

SPECIAL MAINTENANCE INSTRUCTIONSMI-1-1-1PRESERVICE BASELINE INSPECTION OF
UNIT 1 LOW PRESSURE TURBINESPrepared By: Zierler/SimmonsRevised By: N/ASubmitted By: MTA
SupervisorPORC Review: 3/11/80
DateApproved By: John Valentine
SuperintendentDate Approved: 3/11/80

10 Plant Master File
 Superintendent
 Assistant Superintendent (Oper.)
 Assistant Superintendent (Maint.)
 Administrative Supervisor
 Maintenance Supervisor (M)
 Assistant Maintenance Supervisor (M)
 Maintenance Supervisor (E)
 Assistant Maintenance Supervisor (E)
 Maintenance Supervisor (I)
 Results Supervisor
 Operations Supervisor
 Quality Assurance Supervisor
 Health Physics
 Public Safety Services Supv.
 Chief Storekeeper
 Prep Test Program Coordinator
 10 Outage Director
 Chemical Engineer
 Radiochem Laboratory
 Instrument Shop
 Reactor Engineer
 Instrument Engineer
 Mechanical Engineer
 Staff Industrial Engineer
 Training Center Coordinator
 PSO - Chickamauga Surg Unit - S
 Public Safety Services - RSP
 Shift Engineer's Office
 Unit Control Room
 QA&A Rep. - SPP
 Health Physics Laboratory
 10 Chief, Nuclear Generation Branch
 10 P Prod Central Office File
 10 Superintendent, WBNP
 Superintendent, BBNP
 Superintendent, BENI
 10 EN DES - NRB NEG
 Supv., NPHPS ROR, MS
 NRC-DE:CI
 Power Security Officer, 604 PRB-1
 Nuclear Materials Coordinator
 Manager, OP-QA&A Staff
 10 P Prod Plant Eng. Branch
 10 NSRS, 309 GB-K
 Technical Support Center

Rev. No.	Date	Revised Pages
0	3/11/80	All

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The last page of this instruction is Number 4

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SQNP
SMI-1-1-1
Punch List
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1. Westinghouse Ultrasonic Inspection Procedure for Unit 1 LP turbines.

[Handwritten signature]
for C. R. Brimer

13/10/2
Date

1.0 PURPOSE AND APPLICABILITY

The purpose of this instruction is to provide a procedure for preservice inspection of the Unit 1 low pressure turbines to determine the condition of the turbines prior to service and to serve as a baseline for future inservice inspections. Visual and volumetric examinations of the rotors, disks, and blading as required by section 9.3 of the technical specifications will be performed and an evaluation of any flaw indications found during this preservice examination shall be reported to the Nuclear Regulatory Commission.

2.0 PREREQUISITES

2.1 All work shall be coordinated through the operations section and the shift engineer. Equipment removed from service shall be tagged by Hold Order procedures and the cognizant foreman or supervisor shall remain on the Hold Order until work is completed. Refer to AI-9 2.0.B for tagging with a Temporary Alteration Control Form for items within a clearance.

2.2 Observe all prerequisites contained in TVA Visual Examination Procedure N-VT-1 and Westinghouse Ultrasonic Inspection Procedure (Punchlist).

3.0 PRECAUTIONS

Observe any precautions listed in TVA Procedure N-VT-1 and Westinghouse Procedure (Punchlist).

4.0 PREPARATION FOR WORK

Identify and obtain any special tools required for work. Refer to vendor manuals and examination procedures listed in preceding step.

5.0 PERFORMANCE OF WORK

5.1 Disassemble LP turbines and associated components to degree necessary to provide accessibility to rotor, blading and disks. Reference specific disassembly procedures in vendor manual.

5.2 Perform 100% visual baseline examination of all accessible surfaces of the rotors, disks and blading in accordance with TVA Procedure N-VT-1. Document examination on data sheet 1 and attach copies of all data, including evaluation of any flaw indications found.

5.3 Perform a baseline ultrasonic technique inspection of the low pressure turbines in accordance with Westinghouse Instruction (Punchlist). Areas to be examined are the bore and keyway regions of the disks. Document inspections on data sheet 1 and attach copies of all data including evaluation of any flaw indications found.

