

Sequoyah Nuclear Plant

DISTRIBUTIONSURVEILLANCE INSTRUCTIONSI-114PRESERVICE BASELINE INSPECTION FOR
TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANTUnits 1 & 2Prepared By: Belew/DanielsRevised By: Dan GormanSubmitted By: DO McCloud
SupervisorPORC Review: 6/18/81
DateApproved By: W F Cote
Plant ManagerDate Approved: 6/18/81

Rev. No.	Date	Revised Pages
11	4/21/81	ALL
12	6/18/81	3,5,27

1C	Plant Master File
	Plant Superintendent
	Assistant Plant Supt. (Oper.)
	Assistant Plant Supt. (Maint.)
	Assistant Plant Supt. (H&S)
	Administrative Supervisor
1C	Maintenance Supervisor (M)
1C	Assistant Maintenance Supervisor (M)
	Maintenance Supervisor (E)
	Assistant Maintenance Supervisor (E)
	Maintenance Supervisor (I)
1U	Results Supervisor
1C	Operations Supervisor
1C	Quality Assurance Supervisor
	Health Physics Supervisor
	Public Safety Services Supv.
	Chief Storekeeper
	Preop Test Program Coordinator
1C	Outage Director
	Chemical Engineer (Results)
	Radiochem Laboratory
	Instrument Shop
	Reactor Engineer (Results)
	Instrument Engineer (Maint. I)
1C	Mechanical Engineer (Results)
1U	Plant Services Supervisor
1C	Training Center Coordinator
	Public Safety Services SNP
	Shift Engineer's Office
1C	Unit Control Room
	Health Physics Laboratory
1U	Nuclr Document Control Unit-C
1U	Pwr Plant Superintendent, WBNP
	Pwr Plant Superintendent, BFNP
	Pwr Plant Superintendent, BENP
1U	NEB-K
	NRC-IE:II
	Resident NRC Inspector: SNP
1C	NSRS-K
	Technical Support Center
1C	Unit Control Room #2
1U	Compliance Section Staff Supervisor
1U	QCRU - CONST SNP
1U	Project Manager, Seq.
1U	Supv. Codes and Standards Sect.-C
1U	Stup, Metalurgy & NDT Section, 505 EB-C

Rev. No.	Date	Revised Pages

The last page of this instruction is Number 221

1.0 STATEMENT OF APPLICABILITY

This program outlines details for performing the preservice nondestructive examinations of the Sequoyah Nuclear Plant ASME Code Class 1, 2, and 3 components (and their supports). The program has been organized to fulfill preservice examination requirements of the Sequoyah Operational Quality Assurance Manual, Part II, Section 5.1 and comply as practical with the requirements of Section XI of the ASME Boiler and Pressure Vessel Code. In accordance with 10 CFR Part 50, 50.55a(g)(1), a preservice inspection is not required for Sequoyah. However, the areas outlined in this program to receive a preservice inspection will be examined. The requirements of ASME Section XI are in effect when the requirements of the applicable construction code have been satisfied.

- ✕ The requirements of this program are in effect until unit commercial operation.
- ✕ Beginning with unit commercial operation, the requirements of the Inservice Inspection Program are applicable in accordance with 10 CFR 50 section 50.55
- ✕ a (g) (4) (i) and section 50.55 a (g) (4) (iv).

Specifics concerning performance of nondestructive examinations are not a part of this program, but are included in nondestructive examination procedures (DPM N80E3 and SNP TI-51).

2.0 PURPOSE

The Preservice Inspection Program (hereinafter PSI) is preliminary in nature and is employed to obtain detailed information for inclusion in the Inservice Inspection Program. The examinations required by this program will establish acceptance of components for service. In addition, this program partially satisfies the preservice requirements of SR 4.0.5, 4.4.5, and 4.4.10.

The PSI Program serves as a means of determining built-in limitations caused by original plant design, geometry, materials of construction of the components, and the current technology or state-of-art of nondestructive testing. The PSI Program will also permit verification of the examination methods selected, finalization of detailed procedures, and will establish preservice examination data to be used as a reference for later inservice examinations.

3.0 CODES OF RECORD

This program was prepared to meet the requirements of the 1974 Edition, Summer 1975 Addenda of Section XI of ASME Boiler and Pressure Vessel Code. Criteria for determining Class 2 pressure retaining bolting subject to examination is in accordance with the 1977 Edition, Summer 1978 Addenda of Section XI. Criteria for determining components subject to system pressure tests following repair by welding is in accordance with the Summer 1978 Addenda of Section XI. Procedures for Eddy Current Examination of heat exchanger tubing, which the Summer 1975 Addenda of ASME Section XI has no provisions for, meets the requirements of the 1974 Edition, Summer 1976 Addenda of ASME Section XI. Steam generator tubing examination requirements are in accordance with Regulatory Guide 1.83, Rev. 1.

