Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

August 15, 2005

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

Gentlemen:

In the Matter of) Docket No. 50-328
Tennessee Valley Authority)

SEQUOYAH NUCLEAR PLANT (SQN) - UNIT 2 - UNIT 2 CYCLE 13 (U2C13) 90-DAY STEAM GENERATOR (S/G) REPORT FOR VOLTAGE-BASED ALTERNATE REPAIR CRITERIA AND W* ALTERNATE REPAIR CRITERIA

In accordance with SQN Unit 2 License Condition 2.C.(8)(b), and NRC Generic Letter (GL) 95-05, Attachment 1, Section 6.b, TVA is providing the 90-day S/G report (Enclosure 1). The report contains results of voltage-based repair criteria that were applied during the U2C13 refueling outage S/G inspections (end of cycle 13 operation). The voltage-based repair criteria are for axial outside diameter stress corrosion cracking (ODSCC) at tube support plate intersections. The report contains a condition monitoring assessment that demonstrates that the GL 95-05 acceptance criteria are satisfied at the end of the Unit 2 operation cycle 13 and an operational assessment that demonstrates that the GL 95-05 acceptance criteria is expected to continue to be satisfied throughout Unit 2 cycle 14.

In accordance with SQN Unit 2 Technical Specification Surveillance Requirement 4.4.5.5.e, TVA is providing the 90-day S/G report associated with the application of W* during the U2C13 refueling outage (Enclosure 2). The cumulative leak rates as calculated from W* and the GL 95-05 alternate repair criteria were within the SQN Unit 2 accident leakage limit (3.7 gallons per minute).

D030

This letter does not contain TVA commitments. If you have any questions, please call me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

for

P. L. Pace
Manager, Site Licensing and
Industry Affairs

Enclosures
cc (Enclosures):
Mr. Douglas V. Pickett, Senior Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop O8G-9a
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2739

I:License/Steam Generators/U2C13 90-Day SG Report

ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT
UNIT 2

STEAM GENERATOR REPORT
VOLTAGE BASED ALTERNATE REPAIR CRITERIA
UNIT 2 CYCLE 13
90-DAY REPORT

Westinghouse Non-Proprietary Class 3

SG-SGDA-05-29
Revision 0

August 2005

Condition Monitoring and Operational Assessment: GL-95-05 Alternate Repair Criterion End of Cycle 13 90 Day Report Sequoyah Unit 2

Prepared for the
Tennessee Valley Authority

Westinghouse

This page intentionally left blank

SG-SGDA-05-29
Revision 0

Tennessee Valley Authority

Condition Monitoring and Operational Assessment: GL-95-05 Alternate Repair Criterion End of Cycle 13 90 Day Report Sequoyah Unit 2

Author's Name	Signature / Date	For Pages
Thomas P. Magee	*Official Record Electronically Approved in EDMS*	All

Verifier's Name	Signature / Date	For Pages
David J. Ayres	*Official Record Electronically Approved in EDMS*	All

Manager Name	Signature / Date	For Pages
Earl P. Morgan	*Official Record Electronically Approved in EDMS*	All

Westinghouse Electric Company LLC
P.O. Box 355
Pittsburgh, PA 15230-0355

This page intentionally left blank

Westinghouse Electric Company LLC
P.O. Box 355
Pittsburgh, PA 15230-0355

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

GLOSSARY OF ACRONYMS

BOC - Beginning of operation cycle. The current inspection is just prior to BOC-14.

EOC - End of operation cycle. The current inspection is at EOC-13. The end of the next cycle is EOC-14.

NODP – Normal operating differential pressure.

MRPC – Motorized rotating pancake coil. Also refers to the Plus-Point coil.

ODSCC - Outside diameter stress corrosion cracking.

POD - Probability of detection. This value is set equal to 0.60 for the GL-95-05 predictive analysis for the condition of the steam generators at the end of the next cycle.

SG - Steam generator identifier. Specifically SG 1, SG 2, SG 3 and SG 4.

TSP - Tube support plate. The generic letter 95-05 alternate repair criterion applies to ODSCC in the tubes at the TSPs.

1.0 INTRODUCTION

Sequoyah Unit 2 completed its Cycle 13 of operation and subsequent steam generator tube inspection in May 2005. Axial ODSCC has been confirmed within the TSP regions of the steam generators and is a current degradation mechanism at Sequoyah Unit 2. The alternate repair criterion (ARC) defined in NRC Generic Letter 95-05 (Reference 1) is implemented at Sequoyah Unit 2. This report provides a condition monitoring assessment that demonstrates that the GL-95-05 acceptance criteria were satisfied at the end of operational Cycle 13 (EOC-13), and an operational assessment that demonstrates that the GL-95-05 acceptance criteria will continue to be satisfied throughout operational Cycle 14. A Sequoyah-2 specific voltage growth rate was used in the EOC-14 prediction.

The operation cycle just completed, Cycle 13, was 470.9 Effective Full Power Days (EFPD). The next cycle, Cycle 14 is estimated to be 545 EFPD (Reference 2).

This page intentionally left blank.

2.0 SUMMARY AND CONCLUSIONS

Bobbin voltage indications of ODSCC at the tube support plates were detected and measured in all four steam generators. Based on this voltage distribution, using the methodology of References 1 and 3, a Condition Monitoring evaluation including the computation of the probability of tube burst (POB) and the amount of leakage predicted for steam line break conditions at EOC-13 was performed. The acceptance criteria on POB and leakage are satisfied with significant margin.

The change in voltage from the previous inspection was determined by historical review for each indication detected. The apparent voltage growth rate during Cycle 13 was based on the historic review of 1847 DSI indications identified during the Sequoyah Unit 2 EOC-13 inspection. An operational assessment prediction of the POB and leakage at steam line break conditions at EOC-14 was performed using a site specific bounding growth rate. The results indicate that the acceptance criteria on POB and leakage at EOC-14 will be satisfied with acceptable margin. Therefore the Reference 1 acceptance criteria will be satisfied throughout Cycle 14.

This page intentionally left blank.

3.0 EOC-13 INSPECTION RESULTS

3.1 VOLTAGE DISTRIBUTIONS AT EOC-13

Summaries of eddy current signal voltage distributions at the drilled support plates, for each steam generator, are shown in Table 3-1 through Table 3-4. Also shown are the number of indications in each voltage range detected at EOC-13 and the number of indications removed from service due to tube repairs for any reason. The number of indications that remain in service for Cycle 14 is the difference between the number of indications detected and the number of indications removed from service. No tubes were unplugged with the intent to return them to service after inspection.

Appendix A contains a listing of all DSI indications and their repair status. All DSI indications with an EOC-13 voltage greater to or equal to 2 volts were subject to Plus Point inspections, in accordance with Reference 1 requirements for 7/8-inch diameter tubing. Plugging repaired indications confirmed as being present by the Plus Point inspection.

The summary of all four-steam generators shows the following:

- A total of 1847 TSP regions were identified as having ODSCC bobbin signal indications (DSIs) during the inspection. One additional TSP region was identified as having ODSCC by MRPC, but without a bobbin DSI.
- As noted in Reference 4, Sequoyah-2 does not have intersections that are excluded from the voltage-based repair criteria (Section 1.b.1 of Reference 1). None of these 1847 indications were associated with a dent signal greater than 5 volts, copper deposits, or mixed residuals of sufficient magnitude to cause a 1.0 volt ODSCC indication to be missed or misread
- Of the 1847 TSP regions, 3 had DSI indications above 2 volts.
- All indication with voltages greater than or equal to 2 volts, were subjected to an inspection with a Plus Point probe. Indications that confirmed during the Plus Point inspection were removed from service by plugging.
- All of the 3 TSP regions with indications above 2 volts were repaired by plugging. All of the tubes associated with these TSP regions were plugged because of MRPC-confirmed ODSCC at that particular support plate.
- A total of 13 of the 1847 TSP regions were removed from service for reasons other than MRPC-confirmed ODSCC at the support plates

Figure 3-1 through Figure 3-12 illustrates the voltage distribution in each steam generator. Figure 3-1 through Figure 3-4 show the detected voltage distribution compared to the predicted distribution which was developed in the previous 90-day report, Reference 5. Figure 3-5 through Figure 3-8 show the distribution of repaired indications, and Figure 3-9 through Figure 3-12 show the distribution of indications that remain in service for the next operating cycle.

Table 3-1: Inspection Results for SG 1 EOC-13

Voltage Bin	Number of Indications (see Note)	MRPC Confirmed	MRPC Tested But Not Confirmed	Not MRPC Tested	Plugged	Returned to Service	In-Service MRPC Confirmed or not Tested
0.2	8			8		8	8
0.3	41	1		40		41	41
0.4	50			50		50	50
0.5	42	3		39		42	42
0.6	36	1		35		36	36
0.7	36	1		35	1	35	35
0.8	27	2		25		27	27
0.9	21	1	1	19		21	20
1	11	1	2	8		11	9
1.1	10	8	2			10	8
1.2	7	5	2			7	5
1.3	2	1	1			2	1
1.47	1	1				1	1
1.66	1	1				1	1
1.95	1	1				1	1
Total	294	27	8	259	1	293	285

Average voltage = 0.569 volts

Note: This summary does not include the SG 1 H02 intersection of Row 4 Column 14. This intersection did not have a DSI call by Bobbin coil, but it did have a 0.25 Volt SAI call by MRPC. Because this intersection had a 2.51 Volt DNT call, a reliable estimation of the DSI voltage from the SAI voltage cannot be made. This tube was plugged.

Table 3-2: Inspection Results for SG 2 EOC-13

Voltage Bin	Number of Indications	MRPC Confirmed	MRPC Tested But Not Confirmed	Not MRPC Tested	Plugged	Returned to Service	In-Service MRPC Confirmed or not Tested
0.2	13	2		11		13	13
0.3	32	2		30		32	32
0.4	54	1		53	1	53	53
0.5	58	5	1	52	1	57	56
0.6	31		1	30		31	30
0.7	37	5	1	31		37	36
0.8	30	1		29	1	29	29
0.9	16	2		14	1	15	15
1	12	1		11	1	11	11
1.1	7	7			1	6	6
1.2	5	5				5	5
1.3	6	6				6	6
1.39	1	1				1	1
1.57	1	1				1	1
1.62	1	1				1	1
1.97	1	1			1		
Total	305	41	3	261	7	298	295

Average voltage = 0.562 volts

Table 3-3: Inspection Results for SG 3 EOC-13

Voltage Bin	Number of Indications	MRPC Confirmed	MRPC Tested But Not Confirmed	Not MRPC Tested	Plugged	Returned to Service	In-Service MRPC Confirmed or not Tested
0.2	9			9		9	9
0.3	36			36	1	35	35
0.4	41	1		40		41	41
0.5	59		1	58	1	58	57
0.6	46	7	2	37		46	44
0.7	55	2	1	52		55	54
0.8	44	2	2	40	1	43	42
0.9	24	4	1	19		24	23
1	23	3	5	15		23	18
1.1	19	17	2			19	17
1.2	17	14	3			17	14
1.3	13	13				13	13
1.4	8	5	3			8	5
1.5	6	6				6	6
1.6	5	4	1		1	4	3
1.7	1	1				1	1
1.8	3	3				3	3
2.1	2	2			2		
2.36	1	1			1		
Total	412	85	21	306	7	405	385

Average voltage = 0.694 volts

Table 3-4: Inspection Results for SG 4 EOC-13

Voltage Bin	Number of Indications	MRPC Confirmed	MRPC Tested But Not Confirmed	Not MRPC Tested	Plugged	Returned to Service	In-Service MRPC Confirmed or not Tested
0.2	20			20		20	20
0.3	83	1		82	1	82	82
0.4	128	4		124	1	127	127
0.5	135	3		132	1	134	134
0.6	116	3	1	112		116	115
0.7	95	2	1	92		95	94
0.8	72	2	1	69	1	71	70
0.9	66			66		66	66
1	44	3		41	1	43	43
1.1	26	26				26	26
1.2	18	18				18	18
1.3	11	11				11	11
1.4	7	6	1			7	6
1.5	5	5				5	5
1.6	5	5				5	5
1.7	4	4				4	4
1.74	1	1			1		
Total	836	94	4	738	6	830	826

Average voltage = 0.605 volts

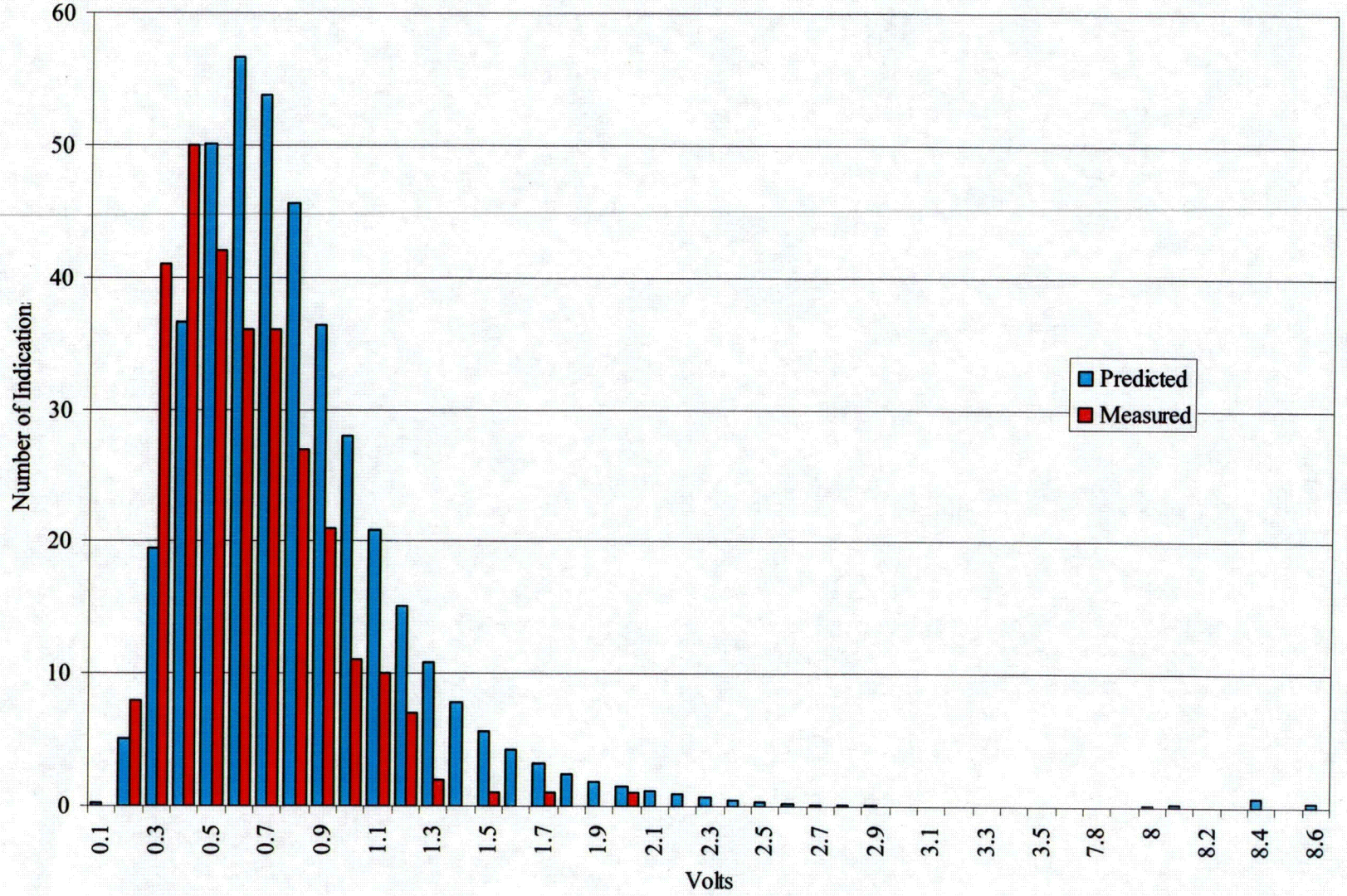

Figure 3-1: Sequoyah-2 EOC-13 Voltage Distribution, SG 1

C01

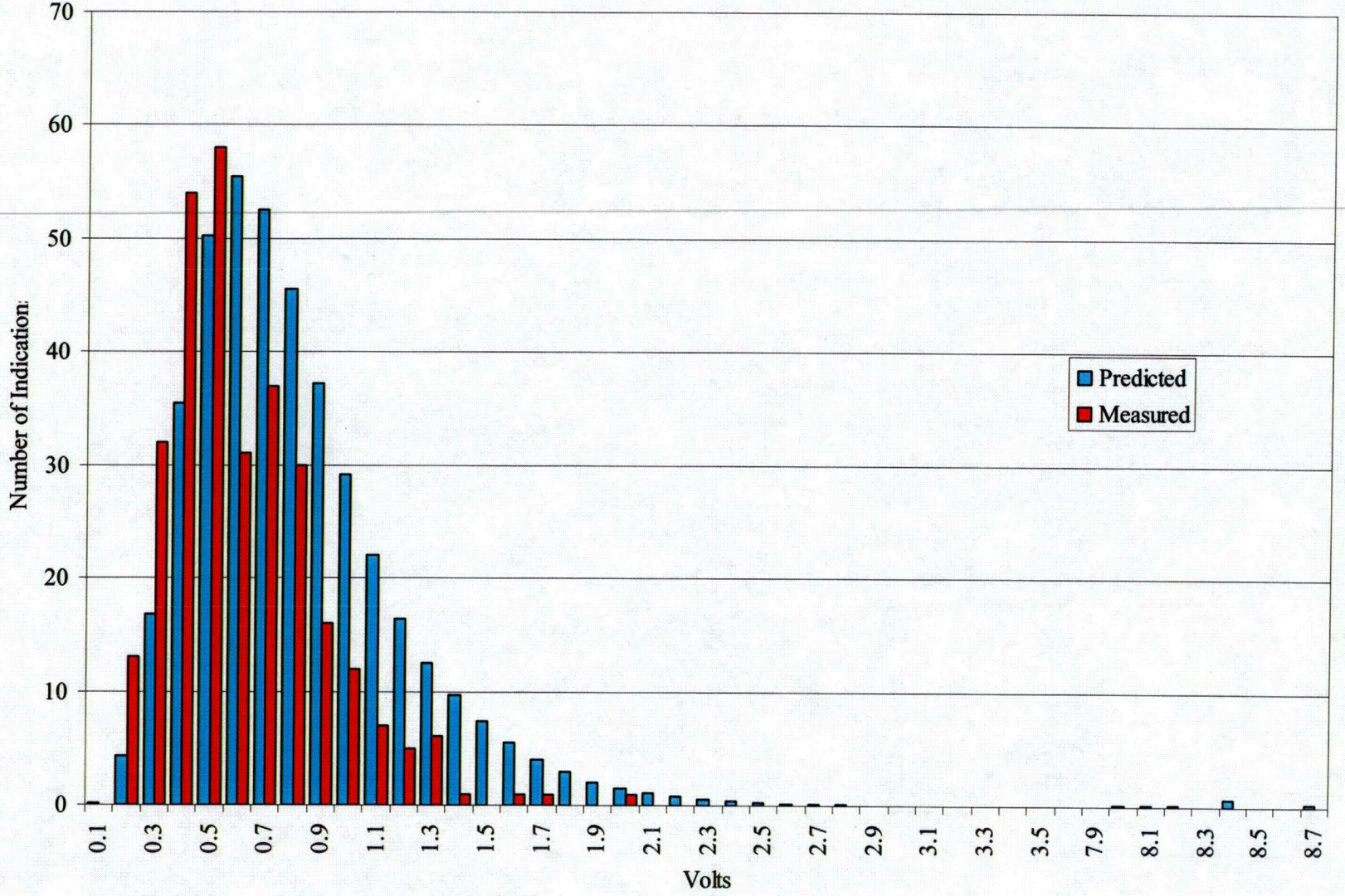

Figure 3-2: Sequoyah-2 EOC-13 Voltage Distribution, SG 2

C02

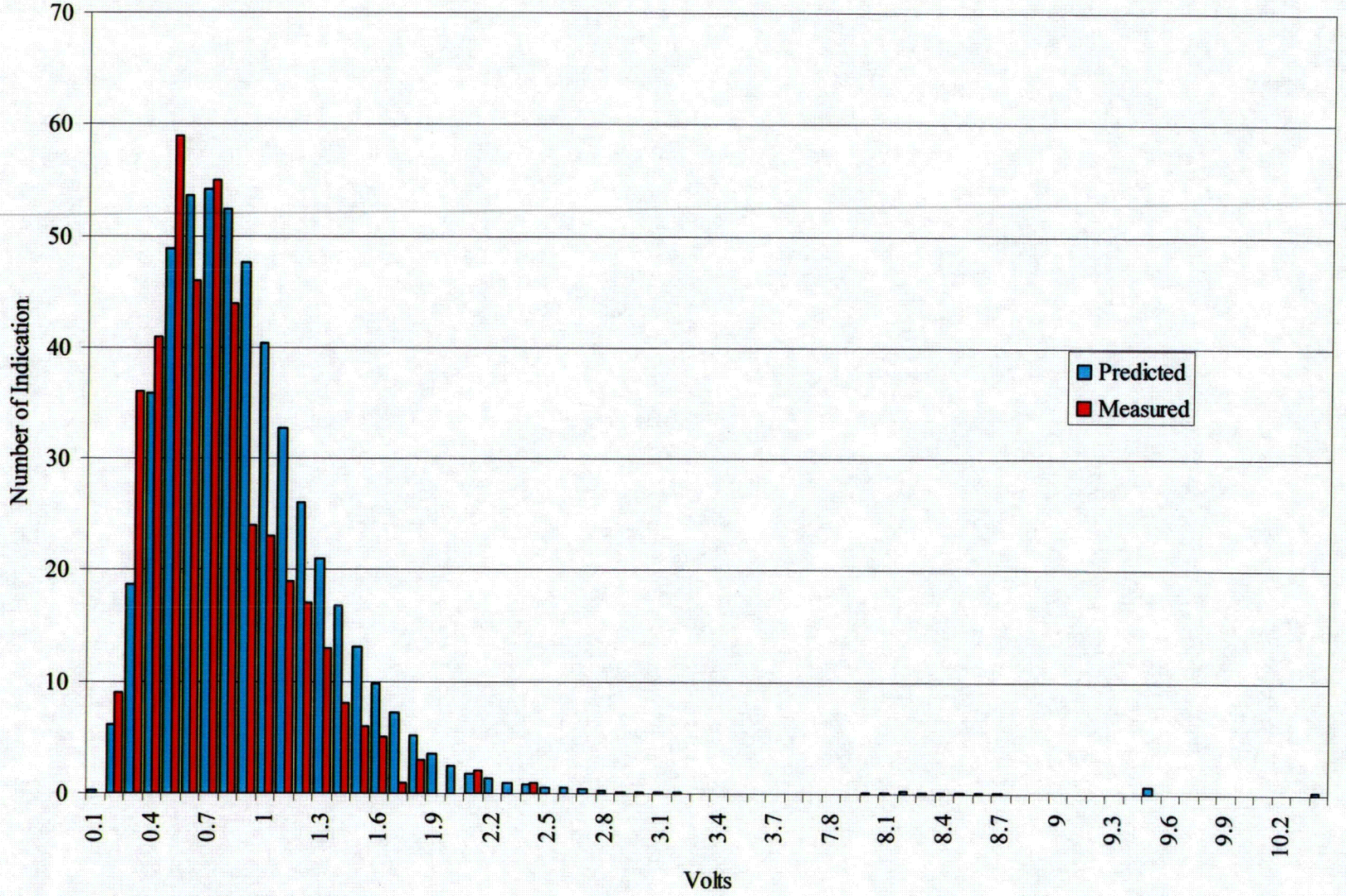

Figure 3-3: Sequoyah-2 EOC-13 Voltage Distribution, SG 3

C03

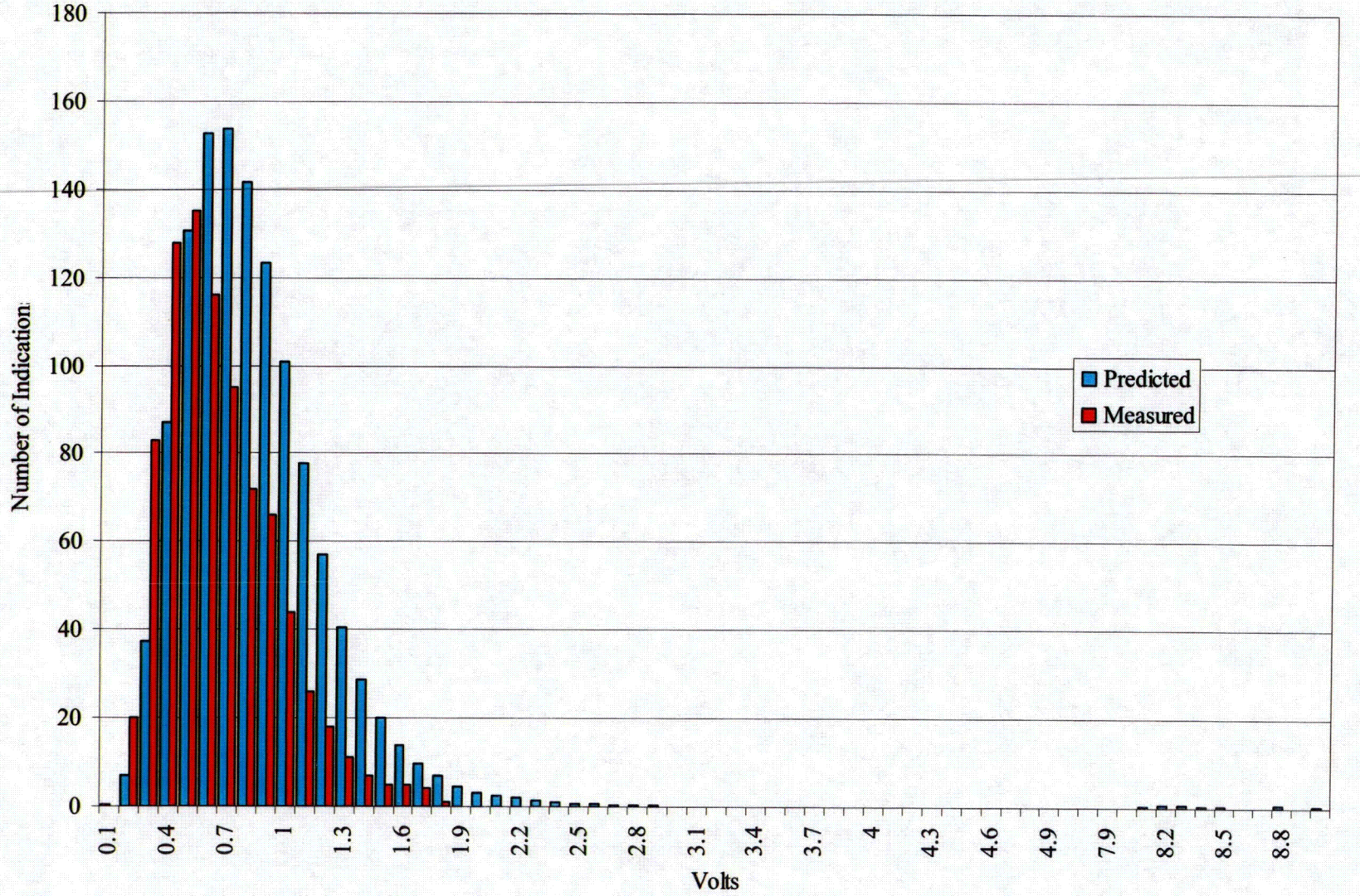

Figure 3-4: Sequoyah-2 EOC-13 Voltage Distribution, SG 4

COY

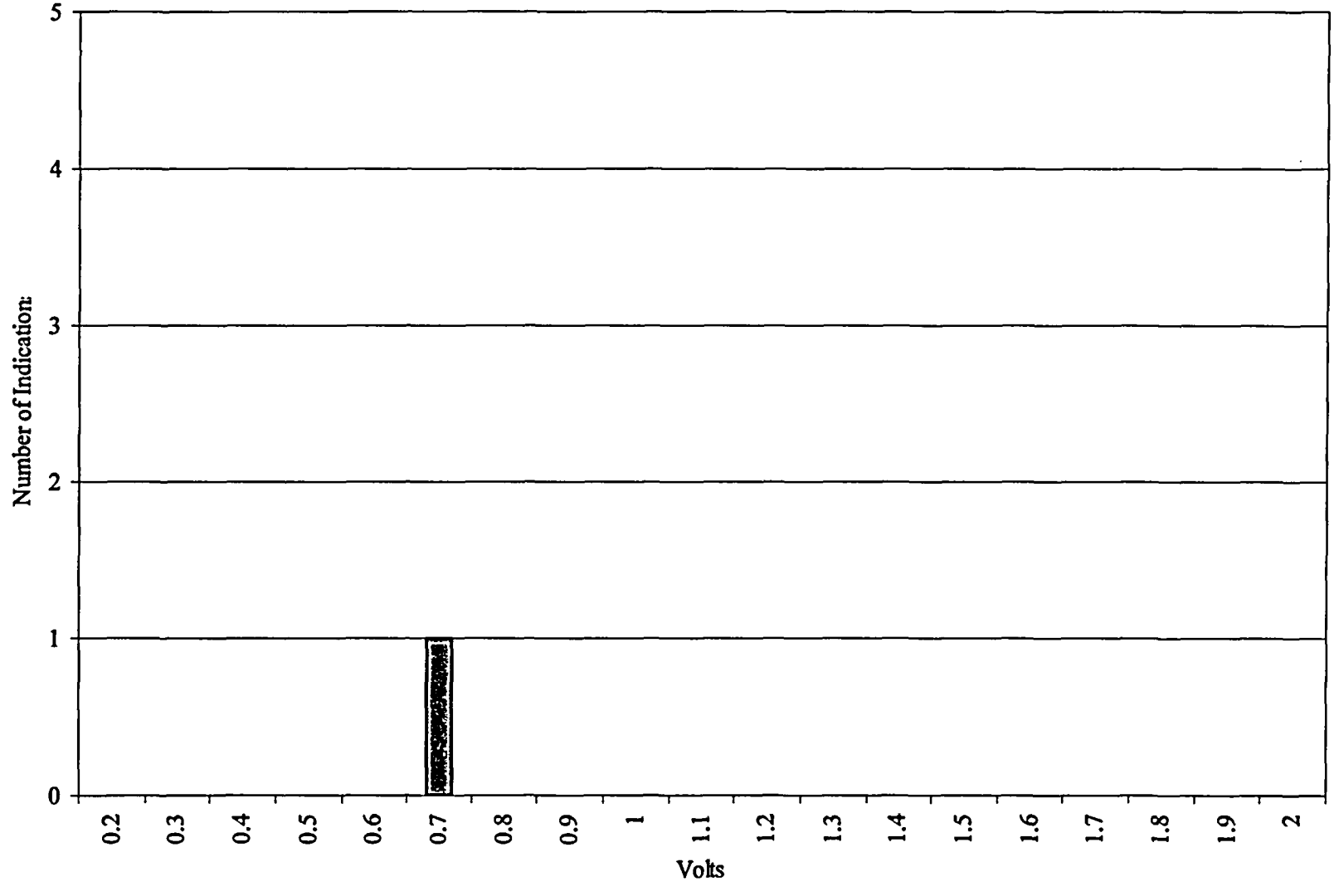

Figure 3-5: Sequoyah-2 EOC-13 Repaired Indications, SG 1

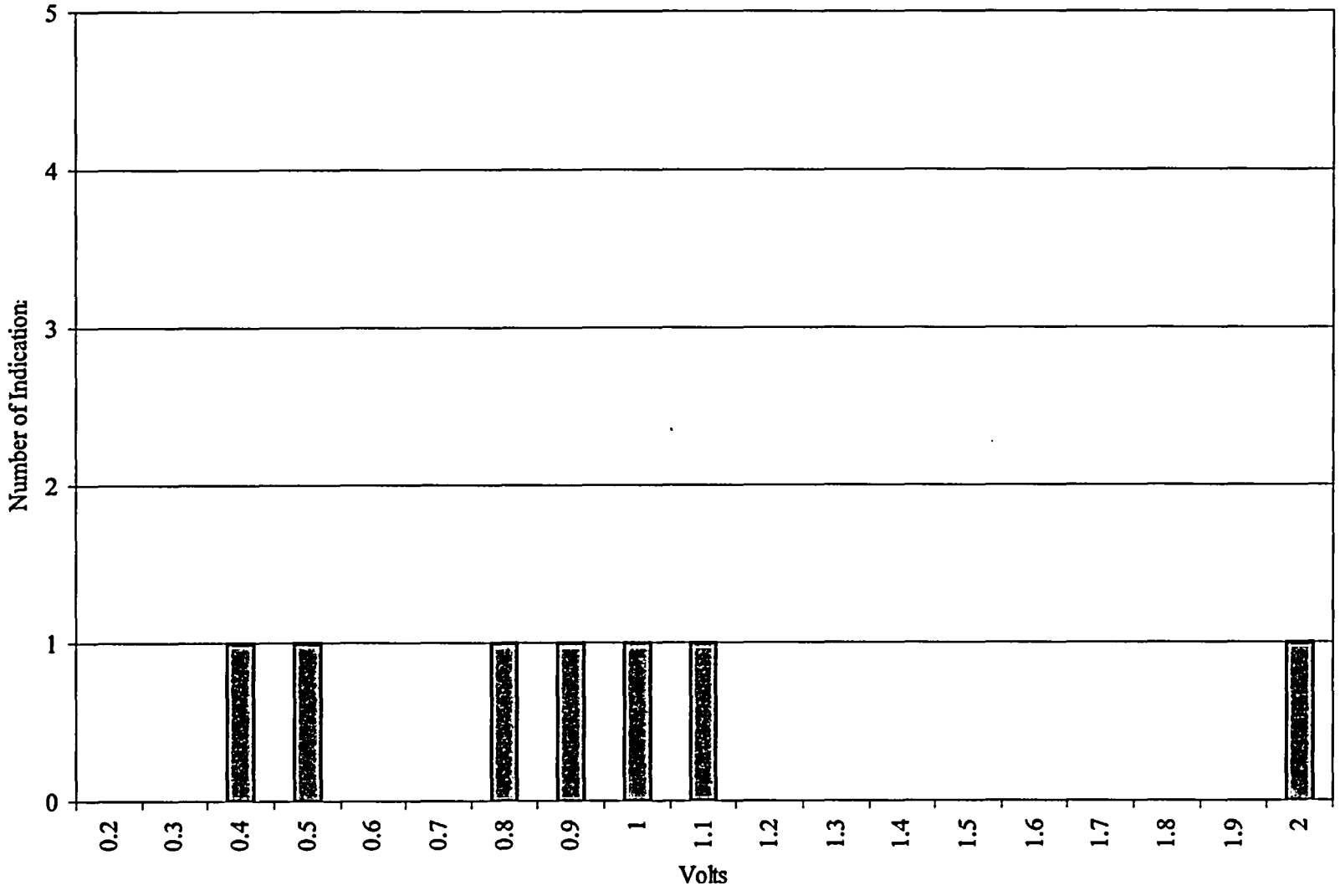

Figure 3-6: Sequoyah-2 EOC-13 Repaired Indications, SG 2

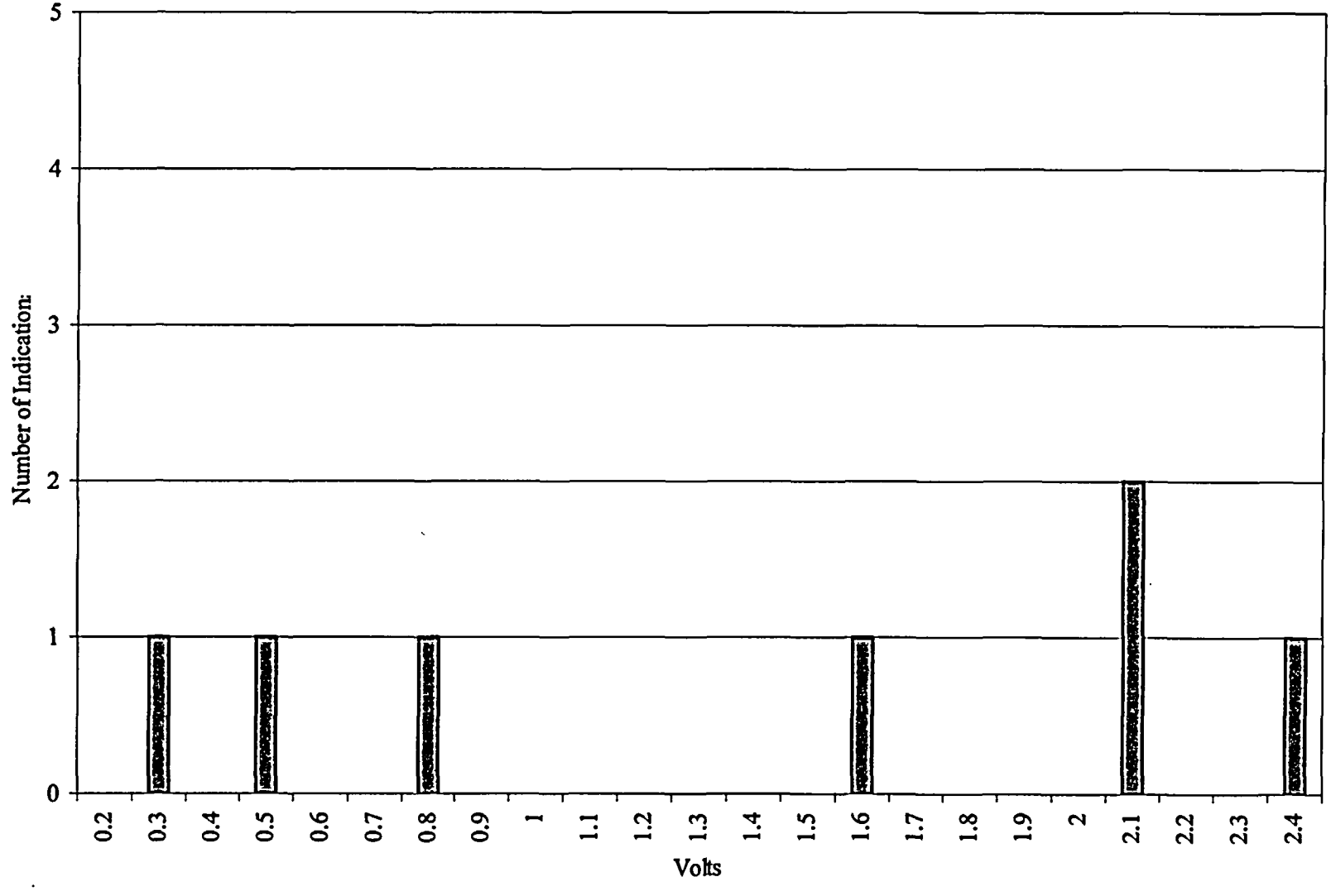

Figure 3-7: Sequoyah-2 EOC-13 Repaired Indications, SG 3

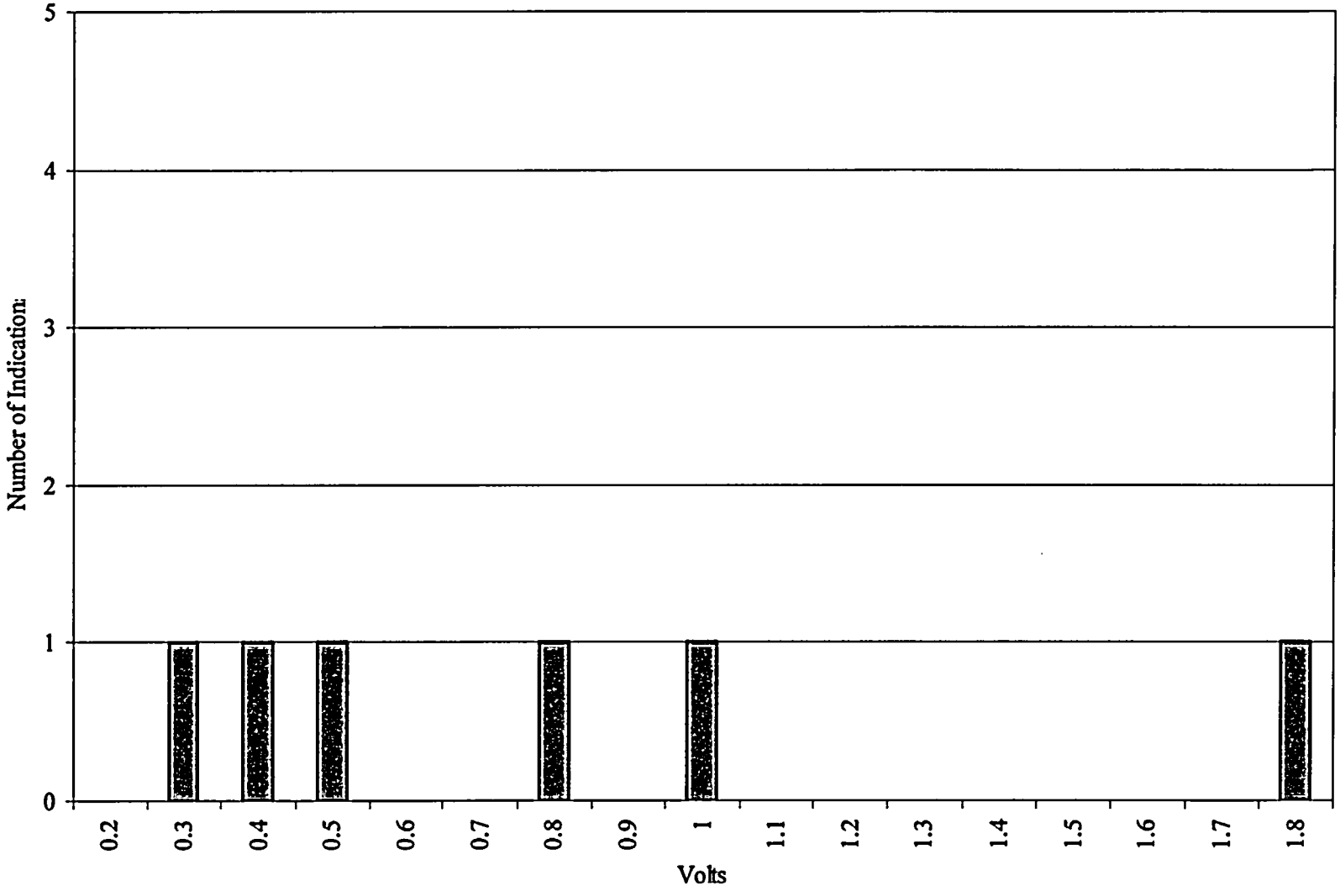

Figure 3-8: Sequoyah-2 EOC-13 Repaired Indications, SG 4

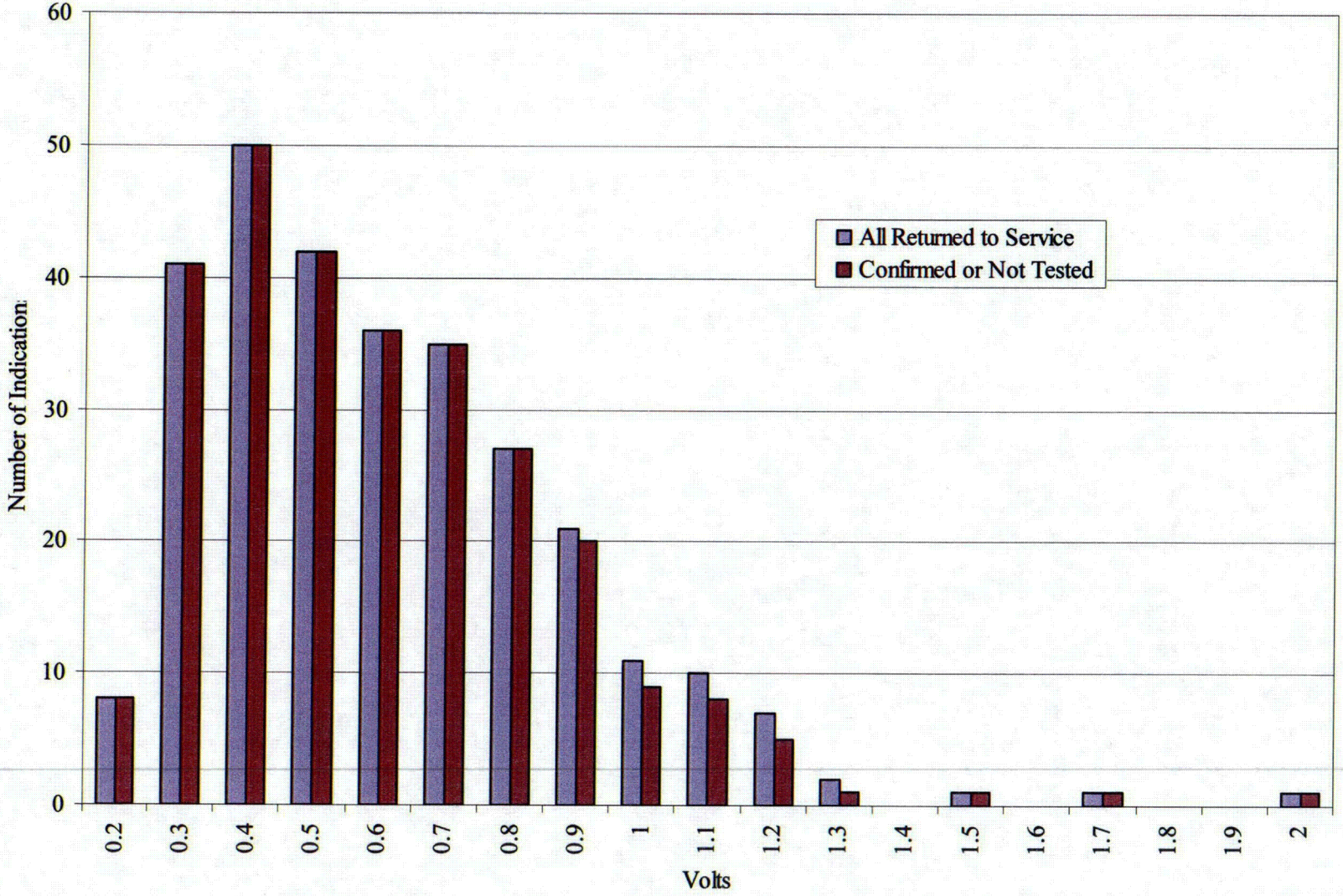

Figure 3-9: Sequoyah-2 EOC-13 Indications Returned to Service, SG 1

C05

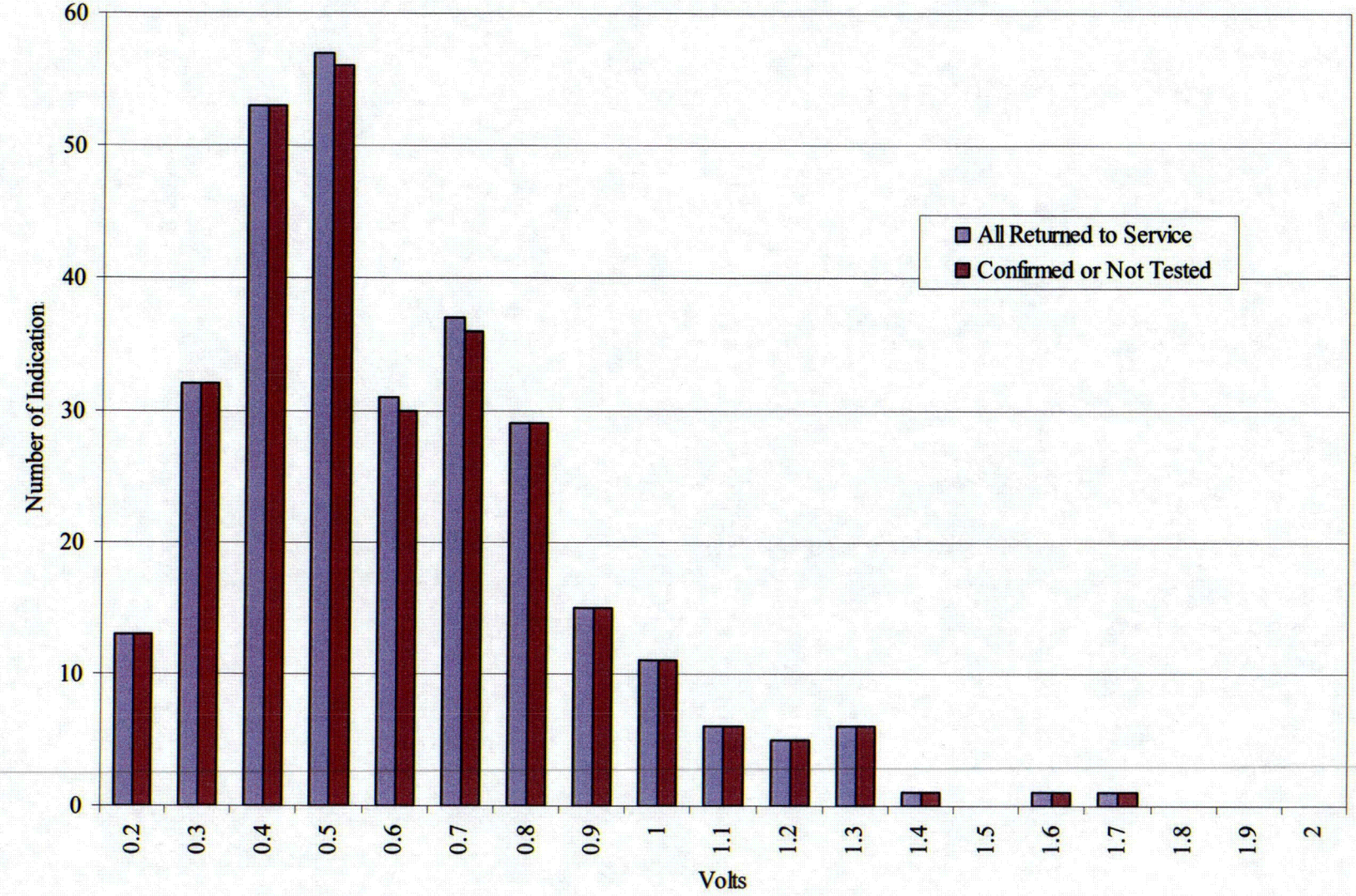

Figure 3-10: Sequoyah-2 EOC-13 Indications Returned to Service, SG 2

COG

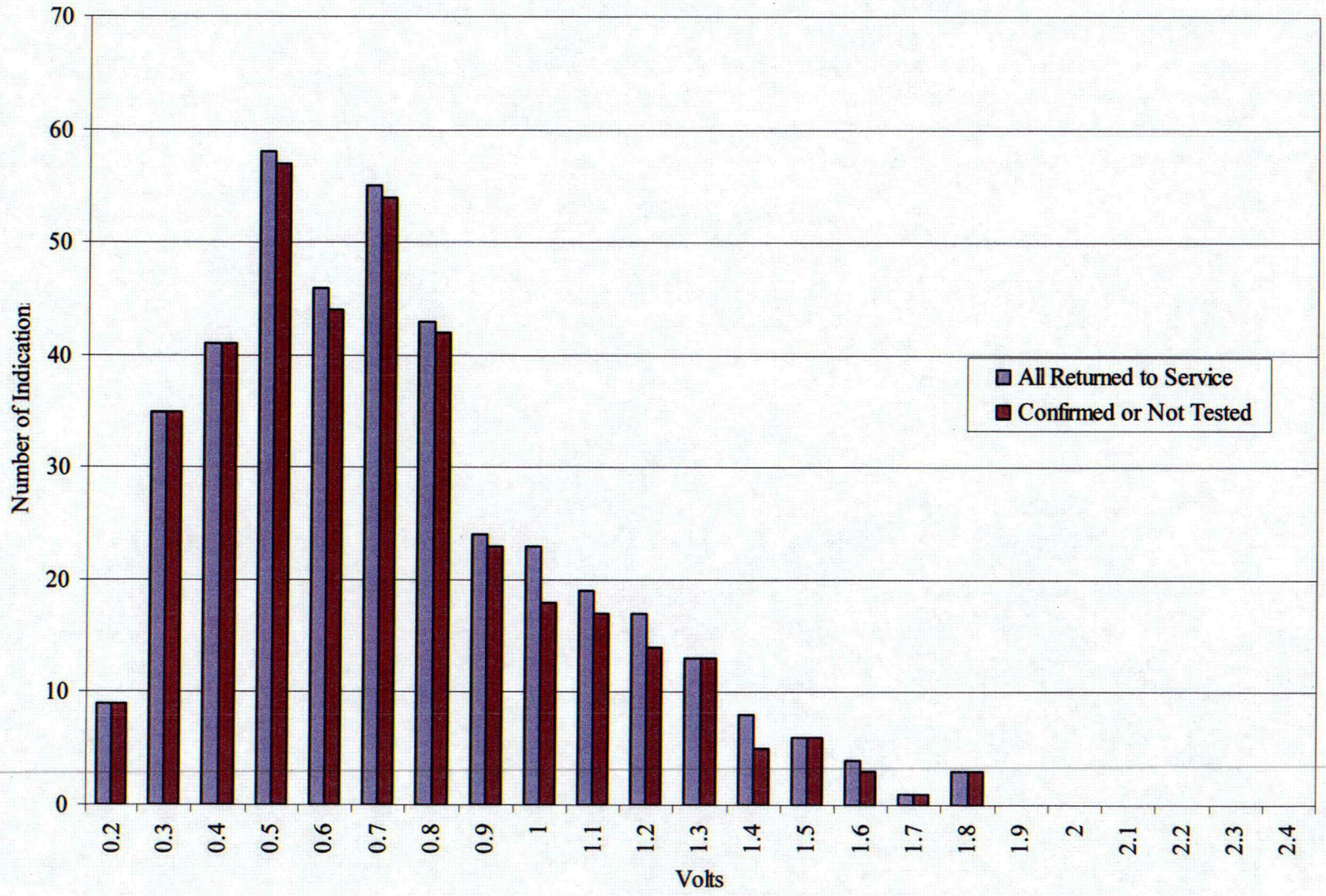

Figure 3-11: Sequoyah-2 EOC-13 Indications Returned to Service, SG 3

c07

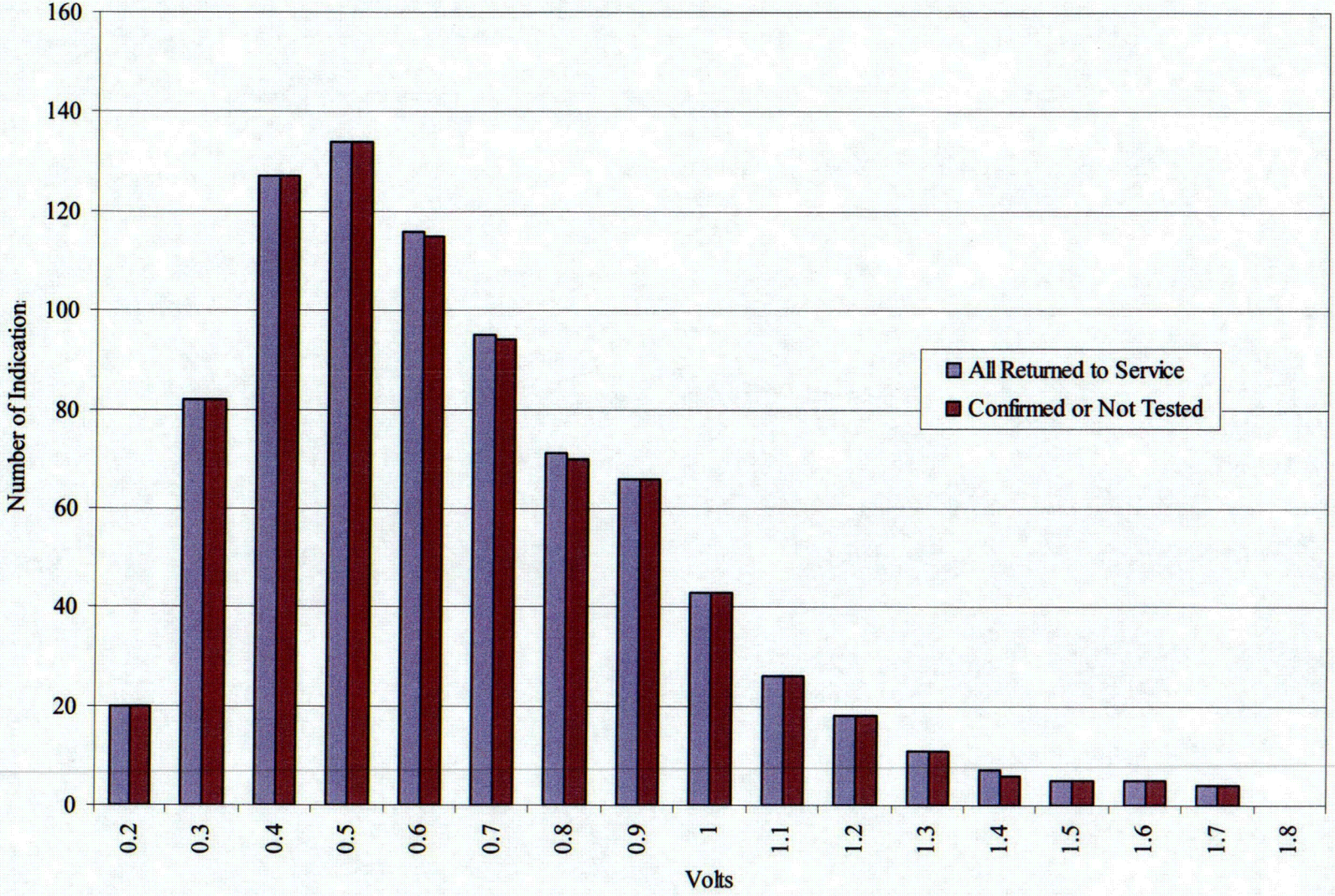

Figure 3-12: Sequoyah-2 EOC-13 Indications Returned to Service, SG 4

C08

3.2 VOLTAGE GROWTH RATES FOR CYCLE 13

Voltage growth was determined by the difference between the EOC-13 and EOC-12 voltages for each indication. The EOC-12 voltages were determined by historical reviews of the prior cycle data base and were established using the same techniques as used to analyze the EOC-13 data. The voltage change is for the 470.9 EFPD cycle length of Cycle 13. The voltage at EOC-12 is provided for indications detected at EOC-13 in Appendix A.

The procedure for computing the voltage change and binning the values is described in Reference 3. Negative voltage changes are included in the 0 change bin. For cases where an EOC-13 indication did not have a corresponding EOC-12 indication, that EOC-13 indication was not included in the growth rate determination. Voltage change distributions for each steam generator are included in Table 3-5 through Table 3-8. These tables also include the average percent change in voltage, obtained for each steam generator by dividing the average change in volts (from EOC-12 to EOC-13) by the average EOC-12 voltage. A bounding EOC-13 specific growth rate distribution was used as defined in Table 3-9. A comparison of the steam generator specific growth rates and the EOC-13 bounding growth rate is shown in Figure 3-13 and the tail end is shown in detail in Figure 3-14.

Figure 3-15 presents a comparison of the bounding growth rates from Cycle 12 with that from Cycle 13. The data has been normalized to a 1 EFPY basis (365.25 EFPD). Figure 3-16 provides a detailed view of the tail of the curve. From these figures it is clear that the growth rate in Cycle 12 bound those from Cycle 13, thus the Cycle 12 growth rate is used in the projections.

Figure 3-17 presents a plot of the voltage growth as a function of the BOC voltage. A regression line of the data is also included. The R^2 value for the regression (0.025) indicates that growth is not dependent on BOC voltage.

Table 3-5: Voltage Changes from EOC-12 to EOC-13, SG 1

SG 1		
Change in Volts	**Number of Indications**	**Cumulative Distribution**
0	99	0.344948
0.1	86	0.644599
0.2	48	0.811847
0.3	27	0.905923
0.4	14	0.954704
0.5	12	0.996516
0.6	1	1
Total	287	

Average change = growth / EOC-12 volts = 12%

Table 3-6: Voltage Changes from EOC-12 to EOC-13, SG 2

SG 2		
Change in Volts	**Number of Indications**	**Cumulative Distribution**
0	134	0.442244
0.1	80	0.706271
0.2	46	0.858086
0.3	26	0.943894
0.4	9	0.973597
0.5	7	0.9967
0.6		0.9967
0.7		0.9967
0.8		0.9967
0.9		0.9967
1.2		0.9967
1.4	1	1
Total	303	

Average change = growth / EOC-12 volts = 5%

Table 3-7: Voltage Changes from EOC-12 to EOC-13, SG 3

SG 3		
Change in Volts	**Number of Indications**	**Cumulative Distribution**
0	99	0.256477
0.1	100	0.515544
0.2	89	0.746114
0.3	48	0.870466
0.4	28	0.943005
0.5	7	0.96114
0.6	6	0.976684
0.7	5	0.989637
0.8	2	0.994819
0.9	1	0.997409
1.2		0.997409
1.4	1	1
Total	386	

Average change = growth / EOC-12 volts = 19%

Table 3-8: Voltage Changes from EOC-12 to EOC-13, SG 4

SG 4		
Change in Volts	**Number of Indications**	**Cumulative Distribution**
0	317	0.383313
0.1	281	0.723096
0.2	150	0.904474
0.3	46	0.960097
0.4	15	0.978235
0.5	8	0.987908
0.6	5	0.993954
0.7	2	0.996372
0.8	1	0.997582
0.9	1	0.998791
1.2	1	1
Total	827	

Average change = growth / EOC-12 volts = 8%

Table 3-9: Voltage Changes from EOC-12 to EOC-13, Bound of All SGs

Change in Volts	Bounding Cumulative Distribution
0	0.256477
0.1	0.515544
0.2	0.746114
0.3	0.870466
0.4	0.943005
0.5	0.96114
0.6	0.976684
0.7	0.989637
0.8	0.994819
0.9	0.9967
1.2	0.9967
1.4	1

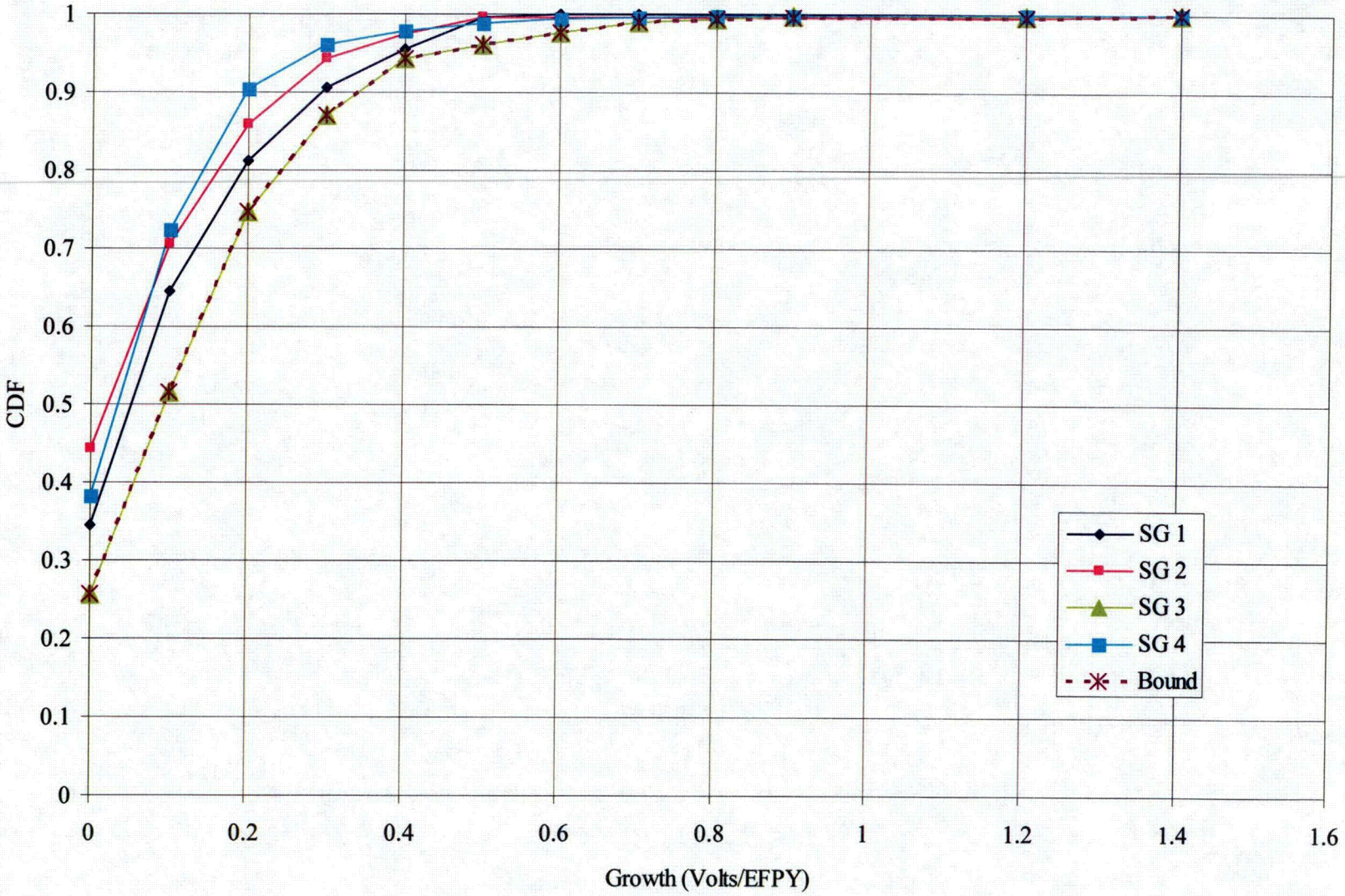

Figure 3-13: Sequoyah-2 Voltage Growth per Cycle 13

C09

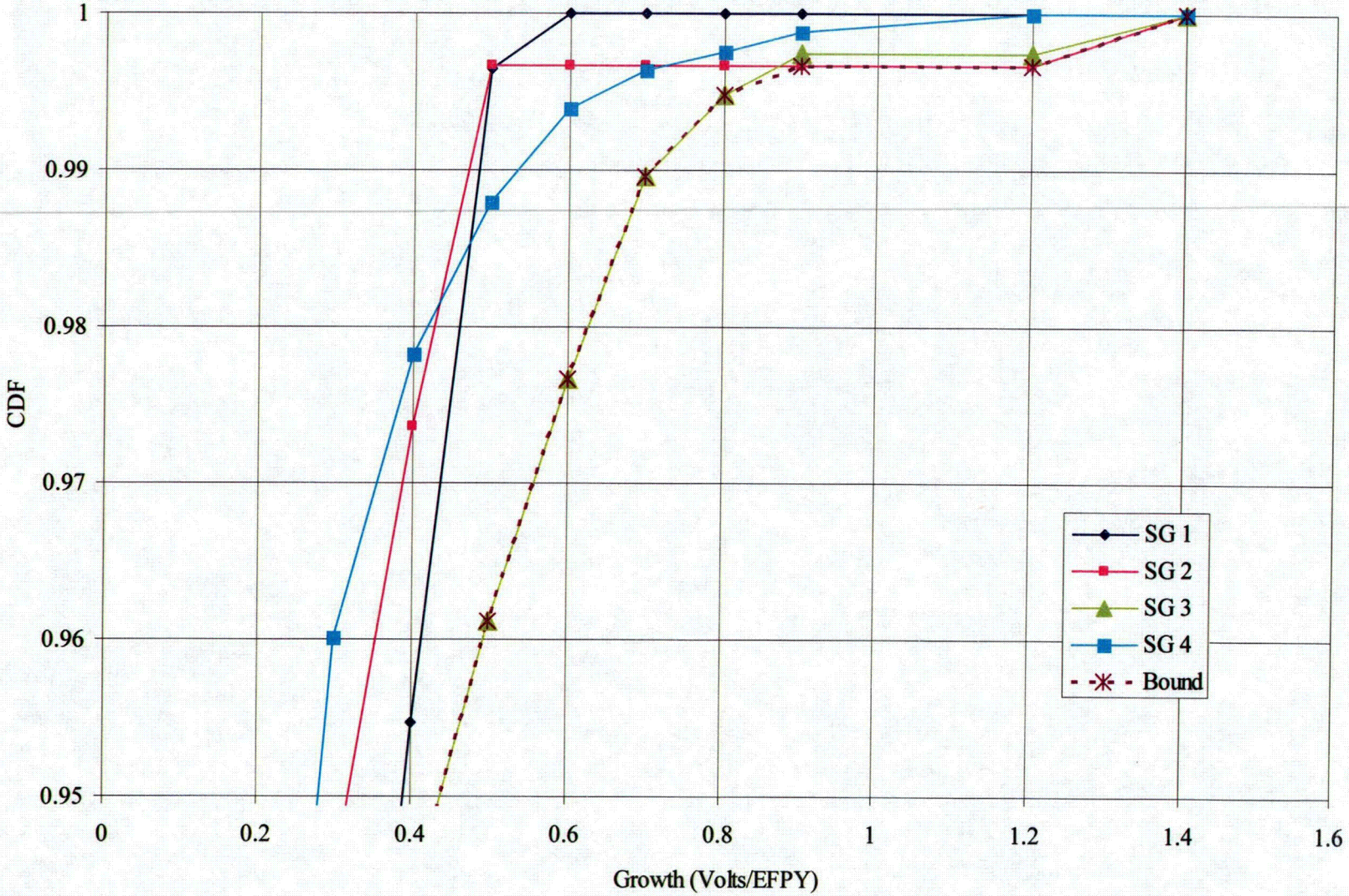

Figure 3-14: Sequoyah-2 Voltage Growth Detail

C10

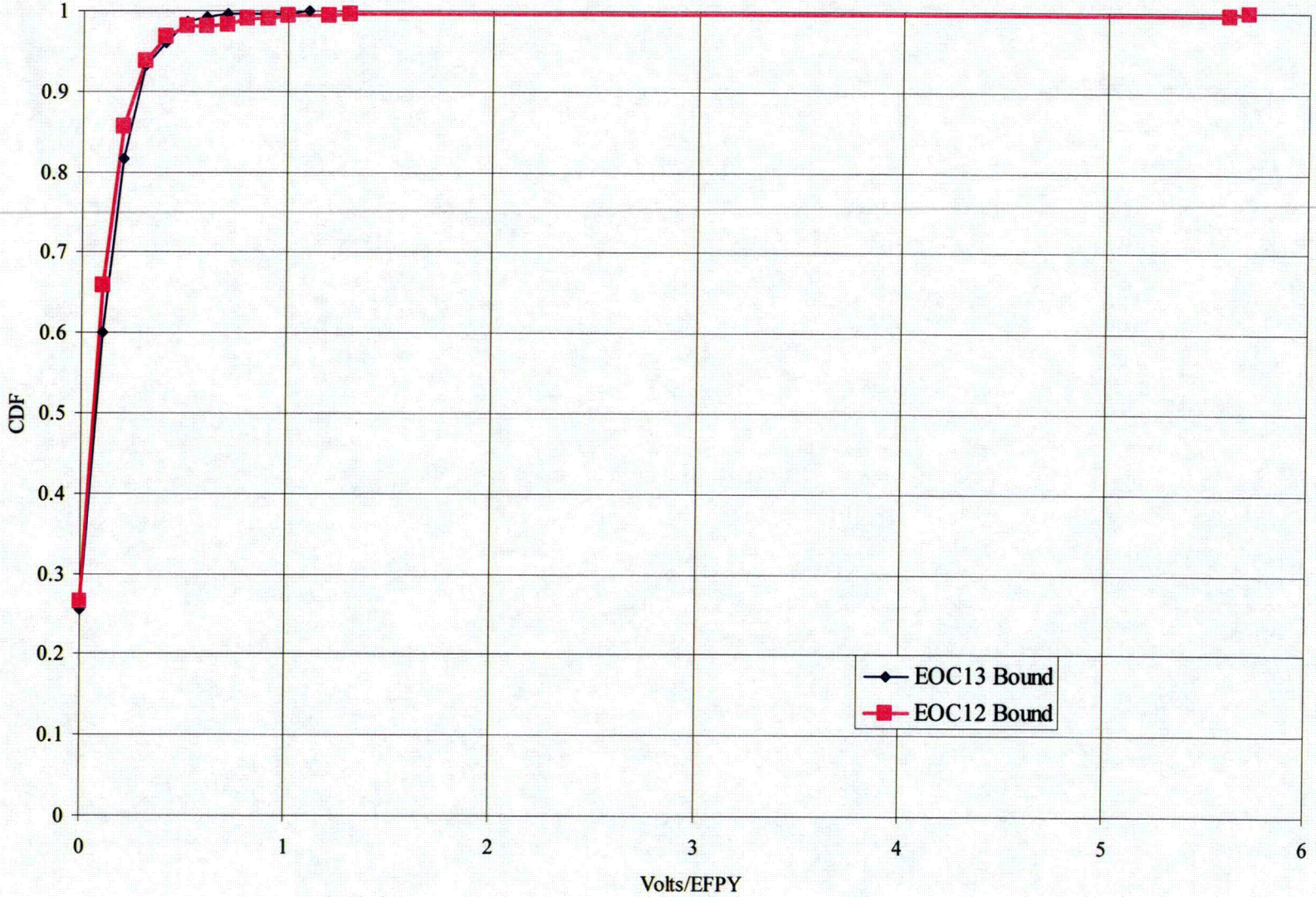

Figure 3-15: Cycle 12 and Cycle 13 Bounding Growth Rates, per EFPY

C11

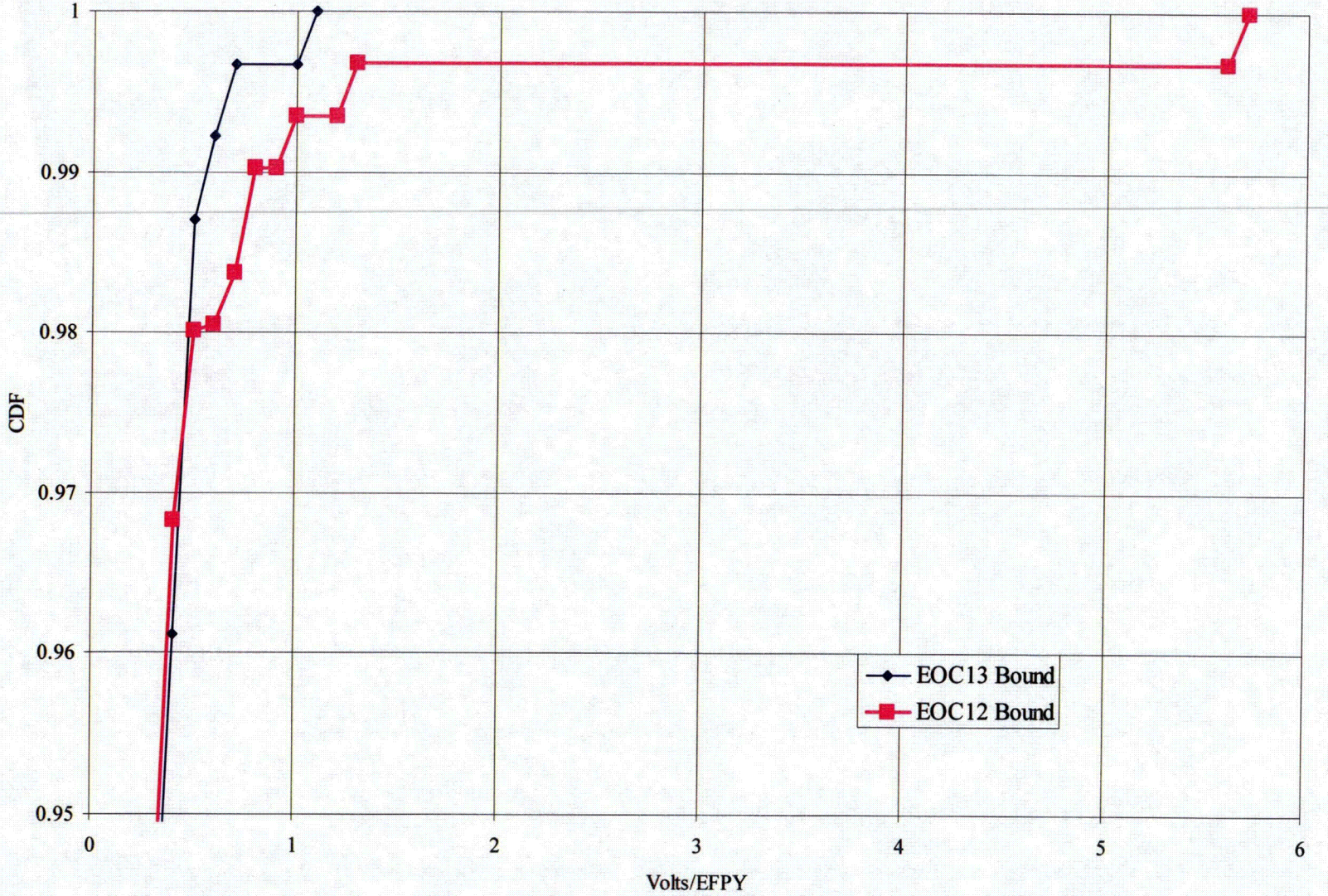

Figure 3-16: Cycle 12 and Cycle 13 Bounding Growth Rates, per EFPY, Detail View

C12

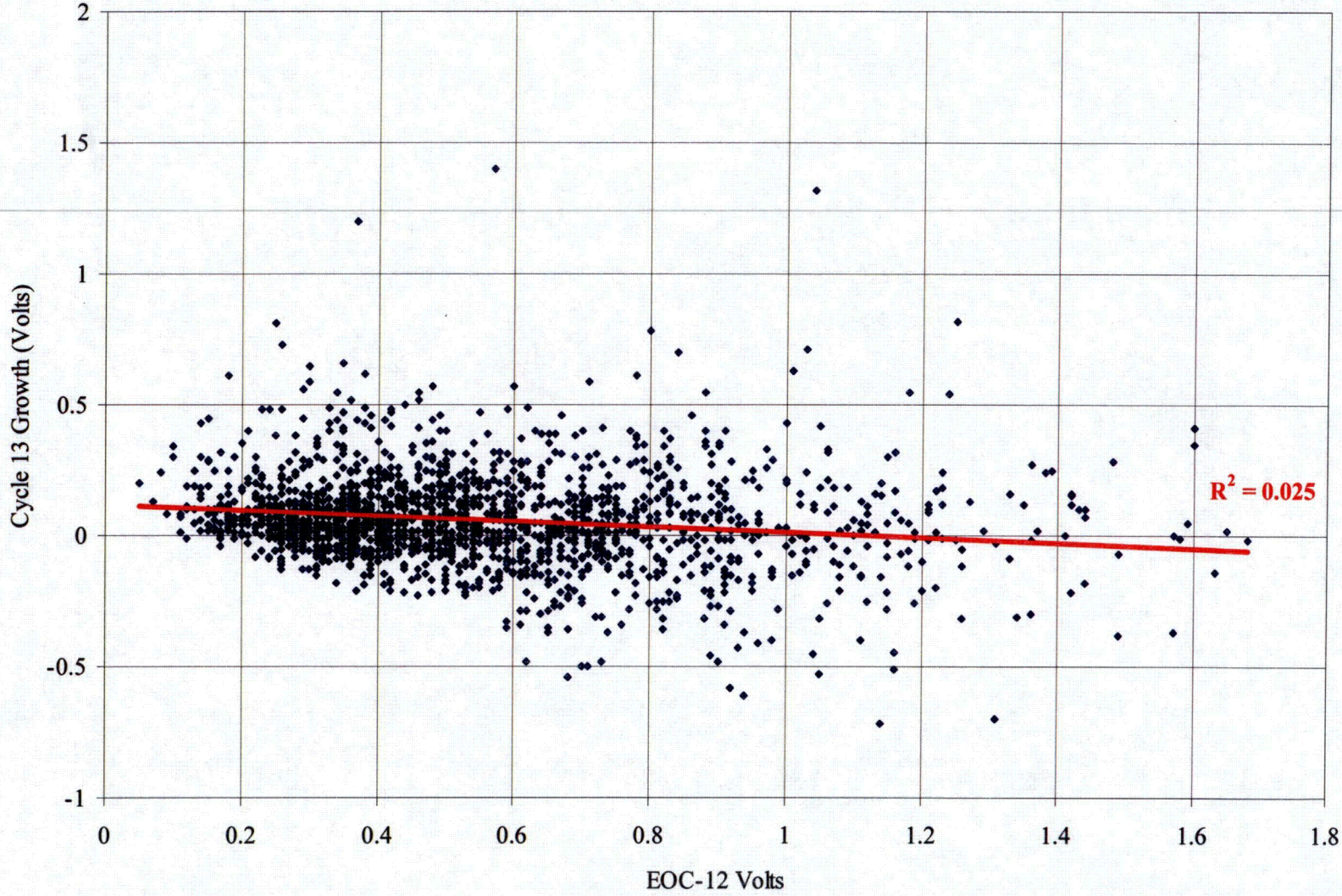

Figure 3-17: Growth as a Function of BOC Voltage

C13

4.0 ANALYSIS METHODS AND DATA BASE FOR ARC CORRELATIONS

A Monte Carlo based computer program was used to perform the calculations prescribed in GL 95-05 (Reference 1). The methodology for predicting the EOC voltage distribution and computing the probability of burst and leakage at accident conditions is based on the Westinghouse Topical Report, WCAP-14277, Revision 1 (Reference 3) supplemented by recent changes in the leakage computation process, discussed in Reference 9 as amended in Reference 10. The EOC voltage distribution, probability of burst and the leakage are computed using the Cyclesim3.1 program, Reference 11.

The predictions for EOC-13 recorded in Reference 5 used the tube burst and leakage correlations of Addendum 5 to EPRI Report NP-7480-L modified according to References 9 and 10. Both the condition monitoring assessment for EOC-13 and the operational assessment predicting the EOC-14 voltage distribution are performed using the Addendum 6 database (Reference 6). Since Sequoyah Unit 2 can take credit for PORV actuation, the condition monitoring and operational assessments are performed using the leakage correlation for 2405 psi (Reference 2). The specific parameters used in the correlations are provided in Sections 4.1 through 4.4.

4.1 TUBE MATERIAL PROPERTIES

The tube material properties are provided in Table 4-1 of Reference 3 for 7/8-inch diameter tubes at 650°F. The parameters used in the analysis are the flow stress mean of 68.78 ksi and the flow stress standard deviation of 3.1725 ksi.

4.2 BURST CORRELATION

The burst pressure, P_b, is normalized to a material with a flow stress of 68.78 ksi, which is the mean of the 7/8-inch tube data appropriate for Sequoyah Unit 2. The correlation parameters are taken from Reference 6.

Table 4-1: Effect of Database Changes on the 7/8" Tube Burst Pressure vs. Bobbin Amplitude Correlation

$$P_B = a_0 + a_1 \log(Volts)$$

Parameter	Addendum 5 Database Value	Addendum 6 Database Value	New / Old Ratio
Intercept, a_0	7.4934	7.4801	0.998
Slope, a_1	-2.3775	-2.4002	1.010
Index of Deter., r^2	79.19%	79.67%	1.006
Std. Deviation, σ_{Error}	0.8861	0.8802	0.993
Mean of Log(V)	0.2920	0.3111	
SS of Log(V)	50.2333	51.6595	
N (data pairs)	97	100	
Str. Limit (2560 psi) (1)	7.67V	7.51V	0.979
Str. Limit (2405 psi)	9.62V	9.40V	0.977
p Value for a_1 (2)	$1.88 \cdot 10^{-34}$	$5.60 \cdot 10^{-36}$	
Reference σ_f	68.78 ksi (3)		

Notes: (1) Values reported correspond to applying a safety factor of 1.4 on the differential pressure associated with a postulated SLB event.

(2) Numerical values are reported only to demonstrate compliance with the requirement that the value be less than 0.05.

(3) This is the flow stress value to which all data were normalized prior to performing the regression analysis. This affects the coefficient and standard error values. The corresponding values for a flow stress of 75.0 ksi can be obtained from the above values by multiplying by 1.0904.

4.3 LEAK RATE CORRELATION

The leak rate correlation as a function of indication voltage is taken from Reference 6. The steam line break pressure is given as 2405 psi in Reference 2. Therefore the leak correlation for pressure of 2405 psi from Reference 6 is used for the leakage predictions.

The leak rate criterion is given in terms of gallons per minute condensed at room temperature.

Table 4-2: Effect of Added Data on the 7/8" Tubes Leak Rate vs. Bobbin Amplitude Correlation (2560 psi)

$$Q = 10^{[b_3 + b_4 \log(Volts)]}$$

Parameter	Addendum 5 Database Value	Addendum 6 Database Value	Effect Ratio
SLB ΔP = 2560 psi			
Intercept, b_3	-0.06910	-0.33476	4.84
Slope, b_4	0.7170	0.95311	1.33
Index of Determination, r^2	7.5%	12.4%	1.66
Residuals, σ_{Error} (b_5)	0.8108	0.8175	1.01
Mean of Log(Q)	0.7221	0.7014	
SS of Log(Q)	19.1798	22.8754	
p Value for b_4	7.6%	2.4%	0.32
SLB ΔP = 2405 psi			
Intercept, b_3	-0.5348	-0.8039	1.50
Slope, b_4	0.9699	1.2077	1.25
Index of Determination, r^2	14.0%	20.0%	1.43
Residuals, σ_{Error} (b_5)	0.7728	0.7774	1.01
Mean of Log(Q)	0.5354	0.5090	
SS of Log(Q)	18.7455	22.6667	
p Value for b_4	2.3%	0.5%	0.22
Common Data			
Data Pairs, N	29	32	
Mean of Log(V)	1.1035	1.0871	
SS of Log(V)	2.7841	3.1116	

4.4 PROBABILITY OF LEAK CORRELATION

The probability of leak as a function of indication voltage is taken from Reference 6. In the Monte Carlo analysis leakage is quantified only if the indication is computed to be a leaker, based on the probability of leak correlation.

Table 4-3: Effect of Additional Data on the 7/8" Tube Probability of Leak Correlation

$$\Pr(Leak) = \frac{1}{1 + e^{-[b_1 + b_2 \log(Volts)]}}$$

Parameter	Addendum 5 Database Value	Addendum 6 Database Value	New / Old Ratio
Logistic Intercept, b_1	-5.1017	-5.0407	0.988
Logistic Slope, b_2	7.3483	7.5434	1.027
Intercept Variance, V_{11} (2)	1.3742	1.3311	0.969
Covariance, V_{12}	-1.7365	-1.7606	1.014
Slope Variance, V_{22}	2.6428	2.7744	1.050
Number of Data, N	115	118	
Deviance	30.21	32.37	1.072
Pearson SD	57.9%	61.1%	1.055
MSE	0.267	0.279	1.044

Notes: (1) The parameter estimates in this column were obtained from an analysis performed with the EdF data excluded from consideration.

(2) Parameters V_{ij} are the elements of the covariance matrix of the coefficients, β_i, of the regression equation.

4.5 NDE UNCERTAINTIES

The NDE uncertainties applied for the EOC-13 and EOC-14 voltage projections are the same as used in the previous 90-day report, Reference 5, and described in Reference 3. The probe wear uncertainty has a standard deviation of 7% about a mean of zero and has a cutoff at 15% based on implementation of the probe wear standard. The analyst variability uncertainty has a standard deviation of 10.3% about a mean of zero with no cutoff. These NDE uncertainty distributions are used in the Monte Carlo analysis to predict the burst probabilities and accident leak rates at EOC-13, and EOC-14. The voltages reported were adjusted to account for differences between the laboratory standard and the standard used in the field.

4.6 UPPER VOLTAGE REPAIR LIMIT

The upper voltage repair limit is based on the structural limit in Table 4-1 of 7.51 volts for an accident pressure of 2560 psi. It must be reduced by considering the projected voltage growth during the next cycle and NDE uncertainty. The maximum average percentage growth rate for any steam generator is seen from Table 3-7 (SG 3) to be 19% for the 470.9 EFPD Cycle 13, which would project to 19% x (545/470.9) = 22% for the anticipated 545 EFPD Cycle 14. According to Reference 1, the minimum growth adjustment is 30% per EFPY (44.8% per cycle for the anticipated 545 EFPD Cycle 14). Therefore the specific maximum growth value of 44.8% and 20% for NDE uncertainty was used to estimate the voltage repair limit. This results in an upper voltage repair limit of 7.51 / (1 + 0.448 + 0.20) = 4.56 volts. No indications equal to or greater than this voltage were left in service.

4.7 PROBE WEAR

An alternate probe wear criteria, approved by the NRC (Reference 8), was applied during the EOC-13 inspection. When a probe does not satisfy the ±15% voltage variability criteria for wear, this alternate criteria requires that all tubes that have indications above 75% of the repair limit inspected since the last successful probe wear check be reinspected with a good probe. All probes that failed the wear check were immediately replaced with a new probe. In accordance with this alternate probe wear criteria, the whole tube was re-inspected with a good probe when any part of the tube exceeded 75% of the repair limit. As the repair limit for Sequoyah-2 is 2 volts, all tubes that contained worn probe indications above 1.5 volts were re-inspected with a new probe. In the cases where the original call made with the worn probe was greater than 1.5 volts, the signal amplitude obtained with the new probe was used in these analyses.

A total of 11 indications (in 11 tubes) with a bobbin DSI voltage above 1.5 volts were found in the calibration groups that failed the probe wear check (these indications were called as 'RPW'), and the tubes containing those indications were reinspected with a new probe. Within 4 of these 11 tubes, there were 5 indications with a bobbin DSI voltage below 1.5 volts. These smaller indications retained their 'DSI' designation, and any detected retest signal was designated as 'PBC'.

There was only one false call made with a worn probe. In SG 3, Row 6 Column 48, the worn probe indicated the presence of a 0.44 volt DSI at the H03 support. The retest of that tube with a good probe did not identify an indication at that support. This false call was included in all subsequent analyses, including the burst and leak analyses.

One of the retested intersections had a detectable bobbin signal, but was reclassified, as a non-flaw indication. The H01 support region of tube Row 34 Column 30 in SG 3 was reclassified as a non-flaw 'DSS' call after the retest. This particular intersection was called a DSS in the EOC-12 inspection as well. This intersection was not considered a missed call, but rather a reinterpretted call, and is not included in the burst and leak analyses.

There were no new indications identified during a retest with a new probe, thus there is no evidence that a worn probe missed any indications.

