
Westinghouse Activities to Support on Risk-Informed Appendix G

Carol Heinecke
(Westinghouse Electric Company)

Westinghouse Analysis to Risk Inform Appendix G

- Plants Analyzed
- Parameters for PWR Sensitivity Study
- Test Matrix
- Typical Cooldown Analyzed
- