# 10CFR50.46

# MARGIN UTLIZIATION

# BYRON AND BRAIDWOOD STATION UNITS 1 and 2

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# BYRON 1 LARGE BREAK LOCA 10CF...50.46 MARGIN UTILIZATION Page 1 of 5

新四國語動與後的政策的改變與整整整整整整整整的的改善的理想的新聞新聞的新聞的新聞的新聞的新聞的新聞的新聞的新聞的新聞的 	医骨骨骨骨 医尿管 计算法 计算法 医脊髓管
PLANT NAME: BYRON STATION UNIT 1 UTILITY NAME: COMMONWEALTH EDISON	
A. ANALYSIS OF RECORD (Comments: Calc-Note No. <u>SEC-SAII-3157-CO</u> Evaluation Model: <u>BASH</u> , FQT=2.50, FdH=1.6 SGTP = 15 %, Other:	PCT= <u>1883.07</u> °F 5, _)
B. PRIOR LOCA MODEL ASSESSMENTS - 1989 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-90-314</u>	ΔPCT= +0°F
C. PRIOR LOCA MODEL ASSESSMENTS - 1990 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-91-13</u> )	ΔРСТ≈ <u>+</u> 0°F 5
D. CURRENT LOCA MODEL ASSESSMENTS - 06/1991 (Permanent Assessment of PCT Margin) 1. FUEL ROD INITIAL CONDITION INCONSISTENCY 2. LB-LOCA BURST & BLOCKAGE ASSUMPTION 3. SG TUBE SEISMIC/LOCA ASSUMPTION	ΔPCT= + 10°F ΔPCT= + 0°F ΔPCT= + 7.2°F
E. 10CFR50.59 SAFETY EVALUATIONS - (Permanent Assessment of PO 1. Letter: <u>NOTE 1</u> Issue: <u>PRIOR TO 1990</u> 2. Letter: Issue:	
F. OTHER MARGIN ALLOCATIONS (Temporary Use of PCT Margin): 1. ANALYSIS MARGINS USED: VANTAGE 5 TRANSITION (NOTE 2) 2. PLANT MARGINS USED: N/A 3. FUEL MARGINS USED: LB-LOCA POWER DIST. (NOTE 3)	ΔPCT=°F
LICENSING BASIS PCT + MARGIN ALLOCATION	△PCT= 2051.3°F

#### Notes:

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- 1. This penalty resulted from an evaluation of the containment mini-purge valve as discussed in UFSAR Sect. 6.2.1.5.
- The transition core penalty for 17x17 Vantage 5 fuel is addressed in 2. WCAP 10444-P-A.
- 3. A temporary PCT penalty of 100°F was applied beginning in August 1990 to bound the potential PCT impact associated with the adequacy of the assumed power shape (chopped cosine) for the LBLOCA initial condition.

#### BRAIDWOOD 1 LARGE BREAK LOCA 10CFR50.46 MARGIN UTILIZATION Page 2 of 5

PLANT NAME: BRAIDWOOD STATION UNIT 1 UTILITY NAME: COMMONWEALTH EDISON	
A. ANALYSIS OF RECORD (Comments: Calc-Note No. <u>SEC-SAII-3157-CO</u> Evaluation Model: <u>BASH</u> , FQT=2.50, FdH=1 SGTP = <u>15</u> %, Other:	PCT= <u>1883.07</u> °F 1.65,
B. PRIOR LOCA MODEL ASSESSMENTS - 1989 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-90-</u>	ΔPCT= <u>+</u> Q°F -314 )
C. PRIOR LOCA MODEL ASSESSMENTS - 1990 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-91-</u>	
<ul> <li>D. CURRENT LOCA MODEL ASSESSMENTS - 06/1991</li> <li>(Permanent Assessment of PCT Margin)</li> <li>1. FUEL ROD INITIAL CONDITION INCONSISTENCY</li> <li>2. LB-LOCA BURST &amp; BLOCKAGE ASSUMPTION</li> <li>3. SG TUBE SEISMIC/LOCA ASSUMPTION</li> </ul>	ΔPCT= + 10°F ΔPCT= + 0°F ΔPCT= + 7.2°F
E. 10CFR50.59 SAFETY EVALUATIONS - (Permanent Assessment of 1. Letter: <u>NOTE 1</u> Issue: <u>PRIOR TO 1990</u> 2. Letter: <u>SECL-91-188D</u> Issue: <u>MISSING GRID PIECE</u>	ΔPCT= + 1°F
<ul> <li>F. OTHER MARGIN ALLOCATIONS (Temporary Use of PCT Margin):</li> <li>1. ANALYSIS MARGINS USED: VANTAGE 5 TRANSITION (NOTE 2)</li> <li>2. PLANT MARGINS USED: N/A</li> <li>3. FUEL MARGINS USED: LB-LOCA POWER DISTR. (NOTE 3)</li> </ul>	ΔPCT= °F

