

STEAM GENERATOR TUBE INSERVICE INSPECTION REPORT

SEQUOYAH NUCLEAR PLANT

UNIT 1

CYCLE 1 REFUELING OUTAGE

SEPTEMBER 1982

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TABLE I

INSPECTION SUMMARY - SEQUOYAH UNIT #1

Steam Generators #1 &amp; #4

	<u>Totals</u>	<u>S/G #1</u>		<u>S/G #4</u>	
		<u>Inlet</u>	<u>Outlet</u>	<u>Inlet</u>	<u>Outlet</u>
Tubes In Steam Generator (Straight Lengths)	13,552	3388	3388	3388	3388
Total Tubes Inspected (Straight Lengths)	525	267	0	220	39
Tubes Recording Severe Damage (Approximate Wall Loss 40% & Greater)	0	0	0	0	0
Tubes Recording Moderate Damage (Approximate Wall Loss 20% to 39%)	8	3*	0	5*	0
Tubes Recording Minor Damage (Approximate Wall Loss Less Than 20%)	29	16	0	12	1

S/G #1: \* 2 tubes with lane blocker damage unchanged since 1981  
 1 tube recorded indication unchanged from baseline inspection

S/G #4: \* all 5 tubes recorded indications unchanged from baseline inspection

TABLE II

INSPECTION SUMMARY

Sequoyah Unit #1 - Steam Generator #1

	<u>Total</u>	<u>Hot Leg</u>	<u>Cold Leg</u>
Tubes In Steam Generator (Straight Lengths)	6776	3388	3388
Tubes Inspected (Straight Lengths)	267	267	0
Tubes Recording Severe Damage (Approximate Wall Loss 40% & Greater)	0	0	0
Tubes Recording Moderate Damage (Approximate Wall Loss 20% to 39%)	3	3*	0
Tubes Recording Minor Damage (Approximate Wall Loss Less Than 20%)	16	16	0
Tubes Inspected For Row #1 U-Bend	184	92	92
Additional Inspected By Hand Probing	6	6	0

- \* 2 tubes with lane blocker damage present in 1981  
1 tube recorded indication at baseline and is unchanged

TABLE III

INSPECTION SUMMARY

Sequoyah Unit #1 - Steam Generator #4

	<u>Total</u>	<u>Hot Leg</u>	<u>Cold Leg</u>
Tubes In Steam Generator (Straight Lengths)	6776	3388	3388
Tubes Inspected (Straight Lengths)	258	220	38
Tubes Recording Severe Damage (Approximate Wall Loss 40% & Greater)	0	0	0
Tubes Recording Moderate Damage (Approximate Wall Loss 20% to 39%)	5	5*	0
Tubes Recording Minor Damage (Approximate Wall Loss Less Than 20%)	13	12	1
Tubes Inspected For Row #1 U-Bend	8	8	0

\* All indications were recorded by baseline inspection and are unchanged.

TABLE IV

## TUBES RECORDING DAMAGE IN STEAM GENERATOR #1

## Sequoyah Unit #1

Tube #		Origin	Defect %	Location	Notes
R	C				
INLET (HOT LEG)					
1	1	OD	30	TS-1	External damage near lane b1 device. Present in 1981 inspection.
1	5	ID	20	TS-1	Internal imperfection unchanged since 1981 inspection.
1	6	ID	20	TS-1	Internal imperfection unchanged since 1981 inspection.
1	26	OD	20	2-3	Small volume external imperfection. Not recognizable on baseline.
1	78	OD	20	3-4	Small volume external imperfection. Not recognizable at 400 kHz channel in 1982 inspection. Not recognizable on baseline.
1	90	OD	30	TS-1	External damage near lane blocker device. Unchanged since 1981 inspection.
1	91	OD	20	TS-1	External damage near lane blocker device. Unchanged since 1981 inspection.
1	92	OD	20	TS-1	External degradation near lane blocker device, unchanged since 1981 inspection.
1	94	OD	20	TS-1	External degradation near lane blocker device, unchanged since 1981 inspection.
5	26	OD	20	1-2	External imperfection, present on baseline.
5	61	ID	25	6-7	Internal flaw, present on baseline.
5	76	ID	20	TS-1	Internal imperfection present on baseline.
9	36	ID	20	6-7	Internal imperfection, not recognizable on baseline.
13	11	ID	20	TS-1	Internal imperfection, not recognizable on baseline.
17	16	ID	20	5-6	Internal imperfection, not recognizable on baseline.
25	36	ID	20	5-6	Internal imperfection, not recognizable on baseline.
25	51	ID	20	6-7	Internal imperfection, not recognizable on baseline.
29	11	ID	20	2-3	Internal imperfection, not recognizable on baseline.
41	26	ID	20	TS-2	Multiple internal imperfections. Not recognizable on baseline.

