMPLOYEE CONCERNS		
22.	NEW DESIGN CONTROL PROCRAM	1 0 1	
23	SUPVETILANCE INSTRUCTION PROCEDURES PROC	1 0	
24	MAINTENANCE	1 ^	
	A) MANAGEMENT THUNI VENENT		
	b) MAINTENANCE INSTRUCTION ENHANCEMENT	1.0	
	C) PREVENTIVE MAINTENENCE		
	A) MAINTENANCE TRAINING		
	a) ADDITIONAL MAINTENANCE DECTADY ACT	1.0	
25	OPEDATIONAL DEADINESS BEUTEU		
26	PADIAL ACTUAL CONTROL		*
27	OPEDARTI ITY DEVIEW		
28	FUNCTIONAL TECTING	÷.	
20	CEOLOVAH ACTIVITIES LICE		
20	DDACIDEMENT (4)		X
21	CONTROL BOOM DESTON DEVIEW(4)		
415	CONTROL ROUT DESIGN REVIEW	1 <u> </u>	Annual Contraction of
	TOTAL	40	4

Notes: (1) Unit 1 program takes credit for unit 2 reviews that are applicable. Review of testing transferred to restart test program.

(2) Fieldwork for vertical cable support pads for affected 10 CFR 50.49 silicone rubber cables inside unit 7 containment.

(3) Unit 1 program will submit a response to IE Bulletin 79-14.

(*) These items were described in correspondence between TVA and NRC and are not included in the SNPP.

II. CIVIL ENGINEERING PROGRAM

Several activities are included in what is called the civil engineering program for unit 1. Those activities include: preparation and submittal of the response to IE Bulletin 79-14 for unit 1; verification of alternate analysis calculations; regeneration of missing rigorous analysis pipe support calculations; and restart resolution of 140 Condition Adverse to Quality Reports (CAQRs), 40 Engineering Change Notices (ECNs), several audit findings, and employee concerns. The unit 1 restart program is essentially the same as unit 2 except a final report will be submitted on IE Bulletin 79-14 for unit 1.

Unit 1 work items have been planned and scheduled to: perform necessary functional verification walkdowns; evaluate and disposition outstanding restart documentation; regenerate calculations as necessary; issue required pipe support modifications to meet design bases; and field-complete pipe support modifications required by interim pipe support design criteria. The total scope for this program will consist of approximately 25,000 feet of piping and 2800 pipe supports that have been rigorously analyzed. This program, which began September 1987, will be completed before restart of unit 1.

III. DESIGN BASELINE AND VERIFICATION PROGRAM

The Sequoyah Design Baseline and Verification Program (DBVP) has been established to assess the adequacy of past modification work and correct deficiencies. This program has been designed to address the design control issues by:

- Verifying and establishing the plant functional configuration.
- Reconstructing the design basis.
- Reviewing and evaluating modifications since Operating License (OL) issuance against the design basis.
- Performing the modifications developed from this review and evaluation.

1.0 PROGRAM SCOPE

The implementation of this program has been structured into two phases. The pre-restart phase carries out the program for the systems required to mitigate Final Safety Analysis Report (FSAR) Chapter 15 accidents and provide for safe shutdown.

The systems or portions of systems covered by the pre-restart program are listed in Table 2. These system boundaries were selected by a determination of what systems and portions of systems are required to mitigate FSAR Chapter 15 design basis accidents and provide for safe shutdown. The set of systems and/or portions of systems that mitigate these events were identified by marked prints of the system flow diagrams, electrical single line diagrams, and control diagrams. The results of this effort are documented in a calculation package.

The post-restart phase will continue the engineering activities to complete engineering documentation describing the functional as-constructed configurations.

The post-restart phase will extend the program to system corrections not required for restart, and to other safety-related systems.