#### Notes:

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1.4

- 1. This penalty resulted from an evaluation of the containment mini-purge valve as discussed in UFSAR Sect. 6.2.1.5.
- 2. The transition core penalty for 17x17 Vantage 5 fuel is addressed in WCAP 10444-P-A.
- 3. A temporary PCT penalty of 100°F was applied beginning in August 1990 to bound the potential PCT impact associated with the adequacy of the assumed power shape (chopped cosine) for the LBLOCA initial condition.

## BYRON 2/BRAIDWOOD 2 LARGE BREAK LOCA 10CFR50.46 MARGIN UTILIZATION

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	NT NAME: BYRON STATION UNIT 2/BRAIDWOOD STATION UNIT 2 LITY NAME: COMMONWEALTH EDISON		
Α.	ANALYSIS OF RECORD (Comments: Calc-Note No. <u>SEC-SAII-3157-C0</u> Evaluation Model: <u>BASH</u> , FQT=2.50, FdH=1.6 SGTP = <u>15</u> %, Other:	PCT= <u>1883</u> .	<u>07</u> °F
Β.	PRIOR LOCA MODEL ASSESSMENTS - 1989 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-90-31</u>	ΔPCT= <u>+</u> 4/CCE-90-309)	Q°F
C.	PRIOR LOCA MODEL ASSESSMENTS - 1990 (Permanent Assessment of PCT Margin - Letter #: <u>CAE-91-13</u>	ΔPCT= <u>+</u> 5/CCE-91-136)	<u>0</u> *F
D.	CURRENT LOCA MODEL ASSESSMENTS - 06/1991 (Permanent Assessment of PCT Margin) 1. FUEL ROD INITIAL CONDITION INCONSISTENCY 2. LB-LOCA BURST & BLOCKAGE ASSUMPTION 3. SG TUBE SEISMIC/LOCA ASSUMPTION	ΔPCT≕_+ ΔPCT∞ + ΔPCT∞ +	10°F _0°F 20°F
Ε.	10CFR50.59 SAFETY EVALUATIONS - (Permanent Assessment of P 1. Letter: <u>NOTE 1</u> Issue: <u>PRIOR TO 1990</u> 2. Letter: Issue:	CT Margin) ΔPCT <u>≈</u> + ΔPCT≈	_1°F
F.	OTHER MARGIN ALLOCATIONS (Temporary Use of PCT Margin): 1. ANALYSIS MARGINS USED: <u>VANTAGE 5 TRANSITION (NOTE 2)</u> 2. PLANT MARGINS USED: <u>N/A</u> 3. FUEL MARGINS USED: <u>LB-LOCA POWER DISTR. (NOTE 3)</u>	APCT=	°F
	LICENSING BASIS PCT + MARGIN ALLOCATION	ΔPCT= 2064	.1°F

#### Notes:

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- This penalty resulted from an evaluation of the containment mini-purge valve as discussed in UFSAR Sect. 6.2.1.5.
- The transition core penalty for 17x17 Vantage 5 fuel is addressed in WCAP 10444-P-A.
- 3. A temporary PCT penalty of 100°F was applied beginning in August 1990 to bound the potential PCT impact associated with the adequacy of the assumed power shape (chopped cosine) for the LBLOCA initial condition.

