

EQUIVALENT MARGIN ANALYSIS  
PLANT APPLICABILITY VERIFICATION FORM  
FOR Quad Cities Station Unit 2

BWR/2-6 WELD

Surveillance Weld USE:

%Cu = 0.26 SAW

Capsule Fluence = 9.0 E 18

Measured % Decrease = 45% (Charpy Curves)

R.G. 1.99 Predicted % Decrease = 39% (R.G. 1.99, Figure 2)

Limiting Beltline Weld USE:

%Cu = 0.30

32 EPY Fluence = 3.4 E 17

R.G. 1.99 Predicted % Decrease = 21% (R.G. 1.99, Figure 2)

Adjusted % Decrease = 27% (R.G. 1.99, Position 2.2)

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27%  $\leq$  34%, so vessel welds are  
bounded by equivalent margin analysis.

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**EQUIVALENT MARGIN ANALYSIS  
PLANT APPLICABILITY VERIFICATION FORM  
FOR Quad Cities Station Unit 2**

**BWR/2-6 WELD**

Surveillance Weld USE:

$$\%Cu = \underline{0.26 SAW}$$

$$\text{Capsule Fluence} = \underline{2.43 E 19}$$

$$\text{Measured \% Decrease} = \underline{53\%} \text{ (Charpy Curves)}$$

$$\text{R.G. 1.99 Predicted \% Decrease} = \underline{49\%} \text{ (R.G. 1.99, Figure 2)}$$

Limiting Beltline Weld USE:

$$\%Cu = \underline{0.30}$$

$$32 \text{ EFPY Fluence} = \underline{3.4 E 17}$$

$$\text{R.G. 1.99 Predicted \% Decrease} = \underline{21\%} \text{ (R.G. 1.99, Figure 2)}$$

$$\text{Adjusted \% Decrease} = \underline{27\%} \text{ (R.G. 1.99, Position 2.2)}$$

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$27\% \leq 34\%$ , so vessel welds are  
bounded by equivalent margin analysis.

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