2.0 PROGRAM DESCRIPTION (PHASE I)

This program is divided into the four major areas discussed below. Individual procedures were prepared for the implementation of this program. Upon issuance of these procedures, personnel were trained in their areas of responsibility. Design Criteria/Design Basis

Design basis documents for the systems or portions of the systems covered by the pre-restart phase were developed. Procedures have been developed to define the licensing commitments review process and contro! preparation of design criteria/design basis documents. These procedures were used to perform the licensing review process and prepare/compile design basis documentation.

System Walkdown/Test

The drawings reviewed were the control room drawings (i.e., flow diagrams, single line drawings, and control diagrams) depicting the systems listed in Table 2.

Procedures were developed for system walkdowns to verify the configuration for process flow for mechanical and fluid systems. Instrumentation and control (I&C) systems include confirmation by walkdown/tests that the control device functions and that its associated root valve is verified. Functional test requirements are provided by the DBVP to TVA's Restart Test Program.

Evaluation of ECNs and Other Changes

ECNs and other system changes [e.g., Nonconformance Reports (NCRs)/Significant Condition Reports (SCRs), Temporary Alteration Control Forms (TACFs), Local Design Change Requests (LDCRs), and Field Change Requests (FCRs)] initiated since OL issuance were evaluated against the design bases. Procedures are developed for the control of these processes.

Modification ECNs were categorized into three groups: (1) fully implemented, (2) partially implemented, and (3) unimplemented.

The evaluation of other change documentation, such as dispositioned NCRs/SCRs, TACFs, LDCRs, and FCRs, ensures that appropriate engineering evaluation has been performed, that appropriate corrective actions have been taken, and that related documentation is in order. This includes an evaluation of SCRs/NCRs which were transferred to and tracked by the Office of Nuclear Power (ONP).

System Evaluations and Corrective Actions

The walkdown test data and design and modification documentation were compared to the licensing commitments and the design basis for an engineering evaluation. The results

Revision 3

of previous verification and data gathering activities of this program were used to evaluate whether the modifications since OL, to selected systems or portions of systems covered by this program, fulfill their functional design requirements.

The partially implemented and unimplemented ECNs were evaluated to determine if their implementation is required for restart.

The evaluation process that was performed during the pre-restart phase determined if the system modifications have degraded the system's ability to perform its safety function as required to mitigate events described in FSAR Chapter 15 and meet the design basis. This evaluation was based upon documented engineering analysis.

Actions required to resolve discrepancies identified in the system evaluation and/or technical review are being implemented. This may require modification to the plant configuration with corresponding drawing changes, design basis document changes, and/or licensing commitment changes. Corrective actions are being reviewed for potential impact on design inputs.

Necessary modifications are being made to the original flow diagrams, single line drawings, and control diagrams located in the control room.

The following items will be issued for each system or portion thereof:

- Design Criteria
- System Evaluation Report
- Unreviewed Safety Question Determination (USQD) for pre-restart modifications

3.0 INDEPENDENT REVIEW

The Division of Nuclear Engineering's (DNE's) Engineering Assurance is performing an independent oversight review of the DBVP. This review provides added assurance that the engineering activities associated with the program are conducted in a technically adequate manner and in accordance with the written procedures prepared specifically for this effort.

The independent team of experienced technical personnel is monitoring, on a sample basis, the DBVP as the project completes its document preparation, document revisions, and/or review. This review will:

- Confirm and validate that engineering activities are being conducted in accordance with the approved program plan and procedures established for the DBVP.
- Confirm functional and technical adequacy of system evaluations and completeness/correctness of supporting documentation.
- Verify that corrective actions resulting from these evaluations have been documented and implemented.

All of the above actions will be completed prior to restart.