Figure 4-1 shows the worn probe voltages plotted against the new probe voltages for all four SGs. One indication had its voltage increase above the repair limit when reinspected with a good probe.

Figure 4-2 shows the voltage measured by the retest of the 4 indications that were less than 1.5 volts measured by the worn probe. The retest voltages closely match the worn probe voltages. This figure shows that none of the indications measured to be less than 1.5 volts by the worn probe measured over the repair criterion of 2.0 volts on the retest, i.e., no pluggable tubes were missed due to probe wear considerations. This observation supports the criterion that says that these indications did not need retesting.

The indications found in the current inspection that were tested with a worn probe in the previous (2003) inspection were identified. Of the 302 indications found in the current inspection that were tested with a worn probe in the previous inspection, only one was 2 volts or greater (2.01 volts). This indicates that there is no significant effect of probe wear on the population of indications.

As required by Reference 8, the number of new indications detected in the present inspection in tubes that were inspected with a worn probe in the last inspection was also determined. Out of a total of 365 new indications reported in the current inspection, 81 were in tubes inspected with a worn probe during the last inspection. During a recent review of the data from the last inspection, an analyst was able to assign a voltage to all of these 81 indications, which indicates that tubes inspected with worn probes during the last inspection do not contain a disproportionately larger number of new indications. Thus, the requirements specified in Reference 8 for applying the alternate probe wear criteria are met.

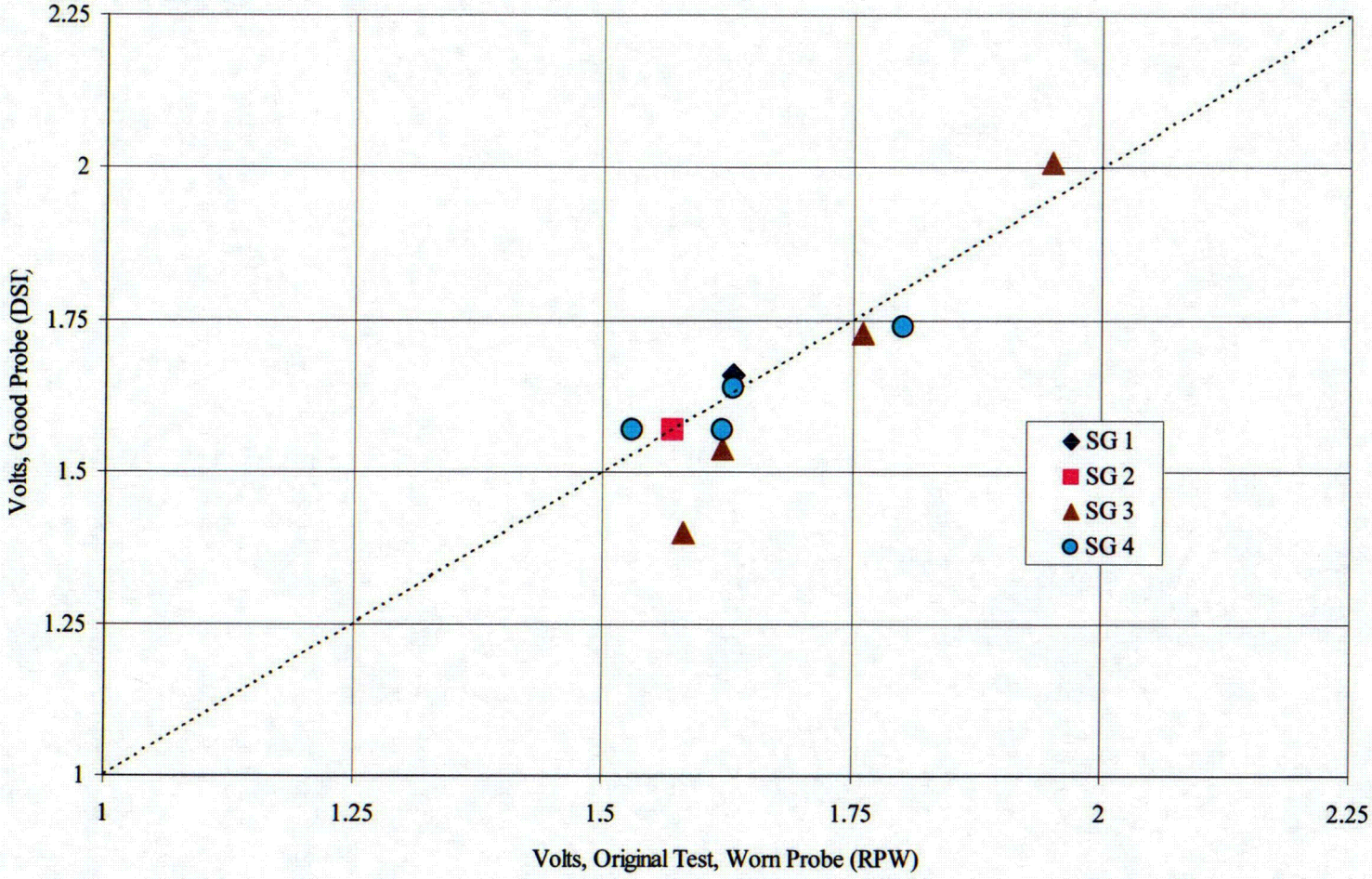

Figure 4-1: Retest Voltage vs. First Test Voltage of Indications Originally Measured to be Greater than 1.5 Volts with Worn Probe

Note: This figure does not include the results from tube R34C30, in SG3, at the H01 location. This location had a 1.71 volt original test (RPW) call. When retested with a good probe, it was called as a 1.54 volt DSS (not a DSI).

C14

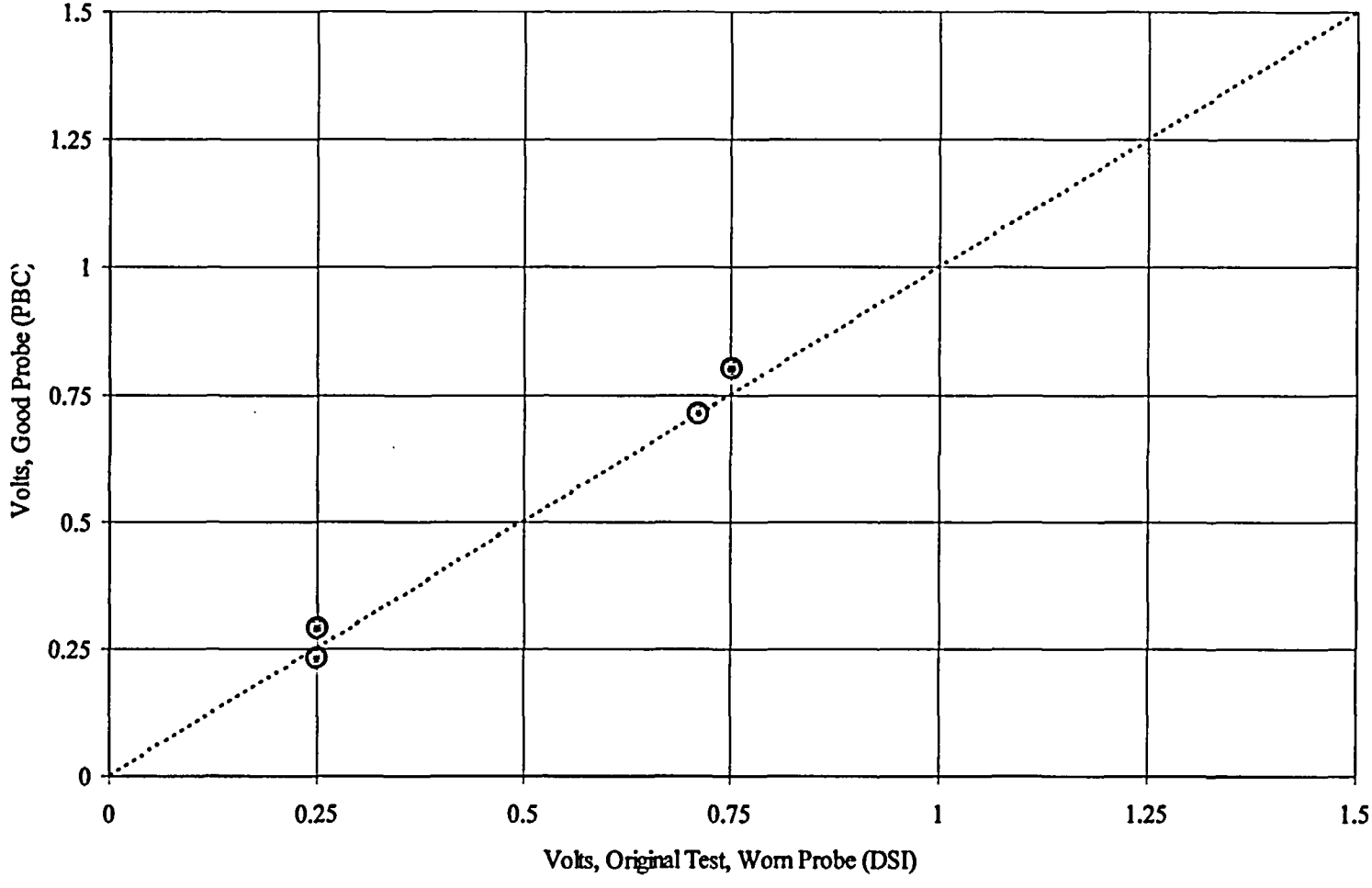

Figure 4-2: Retest Voltage vs. First Test Voltage of Indications Originally Measured to be Less than 1.5 Volts in Tubes Retested for Probe Wear

5.0 CONDITION MONITORING: TUBE LEAK RATE AND BURST PROBABILITIES AT EOC-13

5.1 ANALYSIS APPROACH

The measured EOC-13 voltage distributions of Table 3-1 through Table 3-4 for each steam generator are used as the basis for the leak rate and burst probability predictions for EOC-13. The voltage distributions developed for the computation of POB and leakage consider NDE uncertainty on the measured values, but consider no voltage growth. The resulting voltage distributions used for computation of the probability of burst and leakage are given in Figure 5-1 through Figure 5-4.

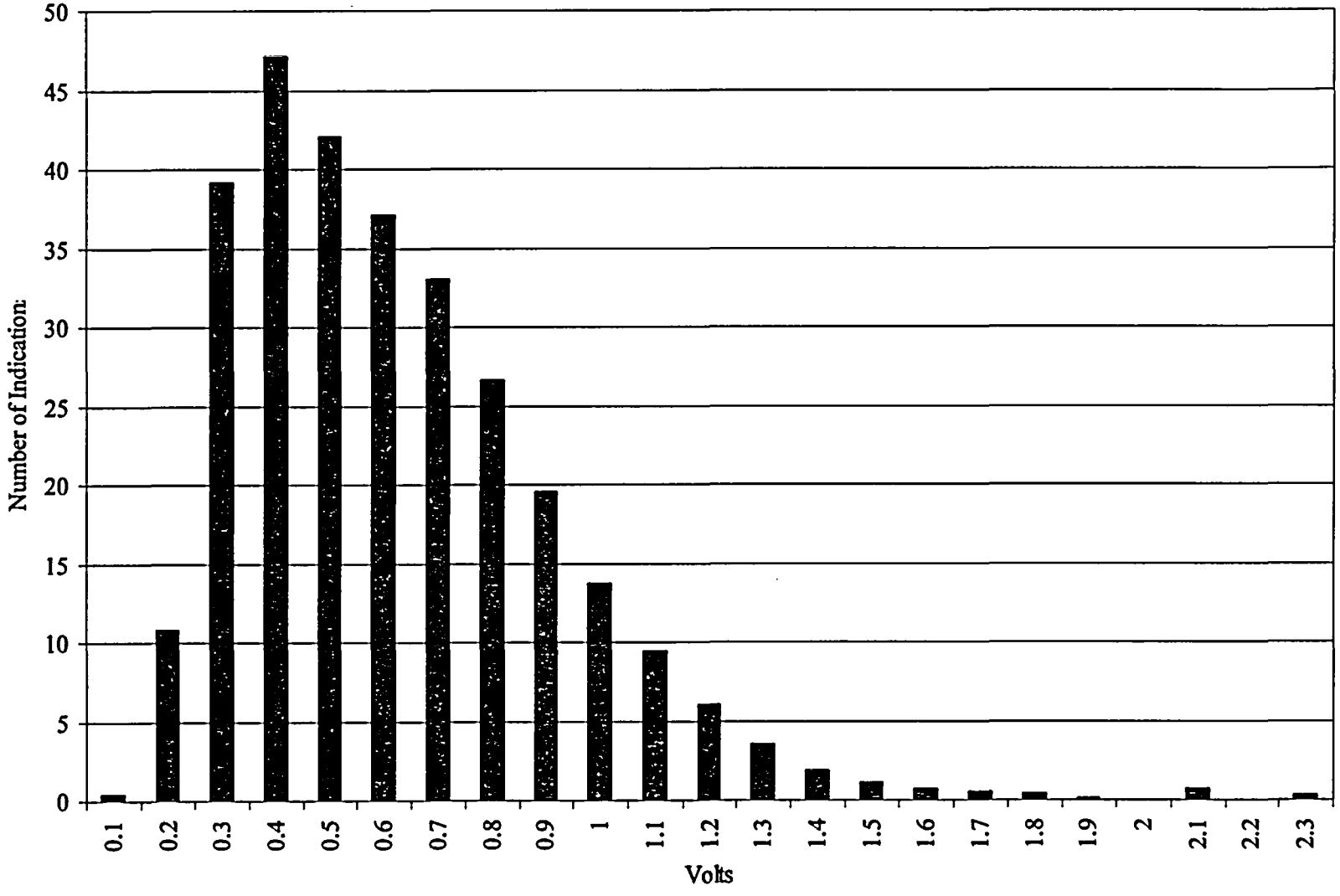

Figure 5-1: Voltage Distribution with NDE Uncertainty, SG 1

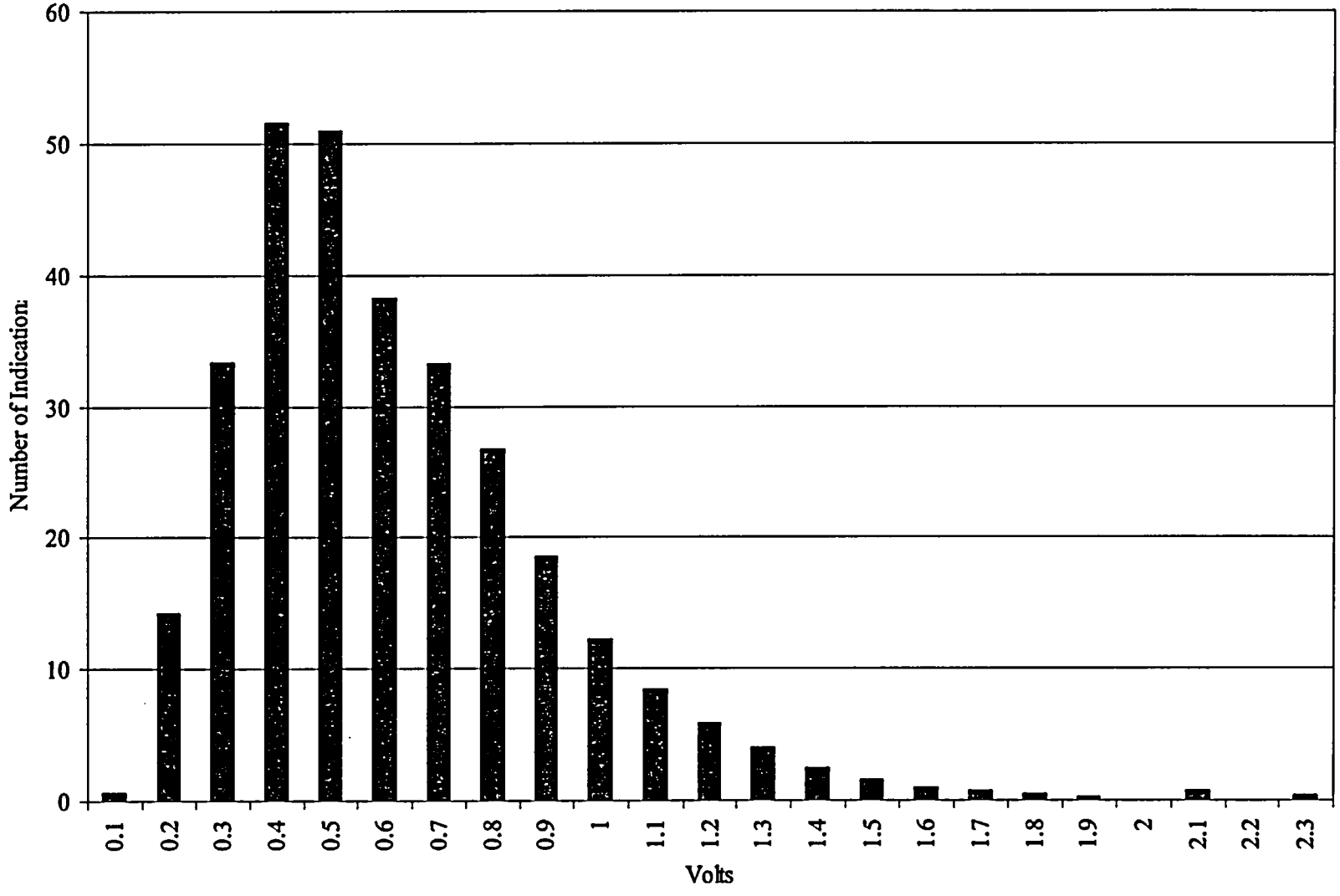

Figure 5-2: Voltage Distribution with NDE Uncertainty, SG 2

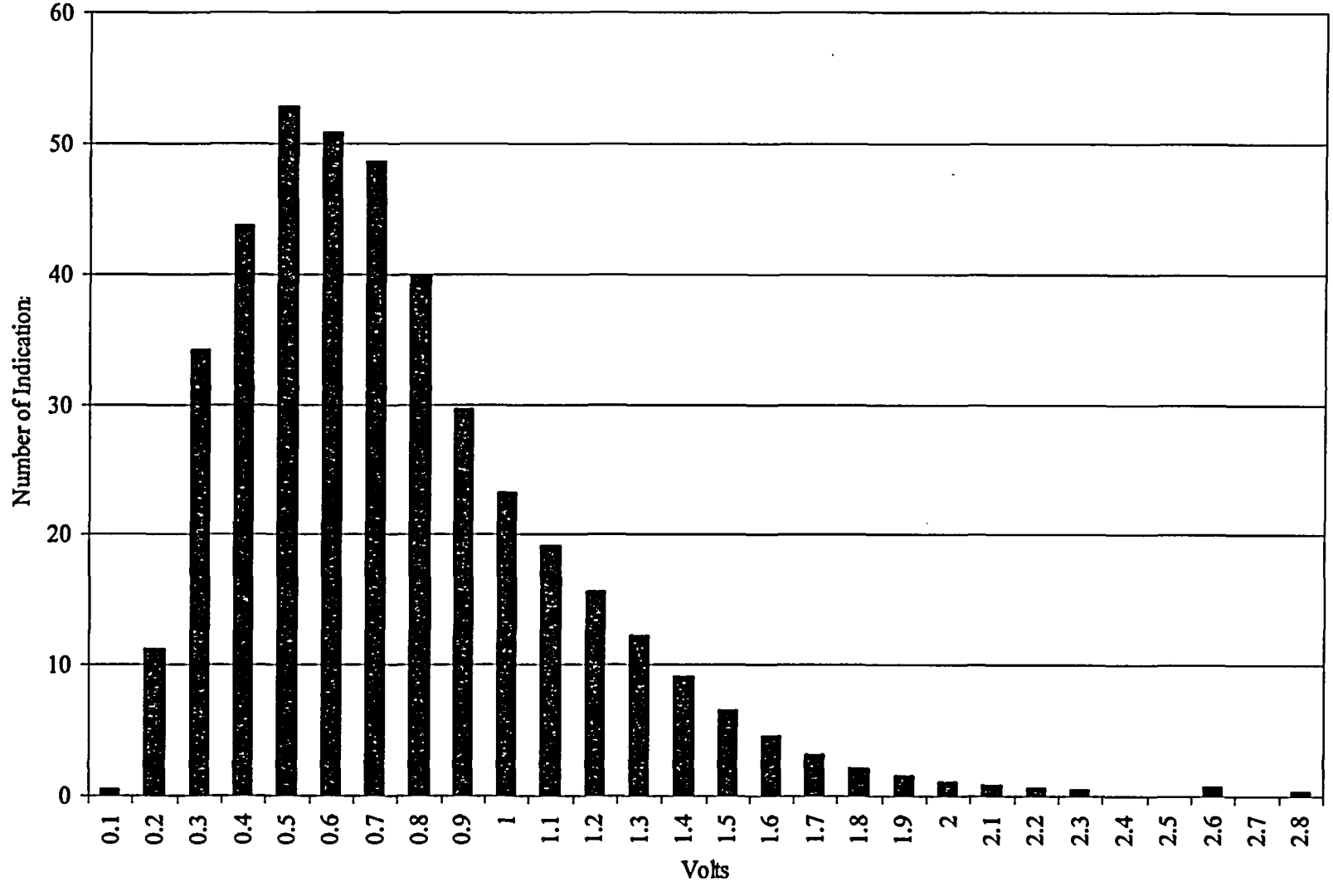

Figure 5-3: Voltage Distribution with NDE Uncertainty, SG 3

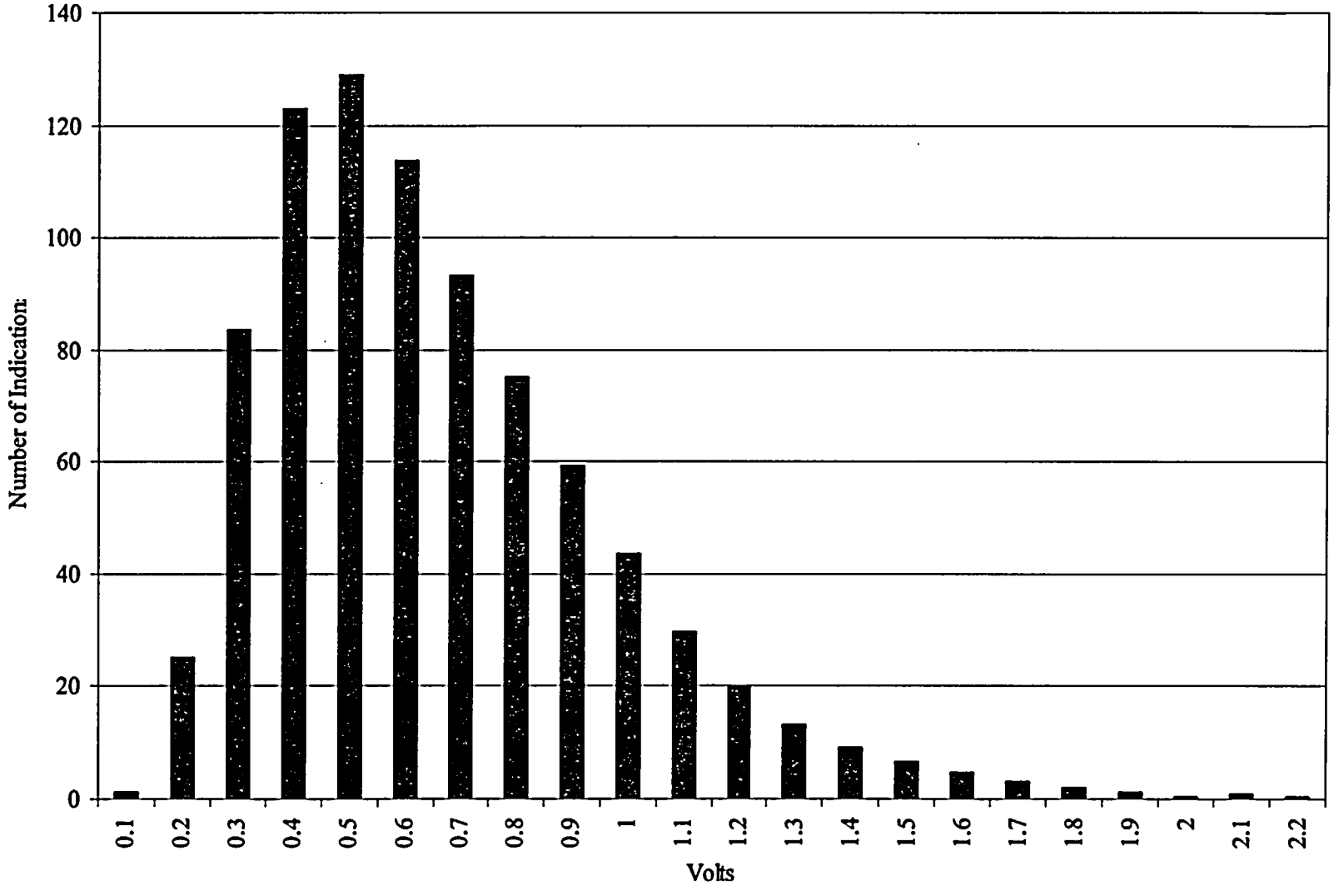

Figure 5-4: Voltage Distribution with NDE Uncertainty, SG 4

5.2 EOC-13 BURST PROBABILITIES AND LEAK RATES

The Monte Carlo analysis results for each of the steam generators based on the measured voltage distribution at EOC-13 are shown in Table 5-1. The analysis program inputs and outputs are detailed in Reference 7. One-quarter-million Monte Carlo trials were performed for each steam generator. The leakage rate is the 95th percentile evaluated at 95% confidence. The burst probability is 95% confidence based on the number of trials.

Table 5-2 presents the predicted results from Reference 5. Since the Reference 5 analysis used Addendum 5 parameters, Table 5-1 includes the results using the Addendum 5 parameters as well.

Table 5-1: Analysis Results for EOC-13 Voltage Distributions with NDE Uncertainty

SG	Number of Monte Carlo Trials	Number of Indications	Maximum Volts Measured	Using Parameters from Addendum	Burst Probability 95% conf.	95/95 SLB Leak Rate, gpm
1	250,000	294	1.95	5	1.90×10^{-5}	0.0724
				6	3.10×10^{-5}	0.0390
2	250,000	305	1.97	5	3.10×10^{-5}	0.0769
				6	2.52×10^{-5}	0.0422
3	250,000	412	2.36	5	5.26×10^{-5}	0.224
				6	8.76×10^{-5}	0.126
4	250,000	836	1.74	5	9.24×10^{-5}	0.285
				6	5.78×10^{-4}	0.147

Table 5-2: Predicted Results

SG	Number of Monte Carlo Trials	Number of Indications	Maximum Volts Predicted	Using Parameters from Addendum	Burst Probability 95% conf.	95/95 SLB Leak Rate, gpm
1	250,000	410.7	8.6	5	1.52×10^{-3}	0.546
2	250,000	416	8.7	5	1.41×10^{-3}	0.568
3	250,000	505.7	10.4	5	3.09×10^{-3}	0.985
4	250,000	1210.7	9.0	5	3.92×10^{-3}	1.690

5.3 COMPARISON WITH ACCEPTANCE CRITERIA AND PREDICTION

All steam generators are well below the burst acceptance criterion of 1.0×10^{-2}, and the Sequoyah Unit 2 leakage criterion of 3.7 gpm per steam generator (Reference 2). The acceptance criteria on POB and leakage are satisfied with significant margin.

The predicted values of the probability of burst and leakage were conservative because they were based on a very conservative industry voltage growth rate in Reference 5. The number of indications and maximum voltages were conservatively predicted.

The total number of measured indications for each steam generator was less than the predicted total number of indications. As Figure 3-1 through Figure 3-4 shows, the quantity of the smaller voltage indications was underestimated but the quantity of larger voltage indications was overestimated. This is attributable to the 0.6 POD (for all indications, regardless of size) that was used to develop the predictions. The larger voltage indications have a greater impact on the leakage prediction values and the burst probability, thus the leakage and burst values were overestimated.

This page intentionally left blank.

6.0 OPERATIONAL ASSESSMENT: TUBE LEAK RATE AND BURST PROBABILITIES AT EOC-14

6.1 ANALYSIS APPROACH

The BOC-14 voltage distributions are developed, within the Cyclesim3.1 program, from the measured EOC-13 distribution by considering the POD and the indications that are removed from service. The EOC-14 voltage distribution is developed considering the NDE uncertainties and voltage growth during the cycle. The Cycle 12 growth rate was used in these projections, since it bound the Cycle 13 growth rate. The latest burst and leakage correlations, Reference 6, are used for the EOC-14 predictions. The burst probabilities and leak rates are computed using the computed EOC-14 voltage predictions to address the acceptance criteria at the end of the cycle.

6.2 POD

The POD used is the NRC accepted value of 0.6 for all voltages (Reference 1). The beginning of Cycle 14 (BOC-14) voltage distributions are shown in Table 6-1.

Table 6-1: BOC-14 Voltage Distributions

	BOC-14 Voltage Distributions			
Volts	SG 1	SG 2	SG 3	SG 4
0.1	0	0	0	0
0.2	13.33	21.67	15	33.33
0.3	68.33	53.33	59	137.33
0.4	83.33	89	68.33	212.33
0.5	70	95.67	97.33	224
0.6	60	51.67	76.67	193.33
0.7	59	61.67	91.67	158.33
0.8	45	49	72.33	119
0.9	35	25.67	40	110
1	18.33	19	38.33	72.33
1.1	16.67	10.67	31.67	43.33
1.2	11.67	8.33	28.33	30
1.3	3.33	10	21.67	18.33
1.4	0	1.67	13.33	11.67
1.5	1.67	0	10	8.33
1.6	0	3.33	7.33	8.33
1.7	1.67	0	1.67	7.33
1.8	0	0	5	0
1.9	0	0	0	0
2	1.67	0.67	0	0
2.1	0	0	1.33	0
2.2	0	0	0	0
2.3	0	0	0	0

Table 6-1: BOC-14 Voltage Distributions

Volts	BOC-14 Voltage Distributions			
	SG 1	SG 2	SG 3	SG 4
2.4	0	0	0.67	0
2.5	0	0	0	0
Total	489	501.3	679.7	1387.3

6.3 VOLTAGE GROWTH RATES FOR CYCLE 14

The Cycle 12 and Cycle 13 bounding voltage growth rates, shown in Figure 3-15 and Figure 3-16, indicate that the Cycle 12 growth rate is the more conservative. The Cycle 12 growth rate is used in these projections.

