ENCLOSURE

Sequoyah Nuclear Plant

SURVEILLANCE INSTRUCTION

SI-114

PRESERVICE BASELINE INSPECTION
AND INSERVICE INSPECTION PROGRAM
FOR TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT

Units 1 and 2

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Submitted By: _____
Supervisor

PORC Review: 9/12/79
Date

Approved By: C. E. Cantrell
for Superintendent

Date Approved: 9/12/79

DISTRIBUTION

1C	Plant Master File
	Superintendent
	Assistant Superintendent (Oper.)
	Assistant Superintendent (Maint.)
	Administrative Supervisor
1C	Maintenance Supervisor (M)
1C	Assistant Maintenance Supervisor (M)
	Maintenance Supervisor (E)
	Assistant Maintenance Supervisor (E)
1U	Maintenance Supervisor (I)
1U	Results Supervisor
1C	Operations Supervisor
1U	Quality Assurance Supervisor
	Health Physicist
	Public Safety Services Supv.
	Chief Storekeeper
	Preop Test Program Coordinator
1C	Training Director
	Chemical Engineer
	Radiochem Laboratory
	Instrument Shop
	Reactor Engineer
	Instrument Engineer
	Mechanical Engineer
1U	Staff Industrial Engineer
1C	Training Center Coordinator
	PEO - Chickamauga Engrg Unit - SNP
	Public Safety Services - SNP
	Shift Engineer Office
1C	Unit Control Room
	QA&A Rep. - SNP
	Health Physics Laboratory
1U	Chief, Nuclear Generation Branch
1U	P Prod Central Office File
1U	Superintendent, WBNP
	Superintendent, BFNP
	Superintendent, BFNP
1U	EN DES - MEB NEG
	Supv., NPHPC ROB, MS
	NRC-IE:II
	Power Security Officer, 604 PRB-C
	Nuclear Materials Coordinator
	Manager, OP-QA&A Staff
1U	P Prod Plant Eng. Branch
1U	Proj Mgr, Sequoyah
1U	Supv, Metallurgy & NDT Section 505 EB-C

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Rev. No.	Date	Revised Pages
7	4/19/79	All
8	9/12/79	4,30 Added 4a

Rev. No.	Date	Revised Pages

The last page of this instruction is Number 81.

3.0 BASELINE AND INSERVICE INSPECTION PROGRAM EXAMINATION (Cont.)

All vessel shell sections are machined forgings fabricated of A-508, class 2, manganese-molybedenum steel.

3.1.1.2 Circumferential Shell Weld

There is one circumferential seam weld, approximately 50 feet in length, in the vessel cylinderical shell located outside of the beltline region. The weld will be inspected from the vessel I.D. with the core internals removed and will be inspected as part of the preservice baseline inspections. Approximately 5 percent of the weld shall be examined during the inservice inspection interval.

3.1.1.3 Lower Head Seam Welds

There are six orange peel seam welds (24 feet) and one circumferential seam weld (38 feet), for a total of approximately 62 feet, which will be partically accessible for future examination from the vessel I.D., with the core internals removed. The welds will be inspected as part of the preservice baseline and inservice inspection.

The bottom head sections are fabricated of A-533, Gr. B, class 1, manganese-molybdenum steel.

3.1.1.4 Closure Head Weld

The head cap weld is approximately 41 feet in length and can be inspected for the preservice baseline and inservice inspection from the head outside surface. The head does not have any orange peel welds

The closure head ring is fabricated of A-508, class 2, manganese-molybedenum steel. The closure hemispherical head section is fabricated of A-533, Gr. B, class 1, manganese-molybdenum steel.

* During the conduct of the Unit 1 pressurizer baseline
* examination a flaw indication in the closure head weld
* was observed. Flaw evaluation and acceptability was based
* on code case N-209 (see nonconforming report 6P for ad-
* ditional information concerning flaw evaluation and location)
* Approximately 5 percent of the closure head weld shall be
* examined each inspection interval. The flaw indication
* volume shall be included in the 5 percent each inspection
* interval.

3.1.1.5 Vessel-to-Flange Weld and Head-to-Flange Weld

The vessel-to-flange weld is approximately 50 feet in length and will be accessible for future examination. The preservice baseline shall be performed from either the flange seal surface or from the vessel inside diameter with vessel remote inspection tools. The technique used for the baseline will also be used for future inservice inspections.

Table A

Sequoyah Inservice Inspection Program - Class "A" Components

Component	Total Sample	Sample Tested	Method of Inspection	Quantity Inspected 40 Month	80 Month	120 Month	Examination Category From Table IWB-2600, Section XI	Reference Drawing Number and Remarks
A. Reactor Vessel								
1. Circumferential shell welds - beltline region	150 ft.	7.5 ft.	UT			7.5 ft.	B-A	CH-M-2343-B Accessible from inside when core barrel is removed
2. Circumferential shell welds	50 ft.	2.5 ft.	UT			2.5 ft.	B-B	CH-M-2343-B Accessible from inside when core barrel is removed
3. Lower head meridional welds (Orange peel seam)	24 ft.	2.5 ft.	UT			3 ft.	B-B	CH-M-2343-B Accessible from inside when core barrel is removed
4. Lower head seam weld	38 ft.	2 ft.	UT			2 ft.	B-B	CH-M-2343-B Accessible from inside when core barrel is removed
*(1) 5. Closure head seam weld	41 ft.	2 ft.	UT			2 ft.	B-B	CH-M-2358-B Accessible from flange surface or inside diameter
6. Vessel-to-flange circumferential weld	50 ft.	50 ft.	UT	16 ft.	17 ft.	17 ft.	B-C	CH-M-2343-B Accessible from flange surface or inside diameter

* (1) See Section 3.1.1.4

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