5.0 PERFORMANCE OF WORK (Cont.)

- 5.4 Reassemble turbines per vendor manual and return to turning gear.
- 5.5 Report inspection results and evaluations to the NRC commission for their acceptance.

NOTE: The sequence of LP turbine disassembly and reassembly may be adjusted as necessary to minimize critical path time and overall schedule.

- I. To be completed by the originator of the work data package. List the documents that are required to perform the work and return the equipment to service.

1. MR number(s): N/A RJS
2. MI data sheet number(s): SMI-1-1-1 Data sheet 1
3. SI data sheet number(s): N/A RJS
4. Material certification requirements: N/A RJS
5. Other documents: Visual examination data sheets
for each LP turbine spindle

All required documentation is in the data work package.

R.J. Simmons 1 4-8-80
Originator of Work Data Package Date

- II. Results review and approval of the above data package (attached).

Walter McClinton 1 4-8-80
Responsible Maintenance Representative Date

C. Brimer 1 4-8-80
Maintenance Supervisor Date

D.A. McLeod 1 4/8/80
QA Supervisor Date

I. Visual examination complete and data sheets attached:

LP Turbine A

LP Turbine B

LP Turbine C

Examiner/Date
Jerry L. Hodder 3-26-80
Jerry L. Hodder 3-21-80
Jerry L. Hodder 3-19-80

II. Ultrasonic examination complete and data sheets attached:

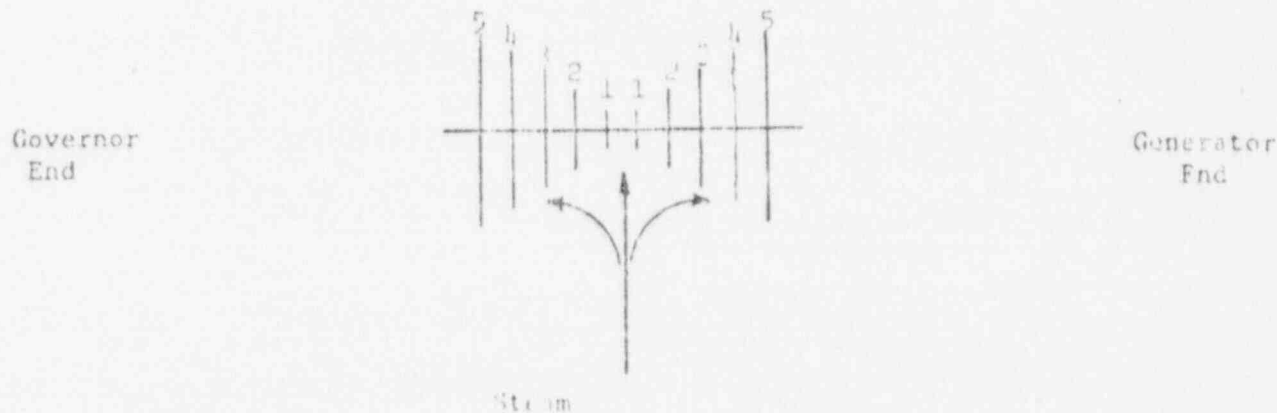
data sheets
transmitted separately
by Westinghouse

UT examiner initial and date the appropriate space in the table below as each disk inspection is completed.

	Governor End					Generator End				
	Disk No.					Disk No.				
	1	2	3	4	5	1	2	3	4	5
LP Turbine A (1)	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80	CR4 3/25/80
LP Turbine B (2)	CR4 3/23	CR4 3/23	CR4 3/22	CR4 3/21	CR4 3/21	CR4 3/23	CR4 3/23	CR4 3/22	CR4 3/21	CR4 3/21
LP Turbine C (3)	CR4 3/17	CR4 3/18	CR4 3/19	CR4 3/17	CR4 3/19	CR4 3/17	CR4 3/18	CR4 3/19	CR4 3/17	CR4 3/19

* US Disc Inspect Inlet side only

*Numbering sequence for LP turbine disks is as shown in sketch below.