6.4 PREDICTION OF VOLTAGE DISTRIBUTIONS AT EOC-14

The prediction of the EOC-14 voltage distributions is based on the BOC-14 indications and the composite growth rate. The length of Cycle 14 is established at 545 effective full power days (EFPD), Reference 2. The EOC-14 predicted voltage distributions (using both the Cycle 12 and Cycle 13 growth rates) are shown in Table 6-2 and in Figure 6-1 through Figure 6-4. The voltage distributions predicted using both growth rates are similar, with the predictions using the Cycle 13 growth rates populated with somewhat greater frequency in the lower voltages and with higher tail-end voltages. The analysis inputs and outputs are detailed in Reference 7.

Table 6-2: EOC-14 Voltage Distributions

Volts	EOC-14 Voltage Distributions			
	SG 1	SG 2	SG 3	SG 4
0.1	0.17	0.28	0.19	0.43
0.2	4.79	6.29	4.92	11.11
0.3	19.98	19.06	17.92	43.4
0.4	37.39	37.83	34.19	88.81
0.5	51.95	55.37	52.3	134.58
0.6	59.57	63.96	66.57	163.78
0.7	59.13	63.33	72.95	168.95
0.8	55.24	57.8	73.45	158.74
0.9	48.52	49.26	67.56	140.03
1	40.03	39.34	58.17	117.28
1.1	31.33	29.77	48.53	93.56
1.2	23.37	21.72	39.88	71.2
1.3	16.71	15.58	32.53	52.24
1.4	11.59	11.16	26.18	37.78
1.5	7.91	8.02	20.73	27.46
1.6	5.23	5.7	15.94	19.99
1.7	3.5	4.02	12.08	14.53
1.8	2.53	2.85	9	10.64

Table 6-2: EOC-14 Voltage Distributions

Volts	EOC-14 Voltage Distributions			
	SG 1	SG 2	SG 3	SG 4
1.9	1.88	2.12	6.56	7.7
2	1.4	1.5	4.69	5.45
2.1	1.07	1.06	3.31	3.8
2.2	0.95	0.83	2.45	2.79
2.3	0.83	0.73	1.82	2.2
2.4	0.65	0.61	1.39	1.73
2.5	0.48	0.44	1.06	1.3
2.6	0.36	0.32	0.83	0.96
2.7	0.27	0.24	0.63	0.7
2.8	0.19	0.17	0.45	0.52
2.9	0.13	0.11	0.32	0.37
3	0.08	0.07	0.24	0.25
3.1	0.06	0.05	0.17	0.17
3.2	0.03	0.03	0.13	0.11
3.3	0.02	0.02	0.09	0.07
3.4	0.01	0.01	0.06	0.05
3.5	0.01	0.01	0.04	0.03
3.6	0	0.01	0.03	0.02
3.7	0	0	0.02	0.01
3.8	0	0	0.01	0.01
3.9	0	0	0.01	0
4	0	0	0	0
4.1	0	0	0	0
4.2	0	0	0	0
4.3	0	0	0	0
4.4	0	0	0	0
4.5	0	0	0	0
4.6	0	0	0	0
4.7	0	0	0	0
4.8	0	0	0	0
4.9	0	0	0	0
5	0	0	0	0
5.1	0	0	0	0
5.2	0	0	0	0
5.3	0	0	0	0
5.4	0	0	0	0
5.5	0	0	0	0
5.6	0	0	0	0
5.7	0	0	0	0
5.8	0	0	0	0
5.9	0	0	0	0
6	0	0	0	0

Table 6-2: EOC-14 Voltage Distributions

Volts	EOC-14 Voltage Distributions			
	SG 1	SG 2	SG 3	SG 4
6.1	0	0	0	0
6.2	0	0	0	0
6.3	0	0	0	0
6.4	0	0	0	0
6.5	0	0	0	0
6.6	0	0	0	0
6.7	0	0	0	0
6.8	0	0	0	0
6.9	0	0	0	0
7	0	0	0	0
7.1	0	0	0	0
7.2	0	0	0	0
7.3	0	0	0	0
7.4	0	0	0	0
7.5	0	0	0	0
7.6	0	0	0	0
7.7	0	0	0	0
7.8	0	0	0	0
7.9	0	0	0	0
8	0	0	0	0
8.1	0	0	0	0
8.2	0	0	0	0
8.3	0	0	0	0
8.4	0	0	0	0
8.5	0	0	0	0
8.6	0	0	0	0
8.7	0.05	0.07	0.06	0.13
8.8	0.21	0.18	0.18	0.44
8.9	0.26	0.28	0.24	0.67
9	0.09	0.13	0.29	0.71
9.1	0	0	0.28	0.63
9.2	0.7	0.7	0.2	0.52
9.3	0	0	0	0.41
9.4	0	0	0	0.07
9.5	0.3	0.3	0.7	0
9.6	0	0	0	0.7
9.7	0	0	0	0
9.8	0	0	0.3	0.3
9.9	0	0	0	0
Total	489	501.3	679.7	1387.3

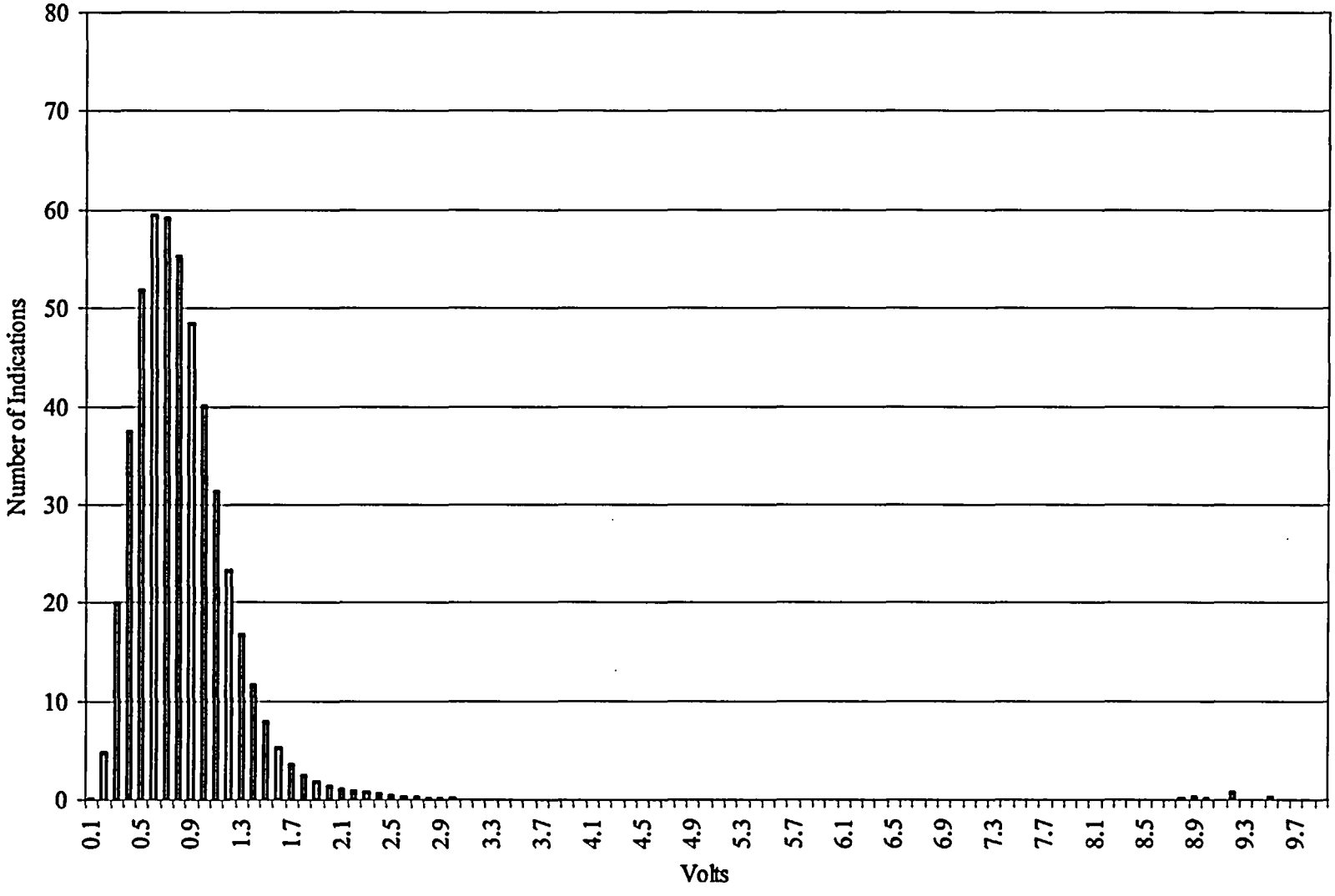

Figure 6-1: Predicted Voltage Distribution, SG 1

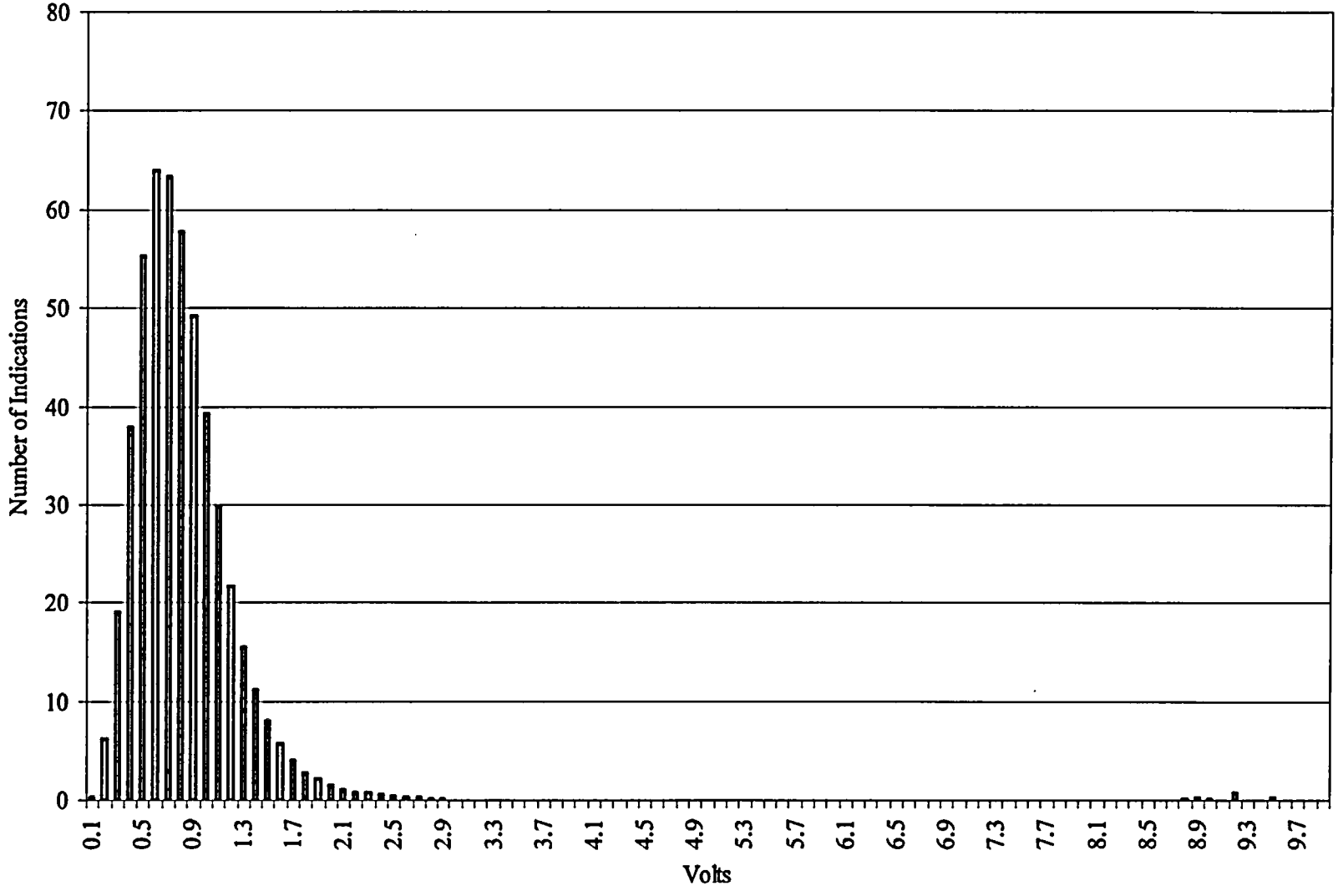

Figure 6-2: Predicted Voltage Distribution, SG 2

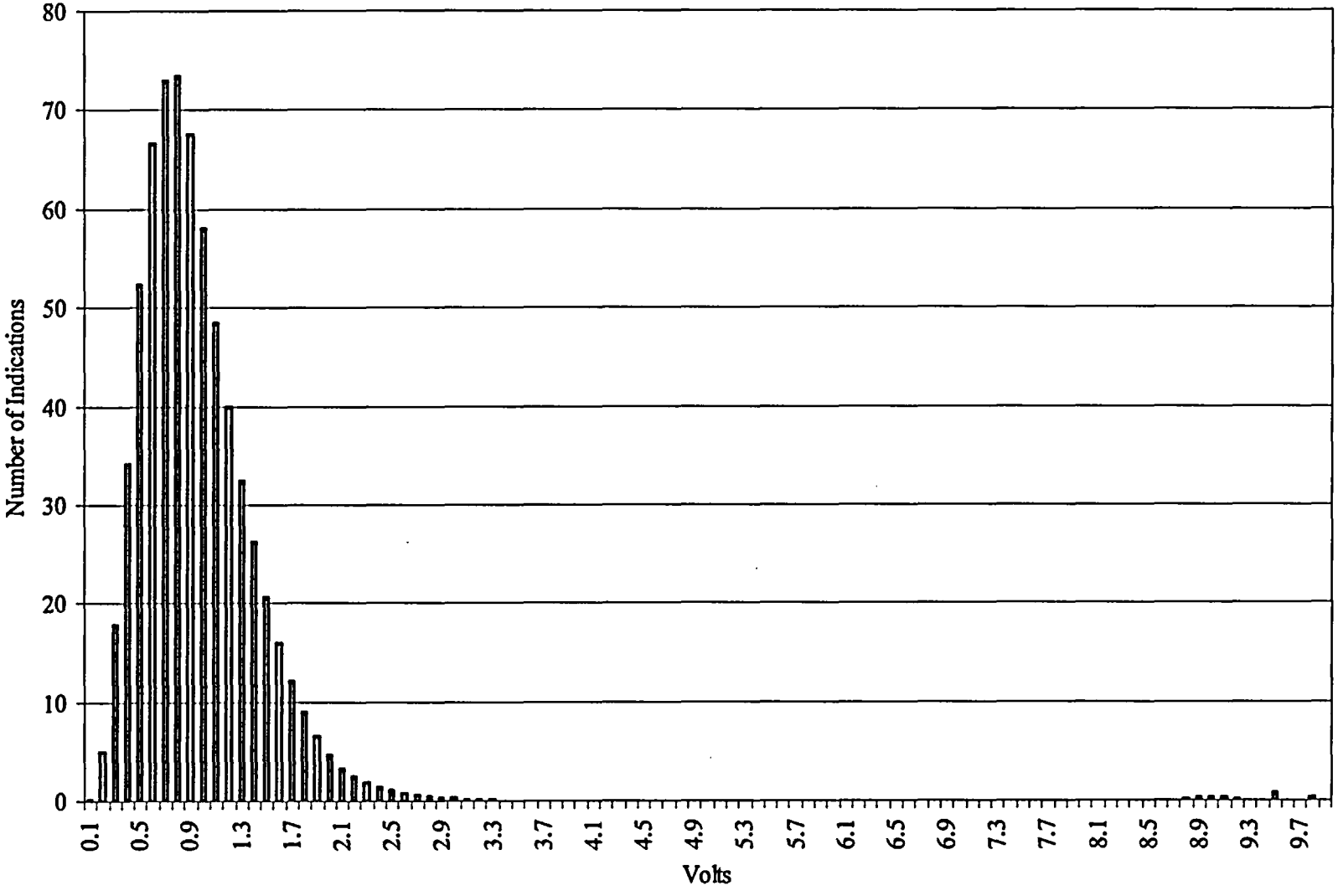

Figure 6-3: Predicted Voltage Distribution, SG 3

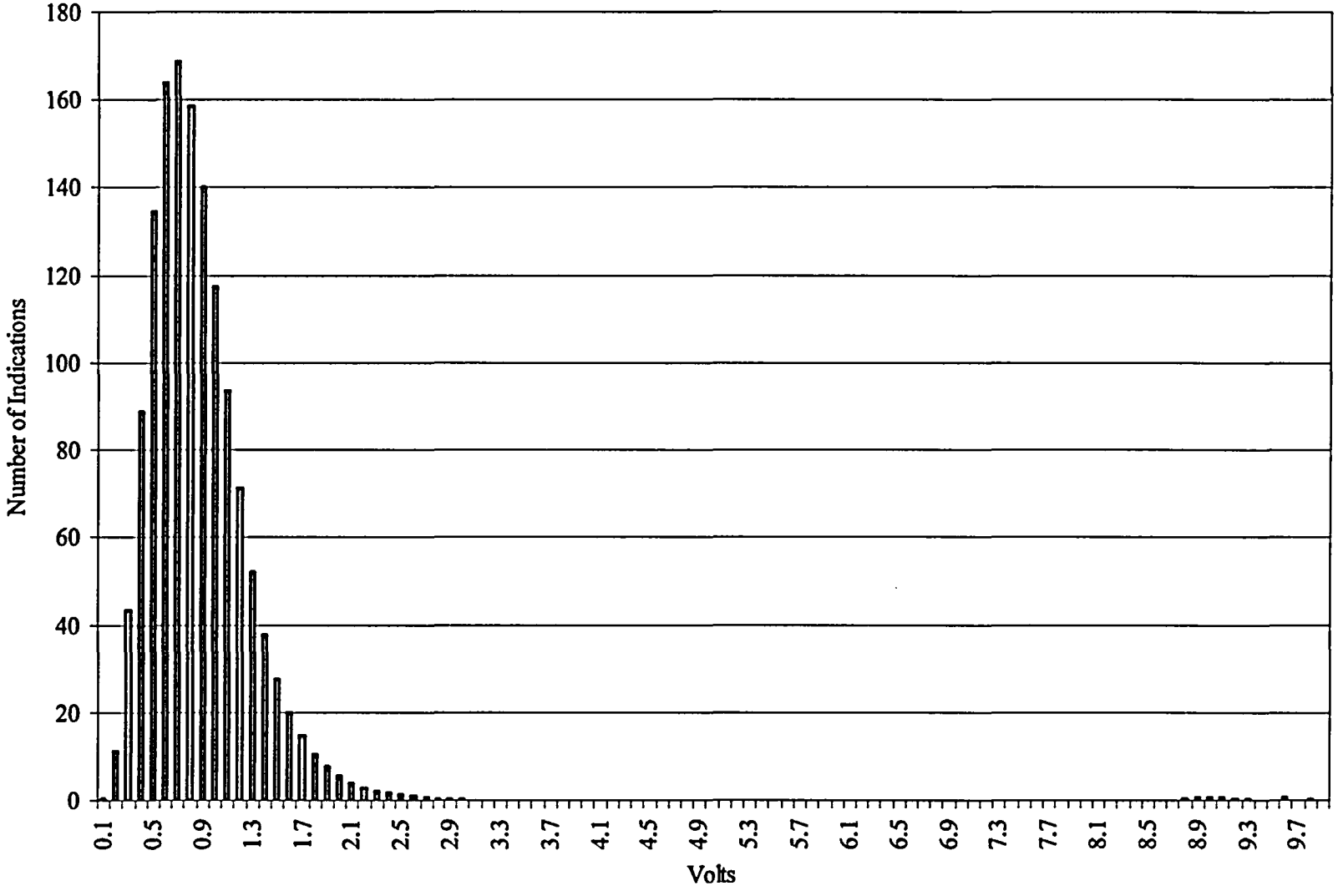

Figure 6-4: Predicted Voltage Distribution, SG 4

6.5 PREDICTION OF TUBE LEAK RATES AND BURST PROBABILITIES AT EOC-14

The Monte Carlo analysis results for predicted EOC-14 voltage distributions are shown in Table 6-3. One-quarter-million Monte Carlo trials were performed for each steam generator in this operational assessment. The Cycle 12 growth rate was used for these predictions. The leakage rate is the 95th percentile evaluated at 95% confidence. The burst probability is 95% confidence based on the number of trials. The analysis program inputs and outputs are detailed in Reference 7.

Table 6-3: EOC-14 Predicted Results

SG	Number of Monte Carlo Trials	Number of Indications	Maximum Volts*	Burst Probability 95% Confidence	95/95 SLB Leak Rate (gpm)
1	250,000	489.0	9.5	2.20×10^{-3}	0.519
2	250,000	501.3	9.5	2.47×10^{-3}	0.530
3	250,000	679.7	9.8	3.41×10^{-3}	0.874
4	250,000	1387.3	9.8	6.51×10^{-3}	1.47

* Voltage where tail is accumulated to 0.3 indications

6.6 COMPARISON WITH ACCEPTANCE CRITERIA

All steam generators are below the burst acceptance criterion of 1.0×10^{-2}, and the Sequoyah Unit 2 leakage criterion of 3.7 gpm (Reference 2).

This page intentionally left blank.

7.0 REFERENCES

1. NRC Generic Letter 95-05, "Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking," USNRC Office of Nuclear Reactor Regulation, August 3, 1995.

2. TVA Letter, H.R. Rogers to M.H. Cothron, "Sequoyah Nuclear Plant –U2C13 Steam Generator Tube Integrity Inspection," B38 050506 802, May 6, 2005.

3. WCAP-14277, Revision 1, "SLB Leak Rate and Tube Burst Probability Analysis Methods for ODSCC at TSP Intersections," Westinghouse Nuclear Services Division, December 1996.

4. WCAP-13990, "Sequoyah Units 1 and 2 Steam Generator Tube Plugging Criteria for Indications at Tube Support Plates," May 1994 – Section 4.1 - Refers to WCAP-12871, "J.M. Farley Units 1 and 2 SG Tube Plugging Criteria for ODSCC at Tube Support Plates," Revision 2, February 1992.

5. Westinghouse Report SG-SGDA-03-55, Rev.0, "Condition Monitoring and Operational Assessment: GL 95-05 Alternate Repair Criterion End of Cycle 12, 90 Day Report, Sequoyah Unit 2," February 2004.

6. EPRI Report NP-7480-L, Addendum 6, 2004 Database Update, "Steam Generator Tubing Outside Diameter Stress Corrosion Cracking at Tube Support Plates Database for Alternate Repair Limits," October 2004.

7. Westinghouse Calculation CN-CDME-05-19, Rev. 0, "Sequoyah Unit 2 EOC 13 GL 95-05 Analyses," August 2005.

8. Letter from B.W. Sheron, Nuclear Regulatory Commission, to A. Marion, Nuclear Energy Research Institute, February 9, 1996.

9. Letter from A. Marion, Nuclear Energy Research Institute, to B. Sheron, Nuclear Regulatory Commission, "Refining the Leak Rate Sampling Methodology for ODSCC ARC Applications (Generic Letter 95-05)," March 15, 2002.

10. Letter from W. Bateman, Nuclear Regulatory Commission, to A. Marion, Nuclear Energy Research Institute, "Refining the Leak Rate Sampling Methodology for Generic Letter 95-05 Voltage-Based Alternate Repair Criteria Application," March 27, 2002.

11. Westinghouse Letter LTR-SGDA-03-204, "Instructions for Running the Computer Code Cyclesim3.1," R. Keating, Westinghouse Nuclear Services Division, August 30, 2003.

This page intentionally left blank.

Appendix A

Indication List
Sequoyah Unit 2 GL-95-05
End of Cycle 13 Sorted by EOC-13 Voltage

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
3	16	DSI	H02		1.95	1.6
28	43	DSI	H02		1.66	1.68
29	52	DSI	H02		1.47	1.05
32	68	DSI	H01		1.3	1.21
41	37	DSI	H02		1.23	0.97
9	92	DSI	H01		1.16	1.04
17	33	DSI	H02		1.16	1.1
35	42	DSI	H02		1.16	0.82
35	22	DSI	H03		1.14	0.96
12	3	DSI	H05		1.11	DSS
19	45	DSI	H02		1.11	0.62
27	52	DSI	H01		1.11	1.49
22	48	DSI	H01		1.1	1.17
45	51	DSI	H02		1.1	1.1
23	7	DSI	H01		1.09	0.89
37	61	DSI	H02		1.08	1.12
39	46	DSI	H01		1.08	0.81
24	21	DSI	H02		1.07	0.69
5	46	DSI	H01		1.03	0.63
6	19	DSI	H03		1.02	0.55
15	31	DSI	H01		1.01	0.96
32	74	DSI	H03		1.01	0.71
6	2	DSI	H02		1	0.86
25	38	DSI	H02		0.99	0.94
4	6	DSI	H02		0.98	0.67
44	45	DSI	H02		0.98	0.61
3	46	DSI	H01		0.97	0.74
3	70	DSI	H04		0.97	1.03
10	3	DSI	H06		0.97	DSS
15	18	DSI	H01		0.96	0.95
27	48	DSI	H02		0.95	1.11
40	25	DSI	H02		0.92	0.48
19	51	DSI	H01		0.91	0.83
8	3	DSI	H02		0.9	0.64
22	25	DSI	H01		0.9	0.62

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
9	25	DSI	H02		0.89	0.42
9	30	DSI	H02		0.89	0.54
9	34	DSI	H04		0.89	0.34
26	64	DSI	H01		0.89	0.57
30	82	DSI	H02		0.89	0.9
3	15	DSI	H05		0.87	0.75
25	42	DSI	H02		0.87	0.46
13	9	DSI	H01		0.84	0.57
17	4	DSI	H01		0.84	0.53
32	42	DSI	H02		0.84	0.42
40	25	DSI	H01		0.84	0.48
17	4	DSI	H03		0.83	0.78
5	26	DSI	H02		0.82	0.35
11	58	DSI	H02		0.82	0.92
14	5	DSI	H01		0.82	0.33
28	45	DSI	H02		0.82	0.98
40	24	DSI	H02		0.82	0.71
8	12	DSI	H01		0.81	0.84
33	50	DSI	H02		0.81	0.9
8	3	DSI	H03		0.8	0.39
3	25	DSI	H02		0.78	0.83
4	15	DSI	H01		0.78	0.53
5	32	DSI	H01		0.78	0.54
5	54	DSI	H03		0.78	0.64
6	21	DSI	H01		0.78	0.69
6	91	DSI	H02		0.78	0.91
10	37	DSI	H01		0.78	0.34
28	28	DSI	H04		0.78	0.48
35	22	DSI	H01		0.78	0.57
35	23	DSI	H01		0.78	0.74
20	65	DSI	H02		0.77	0.92
35	17	DSI	H02		0.77	0.71
35	30	DSI	H01		0.77	0.7
11	3	DSI	H06		0.76	DSS
14	5	DSI	H02		0.76	0.8
18	89	DSI	H05		0.76	0.54
22	9	DSI	H01		0.76	0.4
32	53	DSI	H01		0.76	0.54
37	40	DSI	H01		0.76	0.5
12	46	DSI	H02		0.75	0.74
21	8	DSI	H01		0.74	0.75
46	41	DSI	H03		0.74	0.58
19	66	DSI	H01		0.73	0.72

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
42	40	DSI	H02		0.73	0.66
16	29	DSI	H02		0.72	0.91
28	12	DSI	H01		0.72	0.47
3	34	DSI	H01		0.7	0.6
24	34	DSI	H01		0.7	0.69
38	63	DSI	H02		0.7	0.69
10	34	DSI	H01		0.69	0.46
40	25	DSI	H04		0.69	0.35
4	7	DSI	H01		0.68	0.63
11	93	DSI	H02		0.68	0.42
21	8	DSI	H02		0.68	0.82
32	59	DSI	H03		0.68	0.46
42	49	DSI	H02		0.68	0.42
9	43	DSI	H03		0.67	0.55
32	53	DSI	H03		0.67	0.54
35	33	DSI	H02		0.67	0.38
6	4	DSI	H01		0.66	0.53
6	26	DSI	H01		0.66	0.31
17	20	DSI	H01		0.66	0.61
45	47	DSI	H04		0.66	0.79
25	37	DSI	H01		0.65	0.53
29	56	DSI	H03		0.65	0.47
2	8	DSI	H02		0.64	0.44
32	42	DSI	H01		0.64	0.71
32	73	DSI	H02		0.63	0.62
36	62	DSI	H02		0.63	0.69
40	26	DSI	H04		0.63	0.57
38	65	DSI	H04		0.62	0.77
40	51	DSI	H03		0.62	0.89
9	39	DSI	H01		0.61	0.84
10	36	DSI	H01	y	0.61	0.44
10	77	DSI	H01		0.61	0.46
10	77	DSI	H02		0.61	0.45
10	77	DSI	H04		0.61	1.31
24	29	DSI	H01		0.61	0.76
28	10	DSI	H02		0.61	0.43
28	50	DSI	H02		0.61	0.45
30	41	DSI	H02		0.61	0.74
44	50	DSI	H02		0.61	0.35
3	46	DSI	H02		0.6	0.15
3	52	DSI	H01		0.6	0.53
18	57	DSI	H01		0.6	0.28
28	77	DSI	H02		0.59	0.47