Certain examinations performed in shop and/or by CONST will be identified by the Metallurgy and Standards Group and employed to serve for the ASME Section XI PSI. In these instances, a member of the NCO QA Staff may perform a random sample review of CONST data packages and/or may obtain shop records to assure that examinations have been performed. CONST examination procedures may be obtained by the NCO QA Staff for reference.

Whenever inspection requirements are being accomplished under the jurisdiction of NUC PR, a NCO QA Staff representative shall be onsite to coordinate activities. He will be the designated TVA representative to ensure contract compliance and to ensure proper disposition of needed procedure changes to both TVA and/or contractor procedures in accordance with approved vendor QA program and Section 6.3, Part II of the OQAM.

Additionally, the NCO QA Staff representative will be responsible for notifying the Plant Manager of all unacceptable indications as soon as practical. Whenever an unacceptable indication is discovered, the procedure and form in Appendix D shall be utilized. In those cases where an outside contractor is furnishing preservice examination services, it will be the responsibility of the contractor to initiate the form in Appendix D under the supervision of the NCO QA Staff representative. See section 16.0 of this program.

As examinations are completed, the NCO QA Staff representative shall sign for completion the appropriate sections of Data Sheet 2 in Appendix C of this program. When all examinations of this program have been completed, Data Sheet 2 shall be signed for completion by the NCO QA Staff representative and reviewed by the Supervisor, Baseline and Inservice Inspection Section, QA Staff. In the event system or component alterations or repairs are made which require component reexamination, or components are re-examined for other reasons, following signoff of Data Sheet 2, the appropriate sections of Data Sheet 3 in Appendix C shall be completed and signed by the NCO QA Staff representative. (The requirements of this paragraph pertain to unit 2 only.)

All preservice examinations should be completed prior to initial plant startup (Operational Mode 2). Prior to initial plant startup, Data Sheet 3, in addition to Data Sheet 2, in Appendix C shall be signed by the NCO QA Staff representative and reviewed by the Supervisor, Baseline and Inservice Inspection Section, QA Staff and the Supervisor, Codes and Standards Section of the Metallurgy and Standards Group. The Plant Manager shall approve the data package (Data Sheets 1, 2, and 3) by signing Data Sheet 1. These data sheets shall be filed at the plant site with PSI examination data and final reports discussed in Section 15.0 of this program. (The requirements of this paragraph pertain to unit 2 only.)

PSI program preparation is the responsibility of Metallurgy and Standards Group of the Controls and Test Branch. Any revisions initiated by other groups shall be submitted to the Metallurgy and Standards Group for informal approval prior to incorporating the revisions into this program.

11.5 Volumetric Examination (Ultrasonic)

Ultrasonic examination shall be conducted in accordance with the provisions of Appendix I of Section XI of the ASME Code. Where Appendix I (I-1200) is not applicable, the provisions of Article 5 of Section V of the ASME Code shall apply.

11.6 Volumetric Examination (Eddy Current)

Eddy current examination of heat exchanger tubing shall be conducted in accordance with the provisions of Appendix IV of Section XI of the ASME Boiler and Pressure Vessel Code (Summer 1976 Addenda).

12.0 QUALIFICATIONS OF NONDESTRUCTIVE EXAMINATION PERSONNEL

Personnel performing nondestructive examination operations shall be qualified in accordance with IWA-2300 of ASME Section XI (DPM N75C01). CONST personnel which perform visual examinations in accordance with this program need not be qualified in accordance with IWA-2300.

13.0 ACCEPTANCE CRITERIA

All acceptance standards for Class A, B, C, and D components shall be in accordance with IWA-3000 of ASME Section XI.

14.0 REPAIRS AND REPLACEMENTS

- * Repairs shall be made in accordance with ASME Section XI or in accordance with
- * the Design Specification and Construction Code of the component or system.
- * Later editions of the Construction Code or Section III, either in its
- * entirety, or portions thereof, may be used.

After repairs by welding on the pressure-retaining boundary of components, a pressure test shall be performed in accordance with IWA-5000 and IWB-5000, IWC-5000, or IWD-5000 as applicable of ASME Section XI. The following may be exempted from these pressure tests exclusive of those repairs employing a temper bead technique:

- (1) Cladding repairs
- (2) Heat exchanger tube plugging
- (3) Piping, pump, and valve repairs that do not penetrate through the pressure boundary