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VISUAL EXAMINATION DATA SHEET

Unit 1 Turbine

Pressure Retaining Component Examined

LP SPINDLE "B"

GEN. END

COMPONENT NUMBER	COMPONENT POSITION	EXAMINED BY: *	DATE EXAMINED	REMARKS	REPAIR
STAGE 1		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 2		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 3		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 4		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 5		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
TURB. END					
STAGE 1		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 2		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 3		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 4		GRB, JLG	3-21-80		
DISC		GRB, JLG	3-21-80		
STAGE 5		GRB, JLG	3-21-80	DAMAGED AREAS	ON BACK
BLADE 166		GRB, JLG	3-21-80	GASH, APP. 1 3/4" LG.	ON BACK
BLADE 39		GRB, JLG	3-21-80	DENT	ON BACK
BLADE 40		GRB, JLG	3-21-80	DENT	ON BACK
BLADE 42		GRB, JLG	3-21-80	DENT AND GASH, APP. 1 1/2" LG.	ON BACK
BLADE 43		GRB, JLG	3-21-80	DENT	ON BACK
BLADE 44		GRB, JLG	3-21-80	SMALL GASH	ON BACK
BLADE 45		GRB, JLG	3-21-80	SMALL GASH	ON BACK

(CONTINUED NEXT PAGE)

* Initials of examiner indicate component has no unacceptable indications.

REPAIR

TURBINE STAGES

BLADE #166 REMOVE & REPLACE

39 BLEND & POLISH

40 ACCEPTABLE PER TURBINE SPECIALIST

42 REMOVE & REPLACE

43 REMOVE & REPLACE

44 BLEND & POLISH

45 BLEND & POLISH

61 BLEND & POLISH

159 REMOVE & REPLACE

160 BLEND & POLISH

111 BLEND & POLISH

91 BLEND & POLISH

87 REMOVE & REPLACE

82 BLEND & POLISH

73 BLEND & POLISH

121 BLEND & POLISH

Unit 1 Turbine
LP SPINDLE "B"

* Initials of examiner indicate component has no unacceptable indications.

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VISUAL EXAMINATION DATA SHEET

Drawings Retaining Component Examined

Unit 1 turbine
LP spindle "C"

COMPONENT NUMBER	COMPONENT POSITION	EXAMINED BY	DATE EXAMINED	REMARKS	REPAIR
STAGE 5	GEN. END	JLG GRB	3-19-80		
DISC		JLG GRB	"		ON BACK
STAGE 4		JLG GRB	"	POSSIBLY IN STEVEN SOLDER ON 3 BLADES	
DISC		JLG GRB	"		
STAGE 3		JLG GRB	"	VERY SMALL DENTS ON DISCHARGE SIDE OF ONE BLADE	ON BACK
DISC		JLG GRB	"		
STAGE 2		JLG GRB	"		
DISC		JLG GRB	"		
STAGE 1		JLG GRB	"		
DISC		JLG GRB	"		
SHAFT		JLG GRB	3-19-80		
STAGE 5	TURB. END	JLG GRB	3-19-80		
DISC		JLG GRB	"		
STAGE 4		JLG GRB	"		
DISC		JLG GRB	"		
STAGE 3		JLG GRB	"		
DISC		JLG GRB	"		
STAGE 2		JLG GRB	"		
DISC		JLG GRB	"		
STAGE 1		JLG GRB	"		
DISC		JLG GRB	"		

STAGES GEN. ENP

BLADES ~~IS~~ ACCEPTABLE PER TURBINE SPECIALIST

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VISUAL EXAMINATION DATA SHEET

Pressure Retaining Component Examined LP'A' UNIT #1

COMPONENT NUMBER	COMPONENT POSITION	EXAMINED BY: *	DATE EXAMINED	REMARKS	REPAIR
STAGE 5	GEN. END	JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 4		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 3		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 2		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 1		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 5	TURB END	*	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 4		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 3		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 2		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
STAGE 1		JLG GRB	3-26-80		
DISC		JLG GRB	3-26-80		
* BLADE #	91	JLG GRB	3-26-80	3 SMALL NICKS	ON BACK
* BLADE #	95	JLG GRB	3-26-80	LOW SPOT ON DISCHARGE	ON BACK
				SIDE OF BLADE	

* Initials of examiner indicate component has no unacceptable indications.

TURB END	KETHIK
STAGE 5	
BLADE # 91	BLEND & POLISH
# 95	ACCEPTABLE PER THE TURBINE SPECIALIST