TUBES RECORDING DAMAGE IN STEAM GENERATOR #4

Sequoyah Unit #1

Tube # R C	Origin	Defect %	Location	Notes
<u>INLET (HOT LEG)</u>				
1 3	ID	< 20	TS-1 & 2-3	Multiple internal imperfections, unchanged since 1981 inspection.
5 56	ID	< 20	1-2, 2-3 & 3-4	Multiple internal imperfections, present on baseline.
13 61	ID	< 20	TS-1	Internal imperfection. Not recognizable on baseline.
17 56	ID	30	4-5	Internal flaw, present on baseline.
17 81	ID	< 20	1-2 & 3-4	Multiple internal imperfections, present on baseline.
25 31	ID	< 20	7-U-bend	Internal imperfection unchanged since 1981 inspection; present on baseline.
25 81	ID	< 20	5-6	Internal imperfection. Not recognizable on baseline.
29 11	ID	< 20	TS-1	Internal imperfection unchanged since 1981 inspection; present on baseline.
29-56	ID	< 20	TS-1	Internal imperfection present on baseline.
29-83	ID	30	5-6	Internal flaw, unchanged since 1981 inspection; present on baseline.
30-46	ID	25	2-3 & 3-4	Multiple internal flaws, present on baseline.
33 46	ID	< 20	4-5	Internal imperfection. Not recognizable on baseline.
33 76	ID	< 20	2-3	Internal imperfection. Not recognizable on baseline.
34 79	ID	< 20	TS-1, 1-2 & 5-6	Multiple internal imperfections, unchanged since 1981 inspection; present on baseline.
37 20	ID	< 20	1-2 & 6-7	Multiple internal imperfections.
37 35	ID	30	TS-1	Internal flaw, recorded in 1981 inspection (25%); present on baseline.
46 45	ID	25	4-5	Internal flaw; present on baseline.
<u>UTLET (COLD LEG)</u>				
31 15	ID	< 20	CTS-C1	Internal imperfection unchanged since 1981 inspection.

# DENT SIZE FREQUENCY DISTRIBUTION

STEAM GENERATOR # 4

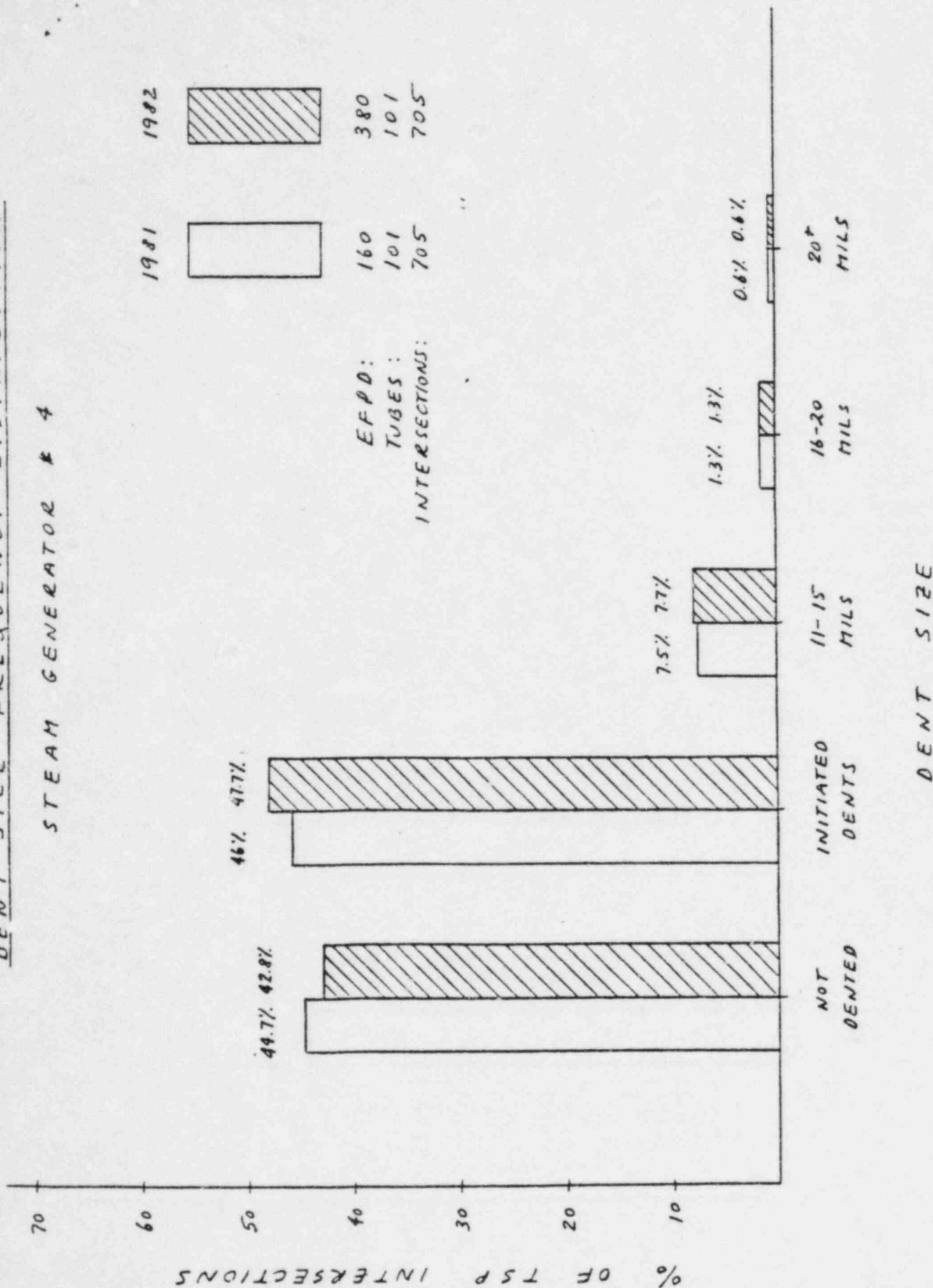


FIGURE 1