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
32	44	DSI	H04		0.59	0.39
36	62	DSI	H03		0.59	0.53
10	75	DSI	H02		0.58	0.48
10	75	DSI	H06		0.58	0.54
21	78	DSI	H02		0.58	0.57
24	29	DSI	H02		0.58	0.64
30	82	DSI	H01		0.58	0.5
32	48	DSI	H02		0.58	0.5
36	35	DSI	H04		0.58	0.47
44	42	DSI	H02		0.58	0.67
3	16	DSI	H01		0.57	0.52
24	17	DSI	H02		0.57	0.64
35	32	DSI	H01		0.57	0.34
39	30	DSI	H05		0.57	0.3
16	86	DSI	H04		0.56	0.54
24	46	DSI	H01		0.56	0.81
26	30	DSI	H02		0.56	0.49
40	24	DSI	H01		0.56	0.48
45	39	DSI	H01		0.56	0.59
25	25	DSI	H01		0.55	0.39
28	11	DSI	H01		0.55	0.27
21	7	DSI	H01		0.54	0.57
22	28	DSI	H01		0.54	0.5
22	33	DSI	H02		0.54	0.57
24	21	DSI	H01		0.54	0.56
25	8	DSI	H01		0.54	0.43
4	11	DSI	H01		0.53	0.42
27	48	DSI	H01		0.53	0.48
22	19	DSI	H01		0.52	0.22
31	19	DSI	H03		0.52	0.55
2	12	DSI	H02		0.51	0.44
28	46	DSI	H02		0.51	0.5
2	10	DSI	H01		0.5	0.42
12	3	DSI	H06		0.5	DSS
5	7	DSI	H02		0.49	0.52
5	33	DSI	H01		0.49	0.35
23	11	DSI	H02		0.49	0.59
15	5	DSI	H02		0.48	0.27
17	4	DSI	H06		0.48	0.43
17	16	DSI	H01		0.48	0.36
17	24	DSI	H01		0.48	0.69
22	11	DSI	H03		0.48	0.35
23	20	DSI	H02		0.48	0.42

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
30	24	DSI	H06		0.48	0.46
27	31	DSI	H03		0.47	0.55
35	19	DSI	H03		0.47	0.42
35	30	DSI	H02		0.47	0.62
38	46	DSI	H04		0.47	0.36
4	9	DSI	H03		0.46	0.4
5	35	DSI	H01		0.46	0.65
9	28	DSI	H04		0.46	0.51
24	60	DSI	H01		0.46	0.82
6	15	DSI	H02		0.45	0.32
33	75	DSI	H05		0.45	0.54
37	61	DSI	H03		0.45	0.29
45	37	DSI	H02		0.45	0.67
3	47	DSI	H02		0.44	0.27
21	83	DSI	H02		0.44	0.34
40	26	DSI	H05		0.44	0.42
44	40	DSI	H02		0.44	0.58
3	27	DSI	H01		0.43	0.34
5	72	DSI	H02		0.43	0.53
5	80	DSI	H02		0.43	0.39
13	62	DSI	H05		0.43	0.37
20	9	DSI	H02		0.43	0.21
28	31	DSI	H02		0.43	0.43
5	26	DSI	H01		0.42	0.23
11	4	DSI	H06		0.42	0.35
27	18	DSI	H02		0.42	0.24
35	21	DSI	H02		0.42	0.47
45	47	DSI	H02		0.42	0.38
45	49	DSI	H02		0.42	0.9
4	78	DSI	H02		0.41	0.29
24	22	DSI	H01		0.41	0.38
11	61	DSI	H02		0.4	0.62
18	8	DSI	H02		0.4	0.57
31	64	DSI	H03		0.4	0.36
34	28	DSI	H01		0.4	0.34
28	16	DSI	H01		0.39	0.32
35	47	DSI	H02		0.39	0.37
5	13	DSI	H02		0.38	0.22
19	45	DSI	H01		0.38	0.58
25	77	DSI	H02		0.38	0.42
35	33	DSI	H03		0.38	0.45
5	11	DSI	H01		0.37	0.33
5	43	DSI	H02		0.37	0.42

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
6	2	DSI	H03		0.37	0.74
16	30	DSI	H01		0.37	0.25
29	50	DSI	H02		0.37	0.26
38	65	DSI	H02		0.37	0.41
40	27	DSI	H02		0.37	0.25
11	3	DSI	H05		0.36	DSS
20	67	DSI	H01		0.36	0.3
33	72	DSI	H02		0.36	0.41
38	24	DSI	H02		0.36	0.26
3	42	DSI	H01		0.35	0.23
14	4	DSI	H01		0.35	0.33
23	9	DSI	H02		0.35	0.23
33	67	DSI	H04		0.35	0.5
17	4	DSI	H04		0.34	0.31
19	8	DSI	H02		0.34	0.64
3	47	DSI	H01		0.33	0.33
6	54	DSI	H02		0.33	0.53
21	73	DSI	H01		0.33	0.44
35	21	DSI	H01		0.33	0.36
36	54	DSI	H02		0.33	0.3
37	32	DSI	H05		0.33	0.31
38	64	DSI	H03		0.33	0.5
6	27	DSI	H02		0.32	0.13
19	8	DSI	H05		0.32	0.44
20	32	DSI	H01		0.32	0.17
25	32	DSI	H01		0.32	0.19
27	16	DSI	H02		0.32	0.25
33	27	DSI	H04		0.32	0.5
36	42	DSI	H02		0.32	0.29
39	27	DSI	H04		0.32	0.31
42	40	DSI	H07		0.32	0.25
5	7	DSI	H01		0.31	0.24
6	9	DSI	H01		0.31	0.12
6	24	DSI	H01		0.31	0.26
6	29	DSI	H01		0.31	0.27
6	45	DSI	H01		0.31	0.31
12	3	DSI	H01		0.31	0.44
12	5	DSI	H06		0.31	DSS
3	20	DSI	H02		0.3	0.28
12	6	DSI	H04		0.3	0.35
19	77	DSI	H03		0.3	0.35
22	21	DSI	H01		0.3	0.46
40	26	DSI	H01		0.3	0.26

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	33	DSI	H01		0.29	0.23
34	30	DSI	H03		0.29	0.31
35	30	DSI	H03		0.29	0.5
36	47	DSI	H02		0.29	0.27
5	50	DSI	H02		0.28	0.17
6	35	DSI	H01		0.28	0.17
9	32	DSI	H01		0.28	0.25
22	46	DSI	H04		0.28	0.45
24	9	DSI	H01		0.28	0.32
30	62	DSI	H02		0.28	0.39
35	21	DSI	H04		0.28	0.23
35	32	DSI	H03		0.28	0.17
5	51	DSI	H01		0.27	INR
19	74	DSI	H02		0.27	0.28
23	32	DSI	H04		0.27	0.26
27	24	DSI	H02		0.27	0.28
33	42	DSI	H02		0.27	0.2
22	10	DSI	H02		0.26	0.59
27	18	DSI	H01		0.26	0.18
35	22	DSI	H02		0.26	0.35
13	62	DSI	H06		0.25	0.32
17	4	DSI	H02		0.25	0.22
24	15	DSI	H01		0.25	0.19
25	14	DSI	H02		0.25	0.15
31	33	DSI	H02		0.25	0.24
42	40	DSI	H01		0.25	0.28
17	82	DSI	H05		0.24	0.28
26	20	DSI	H02		0.24	0.26
28	26	DSI	H02		0.24	0.29
8	21	DSI	H04		0.23	0.26
12	44	DSI	H02		0.23	0.18
22	31	DSI	H01		0.23	0.22
23	9	DSI	H01		0.23	0.24
38	51	DSI	H02		0.23	0.33
28	27	DSI	H02		0.21	0.42
28	28	DSI	H06		0.21	0.21
6	38	DSI	H01		0.2	0.14
17	21	DSI	H02		0.19	0.16
20	58	DSI	H01		0.19	0.38
15	14	DSI	H03		0.18	0.11
22	68	DSI	H02		0.18	0.21
18	82	DSI	H02		0.16	0.24
28	79	DSI	H01		0.16	0.29

Steam Generator 1[3]						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
37	60	DSI	H05		0.14	0.62

(1) All indications greater than or equal to 2 volts at EOC-13 were subject to a Plus Point inspection. All DSI indications greater than 2 volts, confirmed by Plus Point inspection, were repaired by plugging.

(2) Indications without an EOC-12 Volts value were not used in the determination of growth rate.

DSS = Distorted Support Signal. Doesn't meet calling criteria for a DSI.

INR = Indication Not Reportable.

(3) The table for SG 1 does not include Row 4 Column 14 at the H02 elevation. This TSP intersection did not have a DSI indication at EOC-13, but it did have a 0.25 Volt SAI by MRPC. A reliable estimation of the DSI voltage cannot be made due to this intersection having a 2.51 Volt DNT call. Row 4 Column 14 was plugged. This intersection did not have a reportable DSI or SAI call at the EOC-12 inspection, but did have a 2.59 Volt DNT call.

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
33	25	DSI	H02	y	1.97	0.57
30	74	DSI	H02		1.62	1.38
3	42	DSI	H02		1.57	1.57
44	52	DSI	H02		1.39	1.22
27	68	DSI	H01		1.28	0.88
3	61	DSI	H02		1.24	1.33
15	89	DSI	H01		1.23	1.25
30	54	DSI	H01		1.23	1.17
30	68	DSI	H02		1.23	DSS
33	31	DSI	H02		1.22	0.82
23	49	DSI	H01		1.2	1.42
38	45	DSI	H02		1.15	0.78
11	65	DSI	H02		1.13	1.11
24	37	DSI	H04		1.12	1.18
41	41	DSI	H04		1.12	INR
26	59	DSI	H01		1.07	0.59
32	20	DSI	H01		1.07	1.15
2	58	DSI	H02		1.06	1.36
30	81	DSI	H01		1.05	0.82
41	43	DSI	H02		1.04	0.65
36	71	DSI	H01		1.03	1.09
14	48	DSI	H02	y	1.01	0.96
8	92	DSI	H01	y	1	0.93
38	49	DSI	H02		0.99	0.69
27	84	DSI	H01		0.97	0.93
3	76	DSI	H02		0.95	0.49
2	45	DSI	H02		0.94	0.94
8	44	DSI	H01		0.94	1.01
31	70	DSI	H01		0.94	1.26
32	20	DSI	H02		0.94	0.86
37	20	DSI	H01		0.94	0.75
3	37	DSI	H02		0.93	1.19
30	55	DSI	H01		0.93	1.15
2	82	DSI	H04		0.92	0.7
11	63	DSI	H02		0.9	0.42
27	53	DSI	H02		0.9	0.68
41	50	DSI	H02		0.9	0.5
9	33	DSI	H01		0.89	0.91
15	49	DSI	H02		0.89	0.42
19	69	DSI	H01		0.89	0.74
24	43	DSI	H02		0.89	0.81
42	61	DSI	H01		0.89	0.49

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
29	16	DSI	H01		0.88	0.73
4	56	DSI	H02		0.86	1.01
2	85	DSI	H01		0.85	0.8
14	48	DSI	H01	y	0.84	0.98
24	87	DSI	H01		0.84	0.71
36	42	DSI	H02		0.82	0.74
30	81	DSI	H04		0.81	0.59
30	83	DSI	H01		0.81	0.74
15	36	DSI	H01		0.79	0.67
15	54	DSI	H02	y	0.78	0.73
28	17	DSI	H02		0.78	0.58
2	76	DSI	H02		0.77	0.61
4	26	DSI	H02		0.77	0.89
10	4	DSI	H02		0.77	0.48
27	84	DSI	H02		0.77	0.65
2	94	DSI	H02		0.76	0.33
30	79	DSI	H02		0.76	0.56
38	45	DSI	H03		0.76	0.55
41	55	DSI	H03		0.75	0.59
5	93	DSI	H01		0.74	0.26
7	44	DSI	H01		0.73	1.05
12	44	DSI	H02		0.73	0.6
18	56	DSI	H02		0.73	0.61
22	58	DSI	H01		0.73	0.55
32	61	DSI	H02		0.73	0.72
36	75	DSI	H02		0.73	0.81
2	58	DSI	H01		0.72	0.75
4	54	DSI	H02		0.72	0.59
8	38	DSI	H02		0.72	0.48
11	88	DSI	H02		0.72	0.46
25	56	DSI	H03		0.72	0.7
39	55	DSI	H02		0.72	0.73
6	39	DSI	H02		0.71	0.23
14	84	DSI	H01		0.71	0.82
23	44	DSI	H01		0.71	0.69
30	22	DSI	H02		0.71	1.16
32	17	DSI	H05		0.71	1.11
41	54	DSI	H02		0.71	0.51
20	58	DSI	H01		0.7	0.56
24	37	DSI	H02		0.7	0.77
8	51	DSI	H01		0.69	0.51
20	56	DSI	H02		0.69	0.71
31	67	DSI	H02		0.69	0.6

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
43	52	DSI	H01		0.69	0.43
2	87	DSI	H01		0.68	0.72
21	61	DSI	H01		0.68	0.35
2	73	DSI	H02		0.67	0.54
6	38	DSI	H02		0.67	0.84
7	4	DSI	H02		0.67	0.88
40	40	DSI	H03		0.67	0.72
2	43	DSI	H02		0.66	0.66
2	83	DSI	H01		0.66	0.62
2	85	DSI	H02		0.66	0.55
5	94	DSI	H01		0.66	0.6
7	4	DSI	H01		0.66	0.35
3	72	DSI	H01		0.65	0.42
4	36	DSI	H01		0.65	1.16
23	85	DSI	H02		0.65	0.49
29	21	DSI	H02		0.65	0.41
45	51	DSI	H02		0.65	0.81
2	88	DSI	H01		0.64	0.56
4	27	DSI	H02		0.64	0.42
7	43	DSI	H02		0.64	0.8
41	43	DSI	H03		0.64	0.58
45	52	DSI	H02		0.64	0.59
31	47	DSI	H02		0.63	0.63
43	38	DSI	H02		0.63	0.65
2	73	DSI	H01		0.62	0.47
20	43	DSI	H05		0.62	0.64
24	60	DSI	H02		0.62	0.74
2	14	DSI	H02		0.61	0.53
2	37	DSI	H02		0.61	0.21
4	61	DSI	H04		0.61	0.35
8	61	DSI	H02		0.61	0.48
29	16	DSI	H02		0.61	0.83
4	50	DSI	H01		0.6	0.65
4	94	DSI	H02		0.6	0.36
11	21	DSI	H01		0.6	0.65
29	67	DSI	H01		0.6	0.78
43	43	DSI	H02		0.6	0.39
8	51	DSI	H02		0.59	0.45
28	79	DSI	H02		0.59	0.65
43	44	DSI	H03		0.59	0.4
5	65	DSI	H01		0.58	0.45
6	68	DSI	H06		0.58	0.39
8	45	DSI	H02		0.58	0.38

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
41	50	DSI	H01		0.58	0.62
42	37	DSI	H05		0.58	0.43
4	92	DSI	H05		0.57	0.94
8	47	DSI	H02		0.57	0.34
36	74	DSI	H02		0.57	0.82
6	1	DSI	H02		0.56	0.37
17	41	DSI	H01		0.55	0.39
23	55	DSI	H01		0.55	0.29
30	77	DSI	H02		0.55	0.53
6	84	DSI	H02		0.54	0.5
18	22	DSI	H01		0.54	0.7
31	48	DSI	H01		0.54	0.42
31	66	DSI	H02		0.54	0.5
20	49	DSI	H02		0.52	0.28
36	64	DSI	H01		0.52	1.05
4	64	DSI	H01		0.51	0.49
6	94	DSI	H01		0.51	0.45
11	57	DSI	H01		0.51	0.35
23	22	DSI	H02		0.51	0.63
41	54	DSI	H03		0.51	0.39
28	66	DSI	H03		0.5	0.44
29	20	DSI	H02		0.5	0.82
31	74	DSI	H02		0.5	0.6
2	50	DSI	H02		0.49	0.53
5	92	DSI	H01		0.49	0.5
6	16	DSI	H02		0.49	0.26
8	11	DSI	H02		0.49	0.19
12	6	DSI	H02		0.49	0.59
45	54	DSI	H02		0.49	0.44
2	84	DSI	H01		0.48	0.41
2	88	DSI	H03		0.48	0.59
20	52	DSI	H01		0.48	0.48
28	69	DSI	H02		0.48	0.59
30	16	DSI	H02		0.48	0.68
41	69	DSI	H01		0.48	0.32
42	50	DSI	H02		0.48	0.37
45	39	DSI	H04		0.48	0.26
6	40	DSI	H01		0.47	0.54
9	72	DSI	H02		0.47	0.37
12	90	DSI	H02		0.47	0.33
22	69	DSI	H01		0.47	0.38
27	68	DSI	H02		0.47	0.45
32	23	DSI	H02		0.47	0.35

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
39	58	DSI	H04		0.47	0.61
39	62	DSI	H02		0.47	0.31
2	55	DSI	H02		0.46	0.6
25	72	DSI	H02		0.46	0.51
35	45	DSI	H02		0.46	0.41
3	72	DSI	H03		0.45	0.68
20	62	DSI	H01		0.45	0.38
39	25	DSI	H01		0.45	0.23
20	49	DSI	H01		0.44	0.37
23	44	DSI	H05		0.44	0.35
24	38	DSI	H02		0.44	0.42
30	19	DSI	H04		0.44	0.15
37	55	DSI	H02		0.44	0.5
3	49	DSI	H02		0.43	0.54
13	68	DSI	H01		0.43	0.89
20	10	DSI	H03		0.43	0.18
26	59	DSI	H02		0.43	0.33
33	25	DSI	H01	y	0.43	0.47
4	92	DSI	H03		0.42	0.73
8	90	DSI	H02		0.42	0.3
16	48	DSI	H05		0.42	0.29
20	57	DSI	H01		0.42	0.41
23	17	DSI	H02		0.42	0.58
24	87	DSI	H04		0.42	0.3
31	70	DSI	H02		0.42	1.14
38	25	DSI	H02		0.42	0.39
38	33	DSI	H03		0.42	0.32
3	5	DSI	H02		0.41	0.42
8	70	DSI	H03		0.41	0.34
8	91	DSI	H01		0.41	0.42
9	57	DSI	H02		0.41	0.66
15	32	DSI	H04		0.41	0.53
19	22	DSI	H02		0.41	0.29
35	44	DSI	H02		0.41	0.33
40	29	DSI	H02		0.41	0.45
25	22	DSI	H02		0.4	0.46
38	59	DSI	H02		0.4	0.36
40	37	DSI	H02		0.4	0.33
9	48	DSI	H02		0.39	0.63
15	87	DSI	H02		0.39	0.3
21	64	DSI	H01		0.39	0.29
30	82	DSI	H02		0.39	0.66
31	67	DSI	H03		0.39	0.25

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
42	43	DSI	H03		0.39	0.37
10	31	DSI	H04		0.38	0.42
10	89	DSI	H02		0.38	0.52
12	59	DSI	H02		0.38	0.35
14	90	DSI	H01		0.38	0.35
19	22	DSI	H01		0.38	0.52
22	37	DSI	H05		0.38	0.3
39	59	DSI	H02		0.38	0.41
31	38	DSI	H04		0.37	0.36
33	25	DSI	H04	y	0.37	0.41
7	21	DSI	H01		0.36	0.34
20	22	DSI	H03		0.36	0.27
41	54	DSI	H01		0.36	0.36
3	5	DSI	H04		0.35	0.24
20	44	DSI	H02		0.35	0.31
31	25	DSI	H02		0.35	0.55
37	66	DSI	H01		0.35	0.32
38	53	DSI	H02		0.35	0.25
7	13	DSI	H02		0.34	0.35
16	33	DSI	H03		0.34	0.42
26	59	DSI	H03		0.34	0.28
30	17	DSI	H02		0.34	0.92
41	39	DSI	H02		0.34	0.26
2	48	DSI	H01		0.33	0.37
3	30	DSI	H02		0.33	0.46
19	63	DSI	H02		0.33	0.36
25	9	DSI	H07		0.33	0.29
30	55	DSI	H05		0.33	0.39
40	60	DSI	H02		0.33	0.52
43	50	DSI	H02		0.33	0.33
2	49	DSI	H02		0.32	0.35
2	85	DSI	H04		0.32	0.22
13	21	DSI	H02		0.32	0.39
21	87	DSI	H01		0.32	0.37
22	34	DSI	H01		0.32	0.47
31	39	DSI	H02		0.32	0.28
40	57	DSI	H02		0.32	0.39
43	47	DSI	H02		0.32	0.23
44	39	DSI	H02		0.32	0.29
5	59	DSI	H02		0.31	0.32
8	60	DSI	H01		0.31	0.39
12	59	DSI	H01		0.31	0.29
17	49	DSI	H01		0.31	0.26

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
30	70	DSI	H01		0.31	0.31
32	63	DSI	H01		0.31	0.24
41	67	DSI	H01		0.31	0.48
8	13	DSI	H02		0.3	0.26
37	26	DSI	H02		0.3	0.18
2	42	DSI	H01		0.29	0.31
2	90	DSI	H01		0.29	0.36
6	57	DSI	H02		0.29	0.36
2	22	DSI	H02		0.28	0.33
7	27	DSI	H01		0.28	0.29
7	72	DSI	H01		0.28	0.65
36	42	DSI	H01		0.28	0.29
40	48	DSI	H05		0.28	0.29
39	31	DSI	H02		0.27	0.36
43	43	DSI	H03		0.27	0.21
2	49	DSI	H01		0.26	0.48
38	28	DSI	H02		0.26	0.32
38	74	DSI	H04		0.26	0.26
39	25	DSI	H02		0.26	0.28
40	31	DSI	H02		0.26	0.16
45	39	DSI	H03		0.26	0.24
2	77	DSI	H01		0.25	0.32
6	13	DSI	H04		0.25	0.31
43	49	DSI	H02		0.25	0.31
14	18	DSI	H02		0.24	0.18
29	17	DSI	H02		0.24	0.42
43	53	DSI	H04		0.24	0.59
9	69	DSI	H02		0.23	0.22
20	33	DSI	H04		0.23	0.23
21	20	DSI	H02		0.23	0.13
29	61	DSI	H03		0.23	0.31
29	79	DSI	H01		0.23	0.19
39	40	DSI	H02		0.23	0.27
18	14	DSI	H02		0.22	0.41
8	42	DSI	H02		0.21	0.71
2	55	DSI	H01		0.2	0.7
30	20	DSI	H01		0.2	0.18
43	52	DSI	H02		0.2	0.19
23	72	DSI	H02		0.19	0.25
43	52	DSI	H03		0.18	0.17
9	50	DSI	H04		0.17	0.26
29	45	DSI	H02		0.17	0.09
32	26	DSI	H01		0.17	0.23

Steam Generator 2						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
41	37	DSI	H04		0.17	0.15
35	42	DSI	H02		0.16	0.26
4	22	DSI	H02		0.14	0.68
8	34	DSI	H03		0.14	0.22
11	25	DSI	H02		0.13	0.26

(1) All indications greater than or equal to 2 volts at EOC-13 were subject to a Plus Point inspection. All DSI indications greater than 2 volts, confirmed by Plus Point inspection, were repaired by plugging.

(2) Indications without an EOC-12 Volts value were not used in the determination of growth rate.

DSS = Distorted Support Signal. Doesn't meet calling criteria for a DSI.

INR = Indication Not Reportable.

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
9	2	DSI	H01	y	2.36	1.04
24	24	DSI	H01	y	2.07	1.25
6	48	DSI	H01	y	2.01	1.6
38	58	DSI	H02		1.78	1.24
24	16	DSI	H01		1.76	1.48
38	22	DSI	H01		1.73	1.18
32	23	DSI	H01		1.64	1.39
3	11	DSI	H01	y	1.58	0.8
20	29	DSI	H01		1.58	1.42
3	10	DSI	H01		1.54	1.42
25	8	DSI	H01		1.54	0.84
44	59	DSI	H02		1.51	1.44
20	32	DSI	H01		1.49	1.63
34	22	DSI	H01		1.48	1.16
36	24	DSI	H01		1.47	1.35
21	24	DSI	H01		1.45	1.15
31	28	DSI	H01		1.43	0.88
14	39	DSI	H01		1.41	1.23
34	26	DSI	H01		1.4	1.27
7	72	DSI	H02		1.39	0.78
25	26	DSI	H02		1.38	1.06
27	16	DSI	H02		1.38	INR
5	1	DSI	H02		1.33	1.21
11	36	DSI	H01		1.33	1.16
25	18	DSI	H01		1.32	0.86
20	47	DSI	H01		1.31	1.21
31	76	DSI	H01		1.3	0.71
11	17	DSI	H02		1.29	1.14
44	58	DSI	H01		1.29	1.13
9	51	DSI	H01		1.27	1.06
20	26	DSI	H02		1.27	0.98
24	29	DSI	H01		1.27	1.09
30	50	DSI	H01		1.27	1.03
44	33	DSI	H01		1.26	1.44
7	93	DSI	H02		1.25	1.07
26	35	DSI	H01		1.25	0.9
34	72	DSI	H02		1.24	0.9
14	4	DSI	H01		1.22	0.88
15	3	DSI	H01		1.22	1.23
9	48	DSI	H01		1.2	1.57
11	37	DSI	H01		1.2	0.83
21	20	DSI	H02		1.2	0.92

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
22	52	DSI	H01		1.2	0.89
30	23	DSI	H01		1.2	1.15
27	30	DSI	H02		1.18	1.02
13	36	DSI	H01		1.17	0.77
24	35	DSI	H01		1.17	0.6
20	31	DSI	H01		1.16	1.12
39	26	DSI	H02		1.16	0.95
6	38	DSI	H01		1.14	1.13
27	16	DSI	H01		1.14	0.79
27	26	DSI	H02		1.14	1.26
3	29	DSI	H01		1.13	0.83
23	13	DSI	H01		1.13	0.67
3	5	DSI	H01		1.12	0.91
28	26	DSI	H01		1.12	0.78
9	5	DSI	H01		1.1	0.84
22	26	DSI	H02		1.1	1.2
23	30	DSI	H01		1.1	0.7
18	38	DSI	H01		1.09	0.9
24	12	DSI	H01		1.08	0.79
26	28	DSI	H01		1.06	1.18
6	10	DSI	H01		1.05	1.06
9	8	DSI	H01		1.05	0.85
26	9	DSI	H01		1.05	0.66
2	35	DSI	H01		1.04	0.77
30	46	DSI	H02		1.04	0.75
35	21	DSI	H01		1.04	0.8
21	81	DSI	H02		1.03	0.85
26	14	DSI	H01		1.03	0.72
32	33	DSI	H02		1.03	0.64
35	58	DSI	H02		1.03	1.34
8	69	DSI	H01		1.02	0.9
20	28	DSI	H01		1.02	1.22
20	30	DSI	H01		1.02	0.99
15	30	DSI	H01		1	DSS
26	16	DSI	H02		1	0.38
1	84	DSI	H03		0.99	DSS
20	12	DSI	H01		0.99	0.82
34	27	DSI	H03		0.99	0.8
35	47	DSI	H04		0.99	0.26
5	1	DSI	H01		0.98	0.97
7	70	DSI	H01		0.98	0.9
29	14	DSI	H01		0.97	0.71
44	52	DSI	H02		0.97	1.08

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
7	14	DSI	H01		0.96	0.84
20	39	DSI	H01		0.96	1
9	11	DSI	H01		0.95	0.56
20	19	DSI	H01		0.95	0.94
24	19	DSI	H01		0.95	0.76
26	22	DSI	H04		0.95	0.86
26	23	DSI	H01		0.95	0.3
27	15	DSI	H01		0.93	0.85
31	32	DSI	H02		0.93	1.03
7	1	DSI	H02		0.92	0.83
7	92	DSI	H03		0.92	0.85
22	28	DSI	H02		0.92	1.08
7	24	DSI	H02		0.91	0.73
5	10	DSI	H01		0.9	0.92
5	22	DSI	H01		0.9	0.92
10	14	DSI	H01		0.9	0.59
19	10	DSI	H01		0.9	0.79
5	4	DSI	H01		0.89	0.7
7	71	DSI	H01		0.88	0.61
17	6	DSI	H02		0.88	0.6
24	16	DSI	H02		0.88	1.02
24	12	DSI	H02		0.87	0.58
36	33	DSI	H03		0.87	1.08
4	25	DSI	H02		0.86	0.83
36	38	DSI	H02		0.85	0.6
43	44	DSI	H04		0.85	0.29
15	6	DSI	H01		0.84	0.93
19	13	DSI	H01		0.84	0.81
9	21	DSI	H02		0.83	0.64
13	3	DSI	H01		0.83	0.62
26	20	DSI	H02		0.83	INR
36	31	DSI	H05		0.83	0.87
4	60	DSI	H02		0.82	0.63
12	35	DSI	H01		0.82	0.47
37	28	DSI	H02		0.82	0.51
13	3	DSI	H02		0.81	0.37
14	39	DSI	H03		0.81	0.7
17	47	DSI	H01		0.8	1.06
24	21	DSI	H05		0.8	0.78
24	23	DSI	H03		0.8	0.82
4	55	DSI	H02		0.79	0.45
9	14	DSI	H01		0.79	0.64
15	15	DSI	H01		0.79	0.59

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
16	4	DSI	H01		0.79	0.78
17	39	DSI	H02		0.79	0.18
18	18	DSI	H01		0.79	0.8
22	7	DSI	H01		0.79	INR
22	38	DSI	H01		0.79	INR
28	84	DSI	H01		0.79	0.5
32	42	DSI	H02		0.79	0.7
40	24	DSI	H03		0.79	0.66
9	23	DSI	H03		0.78	0.77
33	49	DSI	H02		0.77	0.53
13	53	DSI	H01		0.76	0.35
27	35	DSI	H01		0.76	0.88
9	15	DSI	H03		0.75	0.74
26	29	DSI	H01		0.75	0.35
16	41	DSI	H01		0.74	0.63
18	35	DSI	H01		0.74	0.88
38	25	DSI	H03		0.74	0.63
4	51	DSI	H01		0.73	0.66
14	20	DSI	H02		0.73	0.46
16	4	DSI	H02		0.73	0.67
20	35	DSI	H03		0.73	0.63
30	46	DSI	H03		0.73	INR
34	25	DSI	H01		0.73	0.33
3	2	DSI	H03		0.72	0.71
6	1	DSI	H01		0.72	0.61
7	60	DSI	H01		0.72	0.51
12	35	DSI	H02		0.72	DSS
24	24	DSI	H02	y	0.72	0.46
24	25	DSI	H01		0.72	0.49
26	24	DSI	H01		0.72	0.24
27	63	DSI	H02		0.72	0.42
31	14	DSI	H03		0.72	0.61
33	49	DSI	H03		0.72	0.82
5	5	DSI	H02		0.71	0.7
7	71	DSI	H02		0.71	0.68
9	7	DSI	H01		0.71	0.52
9	16	DSI	H01		0.71	0.66
40	24	DSI	H02		0.71	0.53
16	54	DSI	H01		0.7	0.68
27	36	DSI	H02		0.7	0.55
38	40	DSI	H03		0.7	0.6
6	37	DSI	H02		0.69	0.57
13	29	DSI	H02		0.69	0.76