TABLE 2

SYSTEMS REQUIRED TO MITIGATE FSAR CHAPTER 15 EVENTS AND SAFELY SHUTDOWN THE PLANT

System No.	System Name	Portions Required for Safe Shutdown
1 & 15	Main Steam and Steam Generator Blowdown (SGBD) System	From anchor at exit of valve vault through the steam generator (SG) including the headers up to and including the safety and relief valves and from the outboard containment isolation (CI) valve to the SG for the SGBD system.
3	Main Feedwater System	From the main feedwater regulating valves through the steam generators including instrumentation on the steam generators.
3	Auxiliary Feedwater	Entire system except pump suction and pump recirculation from the condensate storage tank.
18	Fuel Oil	From 7-day to 1-day tank.
26	High Pressure Fire Protection	Containment isolation portion only.
30	Ventilation	Air return fans, containment isolation for instrument room chilled water system, and reactor building purge system, con- tainment vacuum relief system, turbine- driven auxiliary feedwater pump room ventilation, safety features equipment coolers, shutdown transformer room ventilation, diesel generator building ventilation, auxiliary building secondary containment enclosures, and auxiliary building gas treatment system (ABGTS).
31	Air-Conditioning	Main control room air-conditioning, control building emergency pressurization system, control building air cleanup and habitability zone isolation system, isolation for postaccident sampling facilities, control building battery room exhaust fans, and control building electric board room air-conditioning. Cooling for the shutdown board rooms, auxiliary control room, and battery board room.

TABLE 2 (continued)

System No	2. <u>System Name</u>	Portions Required for Safe Shutdown
32	Control Air	Auxiliary control air portion of the system from the auxiliary control air compressor through the essential control air header to the devices being supplied with essential control air.
43	Postaccident Sampling	Portions of the system required for containment isolation.
46	Feedwater Controls	Controls required for the operation of the auxiliary feedwater pump turbine.
59	Demineralized Water and Cask Decontamination	Containment isolation portion only.
61	Ice Condenser	The ice condenser consists of the lower support structure, turning vanes, lower inlet doors, ice baskets and supporting structure, intermediate deck doors, upper plenum, top deck blanket, and the 12-inch drain lines from the ice condenser.
62	Chemical Volume Contol System (CVCS)	Emergency core cooling system (ECCS) portion - from flow control valve (FCV)-62-132/133 [downstream of volume control tank (VCT)] up to and including FCV-62-90/91, miniflow for centrifugal charging pump (CCP) up to and including FCV-62-98/99, reactor coolant pump (RCP) seal injection and return, refueling water storage tank (RWST) to CCP, and CCP to the reactor coolant system (RCS) cold leg via boron injection tank (BIT) (excluding BIT recirculation).
63	Safety Injection System	Entire system - RWST to safety injection system (SIS) pumps to residual heat removal (RHR) system lines to RCS (both primary, cold leg, and alternate, hot leg) except for check valve leak test system.
65	Emergency Gas Treatment	Entire system is required to maintain required vacuum on the annulus and provide air cleanup.

TABLE 2 (continued)

System No.	System Name	Portions Required for Safe Shutdown
67	Essential Raw Cooling Water (ERCW)	Entire system is required except for old ERCW pumping station, small sections that enter the turbine building, and discharge from the overflow structure to the cooling towers.
68	Reactor Coolant System	Entire system except pressurizer relief tank, safety and relief valve discharge line, automatic controls for the pressurizer relief valve, and the reactor vessel level indication system.
70	Component Cooling Water System	Entire system except supply to waste evaporator building and seal leakage collection tank and pumps.
72	Containment Spray System	Entire system.
74	Residual Heat Removal	Entire system.
77	Waste Disposal	Portions required for containment isolation (from FCV-77-19 through FCV-77-18, FCV-77-9 through FCV-77-10); portion of nitrogen fill line for the SIS accumulators.
78	Spent Fuel Cooling	Containment isolation portion of refueling cavity fill and drain lines and fuel transfer tube.
81	Primary Water	Containment isolation valves and piping FCV-81-12 to valve 81-502 including both valves.
82	Diesel Generator Starting Air	From check value on inlet of starting air tanks to the starting air motors and the diesel generator itself.
83	Combustible Gas Control	Hydrogen recombiners, ignitors, and analyzers.
87	Upper Head Injection	Entire system.
88	Containment Isolation	Penetrations not covered under individual