# BYRON 1,2/BRAIDWOOD 2 SMALL BREAK LOCA 10CFR50.46 MARGIN UTILIZATION

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		EYRON STATION U COMMONWEALTH ED	NITS 1 & 2/BRAIDWOOD S	STATION UNIT	2	
Α.	ANALYSIS OF (Comments:	Calc-Note No	SEC-SAII-3173-CO el: NOTRUMP, FQT=2.50 Other:	) , FdH≃1.65		<u>1453.1</u> °F
Β.			TS - 1989 CT Margin - Letter #:			
С.		MODEL ASSESSMEN Assessment of P	TS – 1990 CT Margin – Letter #:			<u>0</u> °F 136)
	(Permanent 1. FUEL RC 2. NOTRUMP	SOLUTION CONVE			ΔPCT= + ΔPCT= + ΔPCT= +	0°F
E.	1. Letter		ONS - (Permanent Asse Issue: Issue:		CT Margin ΔPCT≈ ΔPCT≈	> °F
F.	1. ANALYSI 2. PLANT M	S MARGINS USED:	HHSI SURV. (NOTE 1)		$\Delta PCT = +$	°F 20°F °F
		LICENSING	BASIS PCT + MARGIN ALI	OCATION	APCT=	1510.1°F

#### Notes:

1. A temporary PCT penalty of no more than 20°F was assessed by Westinghouse (SECL-90-015) in support of a potential change to the charging pump surveillance acceptance limit. This proposed change is still under review and has not yet been submitted for NRC approval. The SBLOCA penalty would result from a slight reduction in delivered SI under spilling line conditions between 1400 psia and 1000 psia RCS pressure.

### BRAIDWOOD 1 SMALL BREAK LOCA 10CFR50.46 MARGIN UTILIZATION

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	NT NAME: BRAIDWOOD STATION UNIT 1 LITY NAME: COMMONWEALTH EDISON		
	ANALYSIS OF RECORD (Comments: Calc-Note No. <u>SEC-SAII-3173-CO</u> Evaluation Model: <u>NOTRUMP</u> , FQT=2.50 , FdH=1.65 SGTP = <u>15</u> %, Other:	PCT=14	1 <u>53.1</u> °F
Β.	PRIOR LOCA MODEL ASSESSMENTS - 1989 (Permanent Assessment of PCT Margin - Letter #: <u>CCE-90-309</u>	∆PCT <u></u> +	0°F
С.	PRIOR LOCA MODEL ASSESSMENTS - 1990 (Permanent Assessment of PCT Margin - Letter #: <u>CCE-91-136</u>	∆PCT= <u>+</u>	0°F 
	2. NOTRUMP SOLUTION CONVERGENCE RELIABILITY	ΔΡCT= + ΔΡCT= + ΔΡCT= +	<u>O</u> °F
	10CFR50.59 SAFETY EVALUATIONS - (Permanent Assessment of PC 1. Letter: <u>SECL-91-188D</u> Issue: <u>MISSING GRID PIECE</u> 2. Letter: Issue:		17°F
F.	2. PLANT MARGINS USED: HHSI SURV. (NOTE )	ΔΡCT= ΔΡCT= + ΔΡCT=	20°F
	LICENSING BASIS PCT + MARGIN ALLOCATION	ΔPCT= 15	527.1°F

### Notes:

 A temporary PCT penalty of no more than 20°F was assessed by Westinghouse (SECL-90-015) in support of a potential change to the charging pump surveillance acceptance limit. This proposed change is still under review and has not yet been submitted for NRC approval. The SBLOCA penalty would result from a slight reduction in delivered SI under spilling line conditions between 1400 psia and 1000 psia RCS pressure.