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
27	24	DSI	H02		0.69	0.76
40	41	DSI	H03		0.69	0.34
8	22	DSI	H03		0.68	0.89
19	22	DSI	H02		0.68	0.65
32	78	DSI	H01		0.68	0.53
35	47	DSI	H03		0.68	0.51
40	69	DSI	H02		0.68	0.37
41	68	DSI	H02		0.68	0.59
34	19	DSI	H02		0.67	0.73
9	41	DSI	H01		0.66	0.68
11	6	DSI	H01		0.66	0.43
12	35	DSI	H03		0.66	0.54
17	22	DSI	H01		0.66	0.68
20	80	DSI	H03		0.66	0.77
22	68	DSI	H02		0.66	0.31
6	38	DSI	H03		0.65	0.31
15	6	DSI	H02		0.65	0.51
16	22	DSI	H01		0.65	0.54
20	35	DSI	H01		0.65	INR
39	26	DSI	H03		0.65	0.62
2	39	DSI	H02		0.64	0.61
3	1	DSI	H01		0.64	0.49
3	5	DSI	H05		0.64	0.44
5	17	DSI	H02		0.64	0.42
7	56	DSI	H01		0.64	0.37
27	63	DSI	H03		0.64	0.62
31	76	DSI	H02		0.64	0.5
33	25	DSI	H04		0.64	0.57
34	28	DSI	H04		0.64	0.4
34	61	DSI	H04		0.64	INR
36	53	DSI	H03		0.64	0.39
46	52	DSI	H01		0.64	0.72
7	64	DSI	H01		0.63	0.53
9	50	DSI	H01		0.63	0.77
14	18	DSI	H01		0.63	0.9
15	33	DSI	H03		0.63	0.41
22	61	DSI	H03		0.63	INR
23	14	DSI	H03		0.63	0.67
32	25	DSI	H02		0.63	0.43
2	79	DSI	H01		0.62	0.48
9	20	DSI	H02		0.62	0.46
5	4	DSI	H03		0.61	0.46
5	12	DSI	H01		0.61	0.67

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	28	DSI	H01		0.61	0.6
8	63	DSI	H01		0.61	0.6
15	16	DSI	H01		0.61	0.36
15	18	DSI	H02		0.61	0.4
19	22	DSI	H01		0.61	0.7
33	36	DSI	H03		0.61	0.31
33	40	DSI	H01		0.61	INR
17	53	DSI	H01		0.6	INR
32	57	DSI	H03		0.6	0.53
2	31	DSI	H03		0.59	0.58
32	77	DSI	H01		0.59	0.4
38	36	DSI	H02		0.59	0.68
3	51	DSI	H02		0.58	0.71
7	93	DSI	H01		0.58	0.44
8	18	DSI	H03		0.58	0.56
8	52	DSI	H01		0.58	0.42
14	52	DSI	H01		0.58	0.29
31	26	DSI	H02		0.58	INR
34	61	DSI	H01		0.58	INR
8	18	DSI	H05		0.57	0.69
9	13	DSI	H02		0.57	0.55
25	72	DSI	H02		0.57	0.14
41	30	DSI	H01		0.57	0.44
1	76	DSI	H03		0.56	0.62
2	25	DSI	H03		0.56	0.36
12	22	DSI	H02		0.56	0.5
15	3	DSI	H02		0.56	0.64
8	24	DSI	H03		0.55	0.52
13	54	DSI	H01		0.55	0.43
15	29	DSI	H02		0.55	0.96
20	6	DSI	H01		0.55	0.2
22	21	DSI	H01		0.55	0.41
37	68	DSI	H02		0.55	0.55
42	63	DSI	H01		0.55	INR
8	63	DSI	H02		0.54	0.5
9	48	DSI	H02		0.54	0.44
10	5	DSI	H01		0.54	0.41
11	16	DSI	H03		0.54	0.46
31	20	DSI	H01		0.54	0.39
34	36	DSI	H03		0.54	0.45
3	2	DSI	H01		0.53	0.32
3	34	DSI	H01		0.53	0.67
17	12	DSI	H01		0.53	0.35

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
4	26	DSI	H01		0.52	0.54
7	94	DSI	H03		0.52	0.41
18	21	DSI	H01		0.52	0.51
21	84	DSI	H04		0.52	0.26
27	79	DSI	H06		0.52	0.22
30	42	DSI	H02		0.52	0.47
2	73	DSI	H02		0.51	0.37
7	29	DSI	H01		0.51	0.37
26	25	DSI	H02		0.51	0.47
37	26	DSI	H02		0.51	0.38
7	25	DSI	H02		0.5	0.49
38	42	DSI	H03		0.5	INR
8	15	DSI	H02		0.49	0.17
9	4	DSI	H01		0.49	0.5
9	12	DSI	H01		0.49	0.63
13	10	DSI	H02		0.49	0.54
32	21	DSI	H01		0.49	0.32
33	70	DSI	H02		0.49	0.37
37	31	DSI	H03		0.49	0.66
38	58	DSI	H03		0.49	0.77
39	68	DSI	H04		0.49	0.62
2	16	DSI	H01		0.48	0.5
8	51	DSI	H01		0.48	0.43
8	59	DSI	H01		0.48	0.4
8	64	DSI	H01		0.48	0.44
27	18	DSI	H01		0.48	0.26
27	68	DSI	H02		0.48	0.36
30	42	DSI	H03		0.48	0.4
38	25	DSI	H01		0.48	0.44
39	26	DSI	H01		0.48	0.4
7	61	DSI	H01		0.47	0.43
7	93	DSI	H03		0.47	0.31
24	10	DSI	H01		0.47	0.38
7	25	DSI	H01		0.46	0.44
20	88	DSI	H01		0.46	0.6
25	24	DSI	H02		0.46	0.23
25	35	DSI	H01		0.46	0.35
34	51	DSI	H02		0.46	0.7
7	91	DSI	H02		0.45	0.6
8	70	DSI	H03		0.45	0.3
26	17	DSI	H02		0.45	0.43
6	48	DSI	H03	y	0.44	0.48
20	85	DSI	H03		0.44	0.14

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
24	21	DSI	H03		0.44	0.49
25	24	DSI	H01		0.44	0.26
27	26	DSI	H01		0.44	INR
31	26	DSI	H03		0.44	0.41
33	27	DSI	H01		0.44	0.68
33	36	DSI	H02		0.44	0.33
33	45	DSI	H02		0.44	0.4
38	58	DSI	H05		0.44	0.1
9	52	DSI	H01		0.43	0.5
13	7	DSI	H01		0.43	0.39
25	14	DSI	H04		0.43	0.56
32	54	DSI	H02		0.43	INR
37	42	DSI	H03		0.43	INR
42	33	DSI	H01		0.43	0.15
43	59	DSI	H01		0.43	0.46
3	94	DSI	H02		0.42	0.22
6	79	DSI	H02		0.42	0.43
16	24	DSI	H01		0.42	0.76
17	13	DSI	H01		0.42	0.29
32	20	DSI	H01		0.42	0.3
4	34	DSI	H01		0.41	0.32
7	71	DSI	H03		0.41	0.45
8	50	DSI	H01		0.41	0.34
16	5	DSI	H04		0.41	0.34
30	18	DSI	H01		0.41	0.21
36	68	DSI	H02		0.41	0.16
3	1	DSI	H02		0.4	0.33
11	5	DSI	H03		0.4	0.1
13	29	DSI	H01		0.4	0.67
15	37	DSI	H01		0.4	0.27
27	18	DSI	H03		0.4	0.33
30	21	DSI	H01		0.4	0.27
32	34	DSI	H02		0.4	0.46
36	40	DSI	H04		0.4	0.29
15	39	DSI	H01		0.39	0.32
35	58	DSI	H05		0.39	0.37
38	46	DSI	H02		0.39	0.36
7	72	DSI	H01		0.38	0.55
13	44	DSI	H02		0.38	0.35
26	22	DSI	H06		0.38	0.13
28	14	DSI	H01		0.38	INR
37	66	DSI	H04		0.38	0.2
14	6	DSI	H03		0.37	0.23

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
23	22	DSI	H01		0.37	0.5
26	22	DSI	H05		0.37	0.34
4	39	DSI	H01		0.36	0.34
27	67	DSI	H02		0.36	0.23
21	15	DSI	H02		0.35	0.29
34	25	DSI	H04		0.35	0.36
35	24	DSI	H03		0.35	0.34
14	14	DSI	H01		0.34	0.42
23	60	DSI	H02		0.34	0.34
33	44	DSI	H01		0.34	0.27
33	67	DSI	H04		0.34	0.15
7	14	DSI	H02		0.33	0.38
13	9	DSI	H01		0.33	0.29
21	88	DSI	H01		0.33	0.36
31	65	DSI	H02		0.33	0.94
41	30	DSI	H03		0.33	0.27
9	6	DSI	H01		0.32	0.61
12	27	DSI	H01		0.32	0.25
26	30	DSI	H02		0.32	0.22
40	62	DSI	H03		0.32	0.14
41	36	DSI	H04		0.32	0.33
6	40	DSI	H05		0.31	0.36
7	73	DSI	H02		0.31	0.26
34	60	DSI	H04		0.31	0.26
4	46	DSI	H01		0.3	0.38
8	57	DSI	H04		0.3	0.29
14	18	DSI	H04		0.3	INR
18	37	DSI	H02		0.3	0.14
18	89	DSI	H01		0.3	0.34
23	44	DSI	H01		0.3	0.65
32	48	DSI	H02		0.3	INR
41	33	DSI	H02		0.3	0.24
7	58	DSI	H02		0.29	0.17
17	87	DSI	H01		0.29	0.25
35	27	DSI	H01		0.29	0.28
4	50	DSI	H01		0.28	INR
5	4	DSI	H02		0.28	0.14
21	41	DSI	H01		0.28	0.14
11	16	DSI	H06		0.27	0.17
36	42	DSI	H04		0.27	INR
36	48	DSI	H02		0.27	0.27
37	67	DSI	H02		0.27	0.31
7	92	DSI	H01		0.26	0.22

Steam Generator 3						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
13	17	DSI	H02		0.26	0.27
13	5	DSI	H03		0.25	0.16
14	41	DSI	H02		0.25	0.21
18	45	DSI	H03		0.25	0.73
20	79	DSI	H02		0.25	0.05
27	68	DSI	H05		0.25	0.28
34	19	DSI	H03		0.25	0.36
43	50	DSI	H04		0.25	0.34
9	2	DSI	H03	y	0.24	INR
21	81	DSI	H03		0.24	0.2
3	94	DSI	H04		0.23	0.15
6	11	DSI	H01		0.23	0.19
17	20	DSI	H01		0.23	0.29
2	38	DSI	H02		0.22	0.17
14	11	DSI	H03		0.22	0.12
26	12	DSI	H01		0.22	0.18
6	50	DSI	H01		0.21	0.18
42	43	DSI	H04		0.2	0.07
8	70	DSI	H05		0.18	0.19
38	58	DSI	H04		0.18	0.21
23	26	DSI	H02		0.17	0.26
34	72	DSI	H01		0.17	0.17
20	80	DSI	H06		0.16	0.34
26	29	DSI	H03		0.16	0.37
7	42	DSI	H04		0.15	0.24
3	49	DSI	H02		0.11	0.12

(1) All indications greater than or equal to 2 volts at EOC-13 were subject to a Plus Point inspection. All DSI indications greater than 2 volts, confirmed by Plus Point inspection, were repaired by plugging.

(2) Indications without an EOC-12 Volts value were not used in the determination of growth rate.

DSS = Distorted Support Signal. Doesn't meet calling criteria for a DSI.

INR = Indication Not Reportable.

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	3	DSI	H02	y	1.74	1.03
7	48	DSI	H01		1.67	1.65
8	37	DSI	H01		1.64	1.59
20	40	DSI	H01		1.64	1.01
22	70	DSI	H01		1.63	1.36
15	49	DSI	H03		1.57	0.37
22	33	DSI	H02		1.57	1.42
27	73	DSI	H02		1.57	1.58
23	54	DSI	H01		1.54	1.44
20	69	DSI	H01		1.53	1.43
8	60	DSI	H01		1.49	1.33
8	85	DSI	H02		1.47	1.23
12	43	DSI	H01		1.43	1
27	71	DSI	H01		1.42	1.49
8	92	DSI	H01		1.41	1.41
2	76	DSI	H01		1.39	1.37
14	22	DSI	H01		1.39	1.06
9	38	DSI	H01		1.35	1.23
1	85	DSI	H01		1.34	1.36
15	52	DSI	H01		1.34	1.14
25	42	DSI	H01		1.31	0.91
26	68	DSI	H01		1.31	1.29
17	87	DSI	H01		1.3	0.97
28	67	DSI	H01		1.28	1.31
8	92	DSI	H02		1.25	1.16
9	46	DSI	H01		1.24	0.88
20	48	DSI	H01		1.24	1.11
2	67	DSI	H01		1.23	1.12
13	48	DSI	H01		1.23	1.18
14	57	DSI	H01		1.23	1.22
23	63	DSI	H01		1.23	1.05
9	35	DSI	H01		1.21	1.26
25	40	DSI	H01		1.21	1
4	82	DSI	H01		1.2	1
9	42	DSI	H01		1.2	1.19
12	32	DSI	H01		1.2	1.12
31	58	DSI	H03		1.2	0.95
12	83	DSI	H01		1.19	1.21
8	34	DSI	H01		1.18	1.19
22	47	DSI	H02		1.18	1.07
5	80	DSI	H01		1.16	1.11
17	82	DSI	H01		1.16	0.78

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
20	46	DSI	H02		1.16	0.89
4	90	DSI	H01		1.15	1.06
7	55	DSI	H01		1.15	0.94
5	42	DSI	H01		1.14	1.02
20	34	DSI	H02		1.14	0.73
20	60	DSI	H01		1.14	1.04
2	55	DSI	H01		1.12	1.09
5	28	DSI	H01		1.12	1.15
5	89	DSI	H01		1.11	0.83
32	67	DSI	H02		1.1	1.08
3	71	DSI	H01		1.07	0.81
8	59	DSI	H01		1.07	0.91
12	44	DSI	H01		1.07	0.9
28	65	DSI	H01		1.06	0.78
29	30	DSI	H02		1.06	0.25
15	53	DSI	H01		1.05	0.91
28	35	DSI	H02		1.05	0.48
6	88	DSI	H01		1.04	0.96
8	52	DSI	H01		1.04	0.89
23	87	DSI	H01		1.04	0.79
4	94	DSI	H01		1.03	1.07
5	34	DSI	H01		1.03	0.81
9	48	DSI	H01		1.03	0.83
12	24	DSI	H01		1.03	1
17	26	DSI	H02		1.03	1
5	39	DSI	H01		1.02	1.03
9	57	DSI	H01		1.02	1.02
19	51	DSI	H01		1.02	0.87
23	73	DSI	H02		1.02	0.92
25	53	DSI	H01		1.02	0.96
26	73	DSI	H02		1.02	0.83
6	74	DSI	H01		1.01	0.83
15	48	DSI	H01		1.01	0.46
17	21	DSI	H01		1.01	0.35
20	70	DSI	H02		1.01	0.91
8	41	DSI	H01		1	0.73
27	63	DSI	H02		1	0.65
14	92	DSI	H01		0.99	1.2
20	25	DSI	H01		0.99	1.04
28	71	DSI	H01		0.99	1.01
12	62	DSI	H01		0.98	0.66
12	76	DSI	H01		0.98	1.14
13	53	DSI	H01		0.98	0.89

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
18	14	DSI	H02		0.98	0.46
23	70	DSI	H01		0.98	1.1
25	41	DSI	H01		0.98	0.92
27	15	DSI	H02		0.98	0.82
5	71	DSI	H01		0.97	0.83
9	22	DSI	H02		0.97	1.07
20	39	DSI	H01		0.97	0.9
2	74	DSI	H02		0.96	0.7
3	18	DSI	H02		0.96	0.9
8	89	DSI	H01		0.96	0.96
12	2	DSI	H02		0.96	1.11
28	74	DSI	H03		0.96	0.83
4	40	DSI	H01		0.95	0.83
4	89	DSI	H03		0.95	0.83
8	83	DSI	H01		0.95	0.81
9	30	DSI	H01		0.95	0.88
19	84	DSI	H01		0.95	0.94
22	59	DSI	H01		0.95	0.87
26	33	DSI	H02		0.95	0.81
4	92	DSI	H03		0.94	0.79
5	91	DSI	H01		0.94	0.88
29	47	DSI	H01		0.94	0.44
31	71	DSI	H01		0.94	0.92
36	62	DSI	H02		0.94	0.86
7	58	DSI	H01		0.93	0.8
14	77	DSI	H01		0.93	0.95
32	62	DSI	H01		0.93	0.65
8	32	DSI	H01	y	0.92	1.03
9	2	DSI	H02		0.92	0.86
10	12	DSI	H02		0.92	0.74
22	41	DSI	H01		0.92	0.89
23	64	DSI	H01		0.92	0.86
27	69	DSI	H01		0.92	0.9
27	76	DSI	H01		0.92	DSS
3	43	DSI	H01		0.91	0.74
4	86	DSI	H03		0.91	0.78
27	45	DSI	H01		0.9	0.58
2	53	DSI	H02		0.89	0.61
7	59	DSI	H01		0.89	0.75
20	50	DSI	H01		0.89	0.79
27	77	DSI	H03		0.89	0.96
31	71	DSI	H02		0.89	0.74
32	66	DSI	H03		0.89	0.3

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	71	DSI	H01		0.88	0.64
8	80	DSI	H01		0.88	0.9
12	85	DSI	H01		0.88	0.36
23	75	DSI	H01		0.88	0.78
5	30	DSI	H01		0.87	0.74
5	38	DSI	H01		0.87	0.8
12	21	DSI	H01		0.87	1.12
18	58	DSI	H01		0.87	0.85
20	32	DSI	H01		0.87	0.38
27	75	DSI	H01		0.87	1.15
27	75	DSI	H02		0.87	0.78
27	77	DSI	H01		0.87	0.81
28	77	DSI	H01		0.87	0.8
29	48	DSI	H01		0.87	0.64
32	69	DSI	H01		0.87	0.87
9	21	DSI	H02		0.86	0.83
12	41	DSI	H01		0.86	0.7
20	59	DSI	H01		0.86	0.88
26	35	DSI	H01		0.86	0.72
27	82	DSI	H03		0.86	0.85
28	72	DSI	H02		0.86	0.83
4	23	DSI	H01		0.85	0.8
5	83	DSI	H01		0.85	0.41
8	17	DSI	H02		0.85	0.98
12	18	DSI	H02		0.85	0.73
20	47	DSI	H02		0.85	0.39
25	60	DSI	H01		0.85	0.76
27	63	DSI	H01		0.85	0.71
28	82	DSI	H02		0.85	0.75
38	72	DSI	H02		0.85	0.78
6	80	DSI	H01		0.84	0.86
9	44	DSI	H01		0.84	0.92
13	47	DSI	H01		0.84	0.69
14	88	DSI	H01		0.84	0.68
23	66	DSI	H01		0.84	0.76
23	69	DSI	H02		0.84	0.77
23	86	DSI	H01		0.84	0.61
26	14	DSI	H02		0.84	0.93
3	25	DSI	H02		0.83	0.69
4	90	DSI	H02		0.83	0.85
9	53	DSI	H01		0.83	0.75
13	42	DSI	H01		0.83	0.89
14	90	DSI	H01		0.83	0.93

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
17	56	DSI	H01		0.83	0.7
28	48	DSI	H01		0.83	0.71
28	75	DSI	H02		0.83	0.78
29	18	DSI	H07		0.83	0.85
4	87	DSI	H03		0.82	0.5
5	35	DSI	H01		0.82	0.61
13	49	DSI	H01		0.82	0.62
21	48	DSI	H02		0.82	0.7
27	46	DSI	H01		0.82	0.57
31	71	DSI	H03		0.82	0.54
5	47	DSI	H01		0.81	0.68
9	89	DSI	H02		0.81	0.71
10	35	DSI	H01		0.81	0.73
12	33	DSI	H04		0.81	0.38
20	51	DSI	H01		0.81	0.77
23	60	DSI	H01		0.81	0.75
6	87	DSI	H02		0.8	0.69
17	27	DSI	H01		0.8	0.62
27	84	DSI	H02		0.8	0.87
5	74	DSI	H01		0.79	0.7
8	48	DSI	H01		0.79	0.76
27	78	DSI	H02		0.79	0.95
2	86	DSI	H02		0.78	0.57
3	89	DSI	H02		0.78	0.54
6	23	DSI	H02		0.78	0.76
8	73	DSI	H03		0.78	0.6
9	24	DSI	H01		0.78	0.73
13	34	DSI	H01		0.78	0.78
2	9	DSI	H03		0.77	DSS
6	90	DSI	H01		0.77	0.91
6	91	DSI	H01		0.77	0.72
8	50	DSI	H01		0.77	0.5
8	89	DSI	H02		0.77	0.45
9	43	DSI	H01		0.77	0.79
12	71	DSI	H01		0.77	0.73
16	80	DSI	H03		0.77	0.5
20	57	DSI	H01		0.77	0.47
23	65	DSI	H02		0.77	0.86
28	75	DSI	H01		0.77	0.95
28	78	DSI	H01		0.77	0.68
31	72	DSI	H02		0.77	0.7
32	70	DSI	H02		0.77	0.71
5	93	DSI	H01		0.76	0.75

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	36	DSI	H01		0.76	0.49
12	61	DSI	H01		0.76	0.64
15	54	DSI	H01		0.76	0.75
18	57	DSI	H01		0.76	0.93
20	64	DSI	H01		0.76	0.49
25	80	DSI	H02		0.76	0.72
27	79	DSI	H02		0.76	0.73
28	81	DSI	H03		0.76	0.64
32	62	DSI	H02		0.76	0.69
8	78	DSI	H01		0.75	0.7
8	80	DSI	H02		0.75	0.52
12	21	DSI	H02		0.75	0.74
12	36	DSI	H01		0.75	0.56
12	37	DSI	H02		0.75	INR
13	41	DSI	H03		0.75	0.55
15	49	DSI	H01		0.75	0.35
21	45	DSI	H01		0.75	0.6
23	69	DSI	H01		0.75	0.91
2	15	DSI	H03		0.74	0.73
2	25	DSI	H01		0.74	0.63
6	81	DSI	H02		0.74	0.29
12	63	DSI	H01		0.74	0.72
14	83	DSI	H01		0.74	0.54
14	89	DSI	H01		0.74	0.95
16	91	DSI	H01		0.74	0.56
25	83	DSI	H01		0.74	0.75
27	65	DSI	H01		0.74	0.53
28	72	DSI	H01		0.74	0.85
32	75	DSI	H04		0.74	0.5
4	87	DSI	H01		0.73	0.75
6	75	DSI	H01		0.73	0.6
6	90	DSI	H04		0.73	0.69
14	59	DSI	H01		0.73	0.49
21	51	DSI	H01		0.73	0.41
4	78	DSI	H01		0.72	0.71
17	57	DSI	H01		0.72	0.53
27	74	DSI	H01		0.72	0.81
32	64	DSI	H02		0.72	0.69
8	3	DSI	H03	y	0.71	0.71
8	27	DSI	H03		0.71	0.99
9	70	DSI	H01		0.71	0.57
18	61	DSI	H01		0.71	0.86
20	68	DSI	H01		0.71	0.59

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
26	69	DSI	H01		0.71	0.77
28	68	DSI	H01		0.71	0.76
3	90	DSI	H01		0.7	DSS
9	19	DSI	H02		0.7	0.53
13	50	DSI	H03		0.7	0.56
22	65	DSI	H01		0.7	0.73
26	14	DSI	H03		0.7	0.59
26	19	DSI	H02		0.7	0.73
26	36	DSI	H01		0.7	0.67
36	65	DSI	H01		0.7	0.55
2	38	DSI	H03		0.69	0.66
8	42	DSI	H01		0.69	0.65
8	90	DSI	H02		0.69	0.49
13	45	DSI	H01		0.69	0.66
20	63	DSI	H01		0.69	0.91
22	46	DSI	H01		0.69	0.5
22	59	DSI	H02		0.69	0.72
27	74	DSI	H02		0.69	0.64
4	90	DSI	H03		0.68	0.31
7	46	DSI	H01		0.68	0.49
8	81	DSI	H01		0.68	0.49
9	63	DSI	H01		0.68	0.54
19	71	DSI	H01		0.68	0.73
23	72	DSI	H01		0.68	0.66
23	74	DSI	H01		0.68	0.71
31	72	DSI	H01		0.68	0.67
34	65	DSI	H01		0.68	0.42
39	49	DSI	H02		0.68	0.69
2	53	DSI	H01		0.67	0.71
3	88	DSI	H01		0.67	0.6
6	66	DSI	H01		0.67	0.73
8	31	DSI	H01		0.67	0.81
12	35	DSI	H01		0.67	0.46
12	82	DSI	H01		0.67	0.66
20	52	DSI	H01		0.67	0.88
20	64	DSI	H02		0.67	0.48
23	71	DSI	H02		0.67	0.66
24	46	DSI	H01		0.67	0.57
25	43	DSI	H01		0.67	0.74
27	77	DSI	H02		0.67	0.67
27	81	DSI	H03		0.67	0.6
33	51	DSI	H02		0.67	0.5
39	70	DSI	H03		0.67	0.62

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
6	18	DSI	H03		0.66	0.59
12	40	DSI	H01		0.66	0.65
12	75	DSI	H01		0.66	0.74
15	51	DSI	H01		0.66	0.89
18	59	DSI	H01		0.66	0.4
20	34	DSI	H01		0.66	0.28
20	46	DSI	H01		0.66	0.75
20	54	DSI	H01		0.66	0.75
22	68	DSI	H01		0.66	0.66
23	71	DSI	H01		0.66	0.69
27	80	DSI	H03		0.66	0.69
28	66	DSI	H02		0.66	0.58
29	51	DSI	H01		0.66	0.66
32	66	DSI	H01		0.66	0.57
34	50	DSI	H03		0.66	0.73
4	47	DSI	H02		0.65	0.49
4	82	DSI	H02		0.65	0.48
6	76	DSI	H01		0.65	0.49
8	78	DSI	H03		0.65	0.53
12	23	DSI	H01		0.65	0.6
14	90	DSI	H02		0.65	0.5
15	64	DSI	H01		0.65	0.53
18	21	DSI	H01		0.65	0.52
20	58	DSI	H01		0.65	0.48
32	77	DSI	H04		0.65	0.5
6	72	DSI	H01		0.64	0.71
8	25	DSI	H01		0.64	0.62
8	27	DSI	H01		0.64	0.65
13	15	DSI	H02		0.64	0.52
13	44	DSI	H01		0.64	0.64
17	62	DSI	H01		0.64	0.41
20	31	DSI	H01		0.64	0.57
3	25	DSI	H01		0.63	0.73
5	43	DSI	H01		0.63	0.64
9	33	DSI	H01		0.63	0.39
14	22	DSI	H02		0.63	0.52
14	88	DSI	H03		0.63	0.67
17	29	DSI	H01		0.63	0.25
20	26	DSI	H02		0.63	0.92
27	83	DSI	H03		0.63	0.52
33	67	DSI	H02		0.63	0.34
4	74	DSI	H03		0.62	0.5
5	33	DSI	H01		0.62	0.7

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
9	37	DSI	H01		0.62	0.65
9	73	DSI	H01		0.62	0.37
10	52	DSI	H01		0.62	0.44
23	45	DSI	H01		0.62	0.43
40	57	DSI	H01		0.62	0.46
3	92	DSI	H01		0.61	0.49
8	29	DSI	H01		0.61	0.53
12	10	DSI	H03		0.61	0.45
17	80	DSI	H01		0.61	0.32
28	45	DSI	H01		0.61	0.45
31	76	DSI	H03		0.61	0.59
8	55	DSI	H01		0.6	0.53
14	75	DSI	H02		0.6	0.53
14	79	DSI	H02		0.6	0.51
17	91	DSI	H01		0.6	0.5
21	87	DSI	H01		0.6	0.84
27	65	DSI	H02		0.6	0.6
27	82	DSI	H05		0.6	0.51
28	81	DSI	H02		0.6	0.55
31	72	DSI	H03		0.6	0.52
2	72	DSI	H02		0.59	0.6
5	92	DSI	H01		0.59	0.67
8	89	DSI	H03		0.59	0.5
9	46	DSI	H03		0.59	0.45
11	75	DSI	H02		0.59	0.71
12	59	DSI	H01		0.59	0.42
18	46	DSI	H01		0.59	1.04
20	44	DSI	H03		0.59	0.69
23	70	DSI	H02		0.59	0.45
25	51	DSI	H01		0.59	0.51
29	43	DSI	H01		0.59	0.69
36	64	DSI	H02		0.59	0.61
3	25	DSI	H03		0.58	0.5
5	82	DSI	H01		0.58	DSS
6	84	DSI	H01		0.58	0.55
6	90	DSI	H02		0.58	0.4
7	56	DSI	H01		0.58	0.54
9	47	DSI	H01		0.58	0.53
12	24	DSI	H02		0.58	0.83
12	74	DSI	H01		0.58	0.62
13	54	DSI	H01		0.58	0.43
17	13	DSI	H02		0.58	0.54
22	46	DSI	H03		0.58	0.64