TABLE 2 (continued)

Syste	em No. System Name	Portions Required for Safe Shutdown
90	Radiation Monitoring	Containment purge air exhaust monitor, waste gas effluent monitor, essential raw cooling water liquid monitor, containment building lower compartment air monitor, containment building upper compartment air monitor, postaccident area radiation monitor, main control room monitors, and auxiliary building vent monitors.
92	Neutron Monitoring	Entire system.
99	Reactor Protection	Entire system.
VP	Vital Control Power	Entire system excluding 480V power system, computer power system, and technical support power system.
AP	Emergency Auxiliary ac Power	Entire system.
NOTE :	This written description of	required systems may not be all inclusion

Marked drawings provided under a calculation will delineate the exact portions of the systems required.



IV. RESTART ACTIVITIES LIST

The identification and tracking of unit 1 restart items are accomplished by the use of the ONP's permanent tracking system--tracking and reporting of open items (TROI) rather than the Sequoyah Activities List (SAL) used for unit 2. TROI was selected for unit 1 restart item tracking because it is a controlled data base, provides improved accessibility to line organizations, and provides increased ability to sort and display information. Commitments are tracked by TVA on its corporate commitment tracking system (CCTS). The disposition and verification of closure of restart items is accomplished through our upgraded system of procedures used for unit operation.

1.0 METHODOLOGY USED TO IDENTIFY RESTART ITEMS

The unit 1 restart list was developed by an item-by-item review of completed and open unit 2 and common restart activities and of open unit 1 issues. Standard practice SQA203 "Use of TROI for Unit 1 Restart Action List", was issued to specify the requirements for maintaining and controlling the unit 1 restart list. The common criteria used to guide the line organizations in raising potential restart issues and making recommendations to management has been the same restart criteria used for unit 2. Standard Practice SQA203 requires each SQN unit 1 potential restart item to be evaluated against this criteria to determine whether associated corrective action is required to be completed before restart. The Site Director has designated either the Restart Director or Assistant to the Site Director to evaluate proposed new activities and ascertain that these activities meet the restart criteria.

2.0 RESTART ITEM CLOSURE PROCESS

Standard practice SQA203 specifies that existing site procedures will be used to ensure that unit 1 restart items are dispositioned and closed in a verifiable manner. Each site manager is responsible for: maintaining the status of his restart items through closure; adding new actions as necessary to resolve an open restart item as the issue evolves; and ensuring that a specific discipline and manager within his organization is assigned responsibility for obtaining timely closure of open restart items. An item is considered closed for restart when all corrective actions that have been specified to be completed before restart are field completed, documented, and verified as appropriate.

3.0 COORDINATION OF SEQUOYAH UNIT 1 RESTART ACTIVITIES

The Site Director has identified a unit 1 Restart Director who is responsible for coordinating the unit 1 restart effort. The unit 1 Restart Director reports directly to the Site Director and has responsibility and authority to establish specific schedule priorities, to ensure that line managers are coordinating their activities to complete all restart actions, to establish site goals as appropriate to achieve a safe and timely restart, to call and conduct restart schedule status meetings, and to ensure performance of the individual groups and integrated work activities. This position has been established in order to ensure that all restart requirements are properly completed in an integrated fashion and on a timely basis. Through the activities of the unit 1 Restart Director, the Site Director is provided with an early signal of potential problem areas and is able to take prompt action.

V. OPERATIONAL READINESS FROGRAM

The SQN unit 1 operational readiness program will require that line managers utilize a systematic process for the identification and certification of closure of individual restart items for which they are responsible. The unit 1 program will focus on activity closure rather than on program and management system evaluations, which were performed for unit 2 restart. The unit 1 program will be accomplished by implementation of a startup prerequisite checklist similar to that used for unit 2 restart. However, the unit 1 prerequisite checklist will also address the adequacy of staff support for two-unit operation. Also, unit 2 lessons learned and operations experience will provide additional means to ensure that unit 1 plant and personnel are prepared for restart and operation.