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
25	58	DSI	H01		0.58	0.62
28	24	DSI	H04		0.58	0.59
28	66	DSI	H03		0.58	0.65
31	55	DSI	H02		0.58	0.57
34	25	DSI	H02		0.58	0.98
35	73	DSI	H02		0.58	0.46
41	52	DSI	H02		0.58	0.3
2	74	DSI	H01		0.57	0.64
5	63	DSI	H01		0.57	0.44
8	12	DSI	H03		0.57	0.53
8	27	DSI	H02		0.57	0.5
9	37	DSI	H02		0.57	0.5
13	46	DSI	H01		0.57	0.43
17	21	DSI	H04		0.57	0.58
26	65	DSI	H02		0.57	0.91
34	58	DSI	H02		0.57	0.54
2	38	DSI	H02		0.56	0.55
8	67	DSI	H03		0.56	0.43
8	85	DSI	H01		0.56	0.88
13	52	DSI	H01		0.56	0.49
18	67	DSI	H01		0.56	0.7
20	12	DSI	H02		0.56	0.57
20	44	DSI	H02		0.56	0.59
22	8	DSI	H02		0.56	0.55
27	73	DSI	H03		0.56	0.43
29	38	DSI	H01		0.56	0.37
4	25	DSI	H01		0.55	0.61
5	78	DSI	H02		0.55	0.4
5	79	DSI	H01		0.55	0.36
6	91	DSI	H02		0.55	0.44
8	86	DSI	H01		0.55	0.58
9	61	DSI	H01		0.55	0.46
13	33	DSI	H01		0.55	0.4
17	61	DSI	H01		0.55	0.61
22	46	DSI	H02		0.55	0.61
24	52	DSI	H02		0.55	0.65
29	19	DSI	H06		0.55	0.78
29	50	DSI	H01		0.55	0.44
30	21	DSI	H02		0.55	0.41
34	65	DSI	H02		0.55	0.49
39	64	DSI	H02		0.55	0.4
5	26	DSI	H01		0.54	0.64
10	3	DSI	H02		0.54	0.64

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
12	38	DSI	H05		0.54	0.36
13	77	DSI	H01		0.54	0.5
19	63	DSI	H01		0.54	0.8
28	74	DSI	H05		0.54	0.43
28	80	DSI	H03		0.54	0.54
32	68	DSI	H02		0.54	0.61
6	2	DSI	H02		0.53	0.57
6	24	DSI	H01		0.53	0.61
6	90	DSI	H03		0.53	0.59
8	38	DSI	H01		0.53	0.47
8	84	DSI	H02		0.53	0.48
12	81	DSI	H01		0.53	0.81
22	25	DSI	H03		0.53	0.68
23	68	DSI	H01		0.53	0.56
27	67	DSI	H02		0.53	0.61
28	73	DSI	H01		0.53	0.75
34	64	DSI	H02		0.53	0.57
34	66	DSI	H01		0.53	0.37
2	15	DSI	H02		0.52	0.49
2	57	DSI	H01		0.52	0.55
4	12	DSI	H02		0.52	0.62
4	77	DSI	H01		0.52	0.36
4	93	DSI	H02		0.52	0.33
8	28	DSI	H01		0.52	0.53
8	56	DSI	H01		0.52	0.57
9	29	DSI	H01		0.52	0.47
19	77	DSI	H02		0.52	0.47
27	72	DSI	H03		0.52	0.57
32	67	DSI	H03		0.52	0.48
35	38	DSI	H03		0.52	0.52
4	84	DSI	H02		0.51	0.63
6	32	DSI	H02		0.51	0.28
6	78	DSI	H01		0.51	0.42
6	92	DSI	H01		0.51	0.33
7	57	DSI	H01		0.51	0.28
9	39	DSI	H01		0.51	0.61
11	68	DSI	H07		0.51	0.42
12	39	DSI	H06		0.51	0.36
13	82	DSI	H02		0.51	0.65
21	48	DSI	H01		0.51	0.54
31	40	DSI	H02		0.51	0.35
4	14	DSI	H06		0.5	0.51
6	28	DSI	H01		0.5	0.6

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
10	42	DSI	H01		0.5	0.36
13	29	DSI	H02		0.5	0.43
15	50	DSI	H01		0.5	0.93
17	58	DSI	H01		0.5	0.51
17	72	DSI	H01		0.5	0.37
18	50	DSI	H01		0.5	0.59
28	64	DSI	H02		0.5	0.48
28	79	DSI	H03		0.5	0.49
36	24	DSI	H04		0.5	0.48
36	57	DSI	H02		0.5	0.39
45	51	DSI	H04		0.5	0.52
4	28	DSI	H01		0.49	0.39
6	25	DSI	H02		0.49	0.37
6	73	DSI	H01		0.49	0.41
8	92	DSI	H04		0.49	0.36
9	11	DSI	H01		0.49	0.54
9	18	DSI	H02		0.49	0.58
11	84	DSI	H04		0.49	0.64
12	31	DSI	H03		0.49	0.47
13	47	DSI	H04		0.49	0.36
15	67	DSI	H01		0.49	0.57
21	89	DSI	H01		0.49	0.3
23	67	DSI	H02		0.49	0.51
27	75	DSI	H03		0.49	0.41
31	39	DSI	H01		0.49	0.47
36	68	DSI	H02		0.49	0.32
39	42	DSI	H03		0.49	0.57
8	35	DSI	H01		0.48	0.4
9	48	DSI	H03		0.48	0.63
11	42	DSI	H01		0.48	0.39
15	62	DSI	H01		0.48	0.38
17	55	DSI	H01		0.48	0.43
20	29	DSI	H04		0.48	0.22
23	61	DSI	H02		0.48	0.48
26	62	DSI	H01		0.48	0.44
27	66	DSI	H02		0.48	0.47
28	72	DSI	H03		0.48	0.41
35	66	DSI	H02		0.48	0.65
2	75	DSI	H01		0.47	0.42
6	68	DSI	H01		0.47	0.34
8	40	DSI	H01		0.47	0.42
10	31	DSI	H01		0.47	0.34
12	74	DSI	H02		0.47	0.22

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
20	55	DSI	H02		0.47	0.51
26	71	DSI	H01		0.47	0.47
28	20	DSI	H01		0.47	0.45
28	62	DSI	H02		0.47	0.43
28	63	DSI	H01		0.47	0.55
28	68	DSI	H05		0.47	0.47
38	21	DSI	H01		0.47	0.5
38	30	DSI	H02		0.47	0.35
41	52	DSI	H01		0.47	0.38
3	16	DSI	H02		0.46	0.37
4	19	DSI	H02		0.46	0.51
9	23	DSI	H01		0.46	0.37
20	47	DSI	H03		0.46	0.49
20	61	DSI	H01		0.46	0.48
22	18	DSI	H02		0.46	0.42
22	25	DSI	H02		0.46	0.39
23	66	DSI	H02		0.46	0.45
25	85	DSI	H01		0.46	0.59
27	72	DSI	H02		0.46	0.51
31	58	DSI	H02		0.46	0.3
32	71	DSI	H03		0.46	0.36
37	63	DSI	H01		0.46	0.54
38	34	DSI	H02		0.46	0.37
39	27	DSI	H03		0.46	0.48
4	8	DSI	H06		0.45	0.41
6	45	DSI	H01		0.45	0.39
15	4	DSI	H02		0.45	0.4
19	42	DSI	H01		0.45	0.31
25	50	DSI	H01	y	0.45	0.28
27	78	DSI	H01		0.45	0.48
27	80	DSI	H02		0.45	0.43
28	28	DSI	H04		0.45	0.26
32	39	DSI	H01		0.45	0.35
37	72	DSI	H01		0.45	0.51
42	38	DSI	H02		0.45	0.61
3	18	DSI	H01		0.44	0.27
4	90	DSI	H06		0.44	0.41
5	76	DSI	H01		0.44	0.35
8	31	DSI	H03		0.44	0.36
8	33	DSI	H01		0.44	0.51
10	20	DSI	H02		0.44	0.44
12	27	DSI	H01		0.44	0.39
20	25	DSI	H02		0.44	0.48

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
23	56	DSI	H02		0.44	0.36
26	19	DSI	H03		0.44	0.42
26	64	DSI	H01		0.44	0.46
30	25	DSI	H02		0.44	0.31
32	74	DSI	H01		0.44	0.7
34	47	DSI	H01		0.44	0.45
2	54	DSI	H05		0.43	0.44
2	90	DSI	H01		0.43	0.49
17	31	DSI	H04		0.43	0.51
18	36	DSI	H03		0.43	0.39
21	15	DSI	H06		0.43	0.38
26	27	DSI	H03		0.43	0.37
32	64	DSI	H01		0.43	0.58
33	68	DSI	H01		0.43	0.5
34	68	DSI	H02		0.43	0.39
8	30	DSI	H01		0.42	0.54
9	25	DSI	H01		0.42	0.38
9	74	DSI	H04		0.42	0.34
12	36	DSI	H02		0.42	0.32
14	81	DSI	H02		0.42	0.37
15	63	DSI	H01		0.42	0.31
16	43	DSI	H01		0.42	0.26
18	32	DSI	H03		0.42	0.46
20	46	DSI	H03		0.42	0.48
28	70	DSI	H02		0.42	0.4
32	44	DSI	H04		0.42	0.56
32	70	DSI	H01		0.42	0.73
32	70	DSI	H04		0.42	0.35
36	56	DSI	H02		0.42	0.48
36	60	DSI	H02		0.42	0.47
2	14	DSI	H03		0.41	0.37
2	94	DSI	H01		0.41	0.4
5	44	DSI	H01		0.41	0.4
8	12	DSI	H01		0.41	0.53
8	39	DSI	H01		0.41	0.58
9	12	DSI	H01		0.41	0.36
12	39	DSI	H01		0.41	0.41
14	60	DSI	H01		0.41	0.31
15	65	DSI	H01		0.41	0.51
16	35	DSI	H01		0.41	0.34
16	83	DSI	H01		0.41	0.72
20	46	DSI	H06		0.41	0.41
28	48	DSI	H03		0.41	0.49

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
32	65	DSI	H02		0.41	0.35
32	71	DSI	H01		0.41	0.29
36	52	DSI	H02		0.41	0.28
39	50	DSI	H02		0.41	0.37
4	27	DSI	H01		0.4	0.4
6	30	DSI	H01		0.4	0.52
9	34	DSI	H01		0.4	0.38
18	16	DSI	H05		0.4	0.44
18	40	DSI	H01		0.4	0.36
18	64	DSI	H01		0.4	0.43
20	31	DSI	H03		0.4	0.37
27	20	DSI	H01		0.4	0.28
28	70	DSI	H01		0.4	0.37
30	81	DSI	H02		0.4	0.32
31	54	DSI	H01		0.4	0.48
32	20	DSI	H02		0.4	0.3
38	24	DSI	H03		0.4	0.45
39	37	DSI	H03		0.4	0.42
2	84	DSI	H01		0.39	0.34
12	38	DSI	H01		0.39	0.41
13	46	DSI	H03		0.39	0.27
18	33	DSI	H05		0.39	0.48
26	20	DSI	H02		0.39	0.48
28	81	DSI	H05		0.39	0.4
29	27	DSI	H02		0.39	0.41
29	57	DSI	H01		0.39	0.24
34	24	DSI	H04		0.39	0.34
38	32	DSI	H02		0.39	0.38
40	67	DSI	H01		0.39	0.36
3	88	DSI	H02		0.38	0.45
4	41	DSI	H01		0.38	0.38
5	75	DSI	H03		0.38	0.31
12	26	DSI	H01		0.38	0.3
17	56	DSI	H02		0.38	0.3
18	48	DSI	H01		0.38	0.34
19	43	DSI	H02		0.38	0.4
19	53	DSI	H04		0.38	0.26
23	44	DSI	H03		0.38	0.37
25	22	DSI	H02		0.38	0.4
27	18	DSI	H02		0.38	0.36
29	35	DSI	H01		0.38	0.34
34	70	DSI	H03		0.38	0.41
36	72	DSI	H01		0.38	0.36

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
39	41	DSI	H03		0.38	0.28
5	46	DSI	H01		0.37	0.39
6	87	DSI	H03		0.37	0.22
19	76	DSI	H02		0.37	0.35
20	47	DSI	H01		0.37	0.4
20	65	DSI	H01		0.37	0.55
22	24	DSI	H03		0.37	0.32
27	83	DSI	H04		0.37	0.2
28	40	DSI	H02		0.37	0.39
28	68	DSI	H02		0.37	0.43
34	59	DSI	H02		0.37	0.18
38	26	DSI	H02		0.37	0.42
9	50	DSI	H01		0.36	0.33
13	39	DSI	H02		0.36	0.36
13	43	DSI	H03		0.36	0.65
16	45	DSI	H01		0.36	0.37
18	21	DSI	H02		0.36	0.47
20	62	DSI	H01		0.36	0.36
26	20	DSI	H04		0.36	0.24
26	27	DSI	H06		0.36	0.34
26	29	DSI	H02		0.36	0.27
26	31	DSI	H03		0.36	0.37
27	62	DSI	H01		0.36	0.57
28	47	DSI	H02		0.36	0.31
32	65	DSI	H01		0.36	0.35
34	69	DSI	H02		0.36	0.22
36	57	DSI	H03		0.36	0.43
36	59	DSI	H01		0.36	0.31
2	56	DSI	H03		0.35	0.42
4	78	DSI	H02		0.35	0.28
4	91	DSI	H01		0.35	0.25
9	28	DSI	H02		0.35	0.36
12	59	DSI	H05		0.35	0.36
14	85	DSI	H01		0.35	0.32
19	90	DSI	H02		0.35	0.3
21	12	DSI	H01		0.35	0.34
28	81	DSI	H01		0.35	0.37
34	72	DSI	H01		0.35	0.37
7	18	DSI	H02		0.34	0.53
8	39	DSI	H03		0.34	0.29
8	93	DSI	H03		0.34	0.34
13	44	DSI	H02		0.34	0.31
13	51	DSI	H01		0.34	0.24

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
17	30	DSI	H01		0.34	0.23
19	87	DSI	H03		0.34	0.33
20	42	DSI	H01	y	0.34	0.4
20	53	DSI	H03		0.34	0.39
27	55	DSI	H01		0.34	0.27
27	76	DSI	H05		0.34	0.24
28	78	DSI	H02		0.34	0.28
31	59	DSI	H07		0.34	0.36
34	30	DSI	H02		0.34	0.54
36	65	DSI	H02		0.34	0.18
2	92	DSI	H01		0.33	0.39
5	1	DSI	H02		0.33	0.29
8	4	DSI	H02		0.33	0.35
12	41	DSI	H03		0.33	0.41
13	68	DSI	H02		0.33	0.39
13	70	DSI	H01		0.33	0.3
15	48	DSI	H03		0.33	INR
15	66	DSI	H01		0.33	0.28
17	58	DSI	H03		0.33	0.39
19	35	DSI	H01		0.33	0.62
27	22	DSI	H04		0.33	0.3
29	59	DSI	H06		0.33	0.52
30	18	DSI	H02		0.33	0.36
5	1	DSI	H05		0.32	0.3
6	94	DSI	H03		0.32	0.28
12	15	DSI	H04		0.32	0.36
13	62	DSI	H01		0.32	0.22
18	38	DSI	H03		0.32	0.4
18	51	DSI	H05		0.32	0.3
20	20	DSI	H04		0.32	0.26
24	62	DSI	H02		0.32	0.25
25	60	DSI	H02		0.32	0.36
27	65	DSI	H03		0.32	0.4
30	54	DSI	H01		0.32	0.29
32	63	DSI	H02		0.32	0.68
34	78	DSI	H03		0.32	0.08
8	45	DSI	H01		0.31	0.38
15	63	DSI	H05		0.31	0.21
20	49	DSI	H01		0.31	0.28
26	85	DSI	H01		0.31	0.32
28	63	DSI	H02		0.31	0.44
29	14	DSI	H01		0.31	0.32
32	63	DSI	H04		0.31	0.37

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
35	35	DSI	H02		0.31	0.26
36	48	DSI	H02		0.31	0.53
39	42	DSI	H04		0.31	0.3
3	34	DSI	H02		0.3	0.29
4	22	DSI	H02		0.3	0.34
5	91	DSI	H03		0.3	0.23
9	10	DSI	H02		0.3	0.31
9	47	DSI	H03		0.3	0.36
15	50	DSI	H02		0.3	0.53
15	61	DSI	H01		0.3	0.36
20	56	DSI	H01		0.3	0.39
22	23	DSI	H02		0.3	0.22
25	67	DSI	H04		0.3	0.39
26	31	DSI	H06		0.3	0.31
28	76	DSI	H02		0.3	0.4
29	56	DSI	H02		0.3	0.35
35	62	DSI	H02		0.3	0.37
8	8	DSI	H02		0.29	0.26
18	15	DSI	H04		0.29	0.18
18	24	DSI	H02		0.29	0.28
18	41	DSI	H01		0.29	0.33
21	44	DSI	H01		0.29	0.26
23	73	DSI	H06		0.29	0.3
27	66	DSI	H04		0.29	0.29
28	77	DSI	H02		0.29	0.33
29	27	DSI	H07		0.29	0.21
35	69	DSI	H01		0.29	0.25
36	54	DSI	H04		0.29	0.27
6	39	DSI	H02		0.28	0.24
20	39	DSI	H03		0.28	0.29
26	47	DSI	H03		0.28	0.27
27	53	DSI	H01		0.28	0.34
29	63	DSI	H01		0.28	0.33
32	70	DSI	H03		0.28	0.27
35	33	DSI	H03		0.28	0.26
35	46	DSI	H06		0.28	0.36
36	47	DSI	H01		0.28	0.29
40	29	DSI	H03		0.28	0.35
18	40	DSI	H05		0.27	0.21
26	21	DSI	H03		0.27	0.33
28	74	DSI	H02		0.27	0.28
31	40	DSI	H04		0.27	0.17
38	26	DSI	H04		0.27	0.23

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
38	38	DSI	H04		0.27	0.32
38	74	DSI	H03		0.27	0.61
7	64	DSI	H01		0.26	0.29
9	36	DSI	H01		0.26	0.2
14	77	DSI	H02		0.26	0.39
17	75	DSI	H01		0.26	0.29
18	42	DSI	H04		0.26	0.26
25	53	DSI	H02		0.26	0.19
32	49	DSI	H01		0.26	0.41
8	3	DSI	H04	y	0.25	0.26
20	19	DSI	H02		0.25	0.42
20	40	DSI	H05		0.25	0.25
23	40	DSI	H01		0.25	0.18
29	28	DSI	H02		0.25	0.29
37	65	DSI	H02		0.25	INR
8	44	DSI	H02		0.24	0.28
9	31	DSI	H01		0.24	0.32
9	83	DSI	H01		0.24	0.3
11	69	DSI	H04		0.24	0.31
18	15	DSI	H03		0.24	0.25
18	69	DSI	H02		0.24	0.39
26	72	DSI	H01		0.24	0.36
34	65	DSI	H03		0.24	INR
35	65	DSI	H03		0.24	0.16
17	9	DSI	H02		0.23	0.12
18	11	DSI	H04		0.23	0.19
22	17	DSI	H06		0.23	0.38
22	70	DSI	H02		0.23	0.46
28	76	DSI	H01		0.23	0.27
29	46	DSI	H02		0.23	0.22
30	28	DSI	H04		0.23	0.13
34	43	DSI	H01		0.23	0.32
39	66	DSI	H01		0.23	0.33
3	19	DSI	H02		0.22	0.32
3	71	DSI	H02		0.22	0.18
13	36	DSI	H02		0.22	0.16
20	66	DSI	H02		0.22	0.28
25	47	DSI	H05		0.22	0.44
32	65	DSI	H03		0.22	0.18
43	65	DSI	H01		0.22	0.32
5	1	DSI	H01		0.21	0.26
20	59	DSI	H04		0.21	0.2
36	26	DSI	H04		0.21	0.2

Steam Generator 4						
Row	Col	Ind	Elev	Plugged[1]	EOC-13 Volts	EOC-12 Volts[2]
8	47	DSI	H01		0.2	0.19
15	69	DSI	H01		0.2	0.2
33	54	DSI	H01		0.2	0.28
7	33	DSI	H03		0.19	0.17
22	41	DSI	H04		0.19	0.11
36	67	DSI	H06		0.19	0.15
37	62	DSI	H04		0.19	0.31
5	37	DSI	H01		0.18	0.31
28	24	DSI	H06		0.18	0.16
38	74	DSI	H04		0.18	0.13
12	26	DSI	H02		0.17	0.3
27	63	DSI	H03		0.17	INR
11	69	DSI	H03		0.16	0.31
20	69	DSI	H02		0.16	0.14
27	76	DSI	H02		0.16	0.29
28	63	DSI	H03		0.16	0.17
27	84	DSI	H01		0.15	0.26
18	15	DSI	H02		0.13	0.17
27	74	DSI	H03		0.13	0.17
5	87	DSI	H04		0.12	0.11

(1) All indications greater than or equal to 2 volts at EOC-13 were subject to a Plus Point inspection. All DSI indications greater than 2 volts, confirmed by Plus Point inspection, were repaired by plugging.

(2) Indications without an EOC-12 Volts value were not used in the determination of growth rate.

DSS = Distorted Support Signal. Doesn't meet calling criteria for a DSI.

INR = Indication Not Reportable.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT
UNIT 2

STEAM GENERATOR
W* ALTERNATE REPAIR CRITERIA
UNIT 2 CYCLE 13
90-DAY REPORT

SQN
Unit 2 Cycle 13

W*(Star) 90 Day Report

Calculated Main Steam Line Break Primary to Secondary Leakage

Table 1

Condition Monitoring	Leakage (gpm at MSLB)			
	SG1	SG2	SG3	SG4
ARC GL 95-05 Leakage	0.039	0.042	0.126	0.147
W* 0"-8" Leakage	0.050	0.130	0.020	0.208
W* 8"-12" Leakage	0.168	0.168	0.168	0.168
W* >12" Leakage	0.299	0.291	0.295	0.295
Total Leakage	**0.556**	**0.631**	**0.609**	**0.818**

Operational Assessment	Postulated Worst SG (gpm)
ARC GL 95-05 Leakage	1.470
W* 0"-8" Leakage	0.272
W* 8"-12" Leakage	0.187
W* >12" Leakage	0.298
Total Leakage	**2.227**

During the determination of the Postulated Main Steam Line Break (MSLB) primary to secondary leakage, all indications at the top of tubesheet were evaluated for W* leakage. All OD indications were either above the top-of-tubesheet and or above the associated Bottom of the Wextex Transition (BWT) and therefore not included.

All indications of Primary Water Stress Corrosion Cracking (PWSCC) at the top-of-tubesheet were included in the Condition Monitoring W* leakage evaluation regardless of whether or not they were above the BWT. The location of upper crack tip was subtracted for the location of the BWT and then this value had the NDE uncertainty subtracted. If the value was negative, it was then assumed to be zero.

The Condition Monitoring assumed leakage was determined for each SG. To determine the Condition Monitoring leakage assumed in the 0" to 8" below the BWT region for each of the SGs, the indications were binned into the following bins; 0 to 1, 1 to 2, 2 to 3, and 3 to 4, etc. The leakage value for each of the bins was obtained from WCAP-14797, Rev 2, Figure 6.4-3. The quantity of indications in each bin was multiplied by the greatest leakage value for the bin (i.e., the 1 to 2 inch bin was multiplied by the 1 inch below the BWT leakage value from the Figure 6.4-3). The leakage value for the bins was summed to obtain the total in the 0" to 8 below the top of tubesheet region. To determine the Condition Monitoring assumed leakage in the 8 inch to 12 inch below the HTS region, the total historical count of indications 0 inches to 8 inches below the TTS from all four SGs plus the number of detected indications 0 inches to 8 inches below the TTS for all four SGs for the present outage were combined and 25% of this total was applied to each of the four SGs to determine the assumed quantity of indications in the 8 inches to 12 inches below the TTS region. This assumed quantity of indications was multiplied by 0.0045 gpm to obtain the 8 inches to 12 inches below the TTS leakage. To determine the Condition Monitoring assumed leakage in the greater than 12 inch below the HTS region, the quantity of tubes in service in the specific SG was used. This quantity of tubes was multiplied by 0.00009 gpm to obtain the W* leakage for the greater than 12 inch below the HTS region for each SG.

Operational Assessment assumed leakage was determined for a faulted SG. To determine the Operational Assessment assumed leakage in the 0' to 8" below the TTS region, an assumed quantity of undetected

indications was determined by utilizing the largest quantity over all four SG of indications in each of the bins (0 to 1", 1" to 2", 2" to 3", and 3" to 4", etc) and dividing that greatest bin quantity by 0.6 (assumed POD) and subtracting the quantity of tubes plugged. The leakage value for each of the bins was obtained from WCAP-14797, Rev 2, Figure 6.4-3. The quantity of indications in each bin was multiplied by the greatest leakage value for the bin (i.e., the 1 to 2 inch bin was multiplied by the 1 inch below the BWT leakage value from the Figure 6.4-3). The leakage value for the bins was summed to obtain the total in the 0" to 8 below the top of tubesheet region. To determine the Operational Assessment assumed leakage in the 8 inch to 12 inch below the HTS region, the total historical count of indications 0 inches to 8 inches below the TTS from all four SGs plus the number of projected indications 0 inches to 8 inches below the TTS for all four SGs for the upcoming fuel cycle was combined and 25% of this total determined the assumed quantity of indications in the 8 inches to 12 inches below the TTS region for the faulted SG. This assumed quantity of indications was multiplied by 0.0045 gpm to obtain the 8 inches to 12 inches below the TTS leakage. To determine the Operational Assessment assumed leakage in the greater than 12 inch below the HTS region, the quantity of tubes in service in the least plugged SG was used. This quantity of tubes was multiplied by 0.00009 gpm to obtain the W* leakage for the greater than 12 inch below the HTS region for the faulted SG.

W* Indications

Table 2

SG	Row	Col	Location	BWT	MV	MD	AD	PDA	Length	Degradation Mechanism
2	5	18	HTS-2.17	HTS-0.17	0.27	26	13.92		0.13	PWSCC HTS AXIAL
2	6	71	HTS-0.86	HTS-0.74	0.32	80	49.25		0.12	PWSCC HTS AXIAL
2	19	21	HTS-3.35	HTS-0.47	0.35	78	38.77		0.13	PWSCC HTS AXIAL
3	26	41	HTS-1.73	HTS-0.35	0.19	65	39.53		0.16	PWSCC HTS AXIAL
4	1	49	HTS-1.07	HTS-0.41	0.43	67	43.53		0.30	PWSCC HTS AXIAL
4	1	51	HTS-4.66	HTS-0.44	0.73	44	27.04		0.24	PWSCC HTS AXIAL
4	1	55	HTS-0.64	HTS-0.24	0.46	48	26.41		0.34	PWSCC HTS AXIAL
4	1	55	HTS-0.41	HTS-0.24	0.26	13	10.00		0.13	PWSCC HTS AXIAL
4	35	22	HTS-1.23	HTS-0.45	0.80	83	45.53		0.16	PWSCC HTS AXIAL
1	27	10	HTS-0.91	HTS-0.28	0.94	28		1.09	24.50	PWSCC HTS CIRC
2	16	34	HTS-0.15	HTS-0.32	0.24	78		4.05	25.10	PWSCC HTS CIRC

Notes Length for axial indications is in inches and for circumferential indications is in degrees.
MV is Max Volts, MD is Max Depth, AD is Average Depth, and PDA is Percent Degraded Area

W* Inspection Assessment

W* Alternate Repair Criteria requires an assessment be performed to determine whether the results of the inspection were consistent with the expectations. These expectations are with respect to the number of flaws and flaw severity. The quantity of flaws found in the 4" to 8" regions below the top of the tubesheet is expected to be less than 25% of the total number of flaws. Table 2 is a listing of the indications subject to the W* assessment. Also, an assessment is required to be performed for whether W* identified newly initiated severe indications of cracking and if so include their potential leakage rate in the assessment.

Twenty-five W* region indications were predicted to be discovered during the U2C13 inspection. A total of eleven indications were detected in the W* region. Of the eleven indications only one (SG4 R1 C51) is located in the 4" to 8" region below the top of the tubesheet. One of eleven indications is approximately 9 percent of the total number of indications detected. Therefore, less than 25% of the total quantity of indications is in the 4" to 8" region below the top-of-tubesheet (However, for the purpose of calculating a conservative leakage value, this indication was placed in the 3 to 4 inch bin due to the location of the associated BWT and the subtraction of NDE uncertainty). TVA predicts that 17 W* region indications will be detected during the next inspection (U2C14).

As an assessment of the severity of the flaws, the axial indications will be assessed and then the circumferential indications. The largest axial average depth detected U2C13 was less than 50% average depth. The largest axial depth growth rate was 19.5%/EFPY. This growth rate is less than the 90th percentile growth rate for SQN Unit 1 and 2 PWSCC HTS Axial indications. The greatest Max-Depth was reported by NDE as 83%. Therefore none of the indications are assumed to be through-wall. The greatest axial length detected U2C13 was 0.34 inches. When compared to the recent Unit 1 or 2 inspections none of these values are considered severe. Also, only nine PWSCC HTS Axial indications were detected this outage when compared to eleven PWSCC HTS Axial indications U2C12 and compared to twenty PWSCC HTS Axial indications the U2C11 inspection. The PWSCC HTS Circumferential indications detected U2C13 were both within an inch of the top-of-tubesheet. The percent degraded area growth was less than the 81st percentile growth when compared to the SQN Unit 1 and 2 growth information. The quantity of circumferential indications (two) detected U2C13 is less than the four circumferential indications detected U2C12 and the six circumferential indications detected U2C11.

In addition to the above, the greatest Max-Volts for PWSCC HTS Axial indications was 0.80 volts and the greatest Max-Volts for PWSCC HTS Circumferential indications was 0.94 volts.. The EPRI Steam Generator In-Situ Pressure Test Guidelines, Rev 2, Table 4-1, states that the Voltage Threshold for PWSCC Axial at Explosive Expansion Transitions is 2.50 volts and the Voltage Threshold for PWSCC HTS Circumferential at Explosive Expansion is 1.25 volts. The Voltage Threshold is a value below which there is approximately a 90% probability of no leakage. Therefore, based on voltage amplitude there is at least a 90% probability that none of the eleven indications would leak during a Main Steam Line Break Accident.

SQN Unit 2 eddy current examinations of the hot leg top-of-tubesheet had a minimum depth of 8 inches below the top-of-tubesheet. The vendors examined a greater extent (typically one or two inches) in order to ensure the minimum 8 inches was achieved. Analysts would have identified indications in the data even if the indications were greater than 8 inches below the top-of-tubesheet. None were identified. Because none were identified, TVA believes that this provide some assurance that the methodology for predicting the quantity of indications in the 8" to 12" below the top-of-tubesheet is conservative.

Based on the preceding information, none of the top-of tubesheet indications were categorized as severe and therefore no changes were made to include additional leakage in the leakage model for W*.

Based on the above, it is concluded that the severity of flaws and quantities of flaws are consistent with the expectations for indications within the W* distance.

The SQN Unit 2 primary to secondary leakage limit during the postulated MSLB accident is 3.7 gpm. The Table 1 leakage value is below this limit and therefore acceptable.