The startup prerequisite checklist will be made a part of the Restart Test Instruction (RTI), "Master Test Sequence", for unit 1. The Site Director will use the signed-off startup prerequisite checklist as well as other status reviews and inputs to make his recommendation for SQN unit 1 restart to the Manager, ONP. The Manager, ONP, will approve restart of SQN unit 1 only when he is satisfied that all preparations for restart have been satisfactorily completed.

REFERENCES

- Letter from Steven A. White (TVA) to Lando W. Zech (NRC) transmitting revision 1 to the SNPP dated July 17, 1986
- Letter from Steven A. White (TVA) to NRC dated transmitting revision 2 to the SNPP July 2, 1987
- Letter from William J. Dircks (NRC) to Charles Dean (TVA) with Enclosure 1, SALP Board Report, and Enclosure 2, Request for Information Under 10 CFR 50.54(f) Related to Staff Concerns dated September 17, 1985
- Letter from R. L. Gridley (TVA) to NRC transmitting the Sequoyah unit 1 restart plan dated March 31, 1988
- Letter from Stewart D. Ebneter (NRC) to Steven A. White (TVA) transmitting the revised safety evaluation on the TVA Sequoyah Nuclear Performance Plan dated March 25, 1988

TENNESSEE VALLEY AUTHORITY

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U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555

Gentlemen:

In the Matter of Docket Nos. 50-327 Tennessee Valley Authority Docket Nos. 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - REVISION 3 TO THE SEQUOYAH NUCLEAR PERFORMANCE PLAN (SNPP)

Enclosed is Revision 3 to the SNPP. This revision divides the SNPP into two parts. Part 1 deals with the unit 2 startup programs and consists of the existing SNPP information. Part 2, added by this revision, provides a description of the unit 1 startup programs that are different from the unit 2 programs.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

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S. A. White Manager of Nuclear Power

Enclosures cc: See page 2

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U.S. Nuclear Regulatory Commission

MAY 0 9 1988

cc (Enclosures): Mr. K. P. Barr, Acting Assistant Director for Inspection Programs TVA Projects Division U.S. Nuclear Regulatory Commission Region II 101 Marietta Street, NW, Suite 2900 Atlanta, Georgia 30323

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Sequoyah Resident Inspector Sequoyah Nuclear Plant 2600 Igou Ferry Road Soddy Daisy, Tennessee 37379

REVISED SEQUOYAH NUCLEAR PERFORMANCE PLAN

INSTRUCTION SHEET FOR REVISION 3

Remove *

Replace

EPL-1 through EPL-12

EPL-1 through EPL-13

(2 Pages, Dtd 05/09/88)

Letter from SAWhite to NRC

Letter from SAWhite to NRC (2 Pages, Dtd 07/02/87)

Title Page July 1986, Revision 2 July 1987 Title Page July 1986, Revision 3 May 1988

Section Divider - SNPP Part 1 - Unit 2 Programs

[The remaining Vol. II text is now considered Part 1, Unit 2 Programs, and the following text will be Part 2, Unit 1 Programs.]

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I. Introduction Page I-1 through I-4

Section Divider - II. Civil Engineering Program

*Do not remove section dividers unless instructed.

REVISED SEQUOYAH NUCLEAR PERFORMANCE PLAN

INSTRUCTION SHEET FOR REVISION 3 (Continued)

Remove * Replace II. Civil Engineering Program Page II-1 Section Divider - III. Design Baseline and Verification Program III. Design Baseline and Verification Program Page III-1 through III-8 Section Divider - IV. Restart Activities List IV. Restart Activities List Page IV-1 and IV-2 Section Divider - V. Operational Readiness Program V. Operational Readiness Program Page V-1 Section Divider - References References Page 1

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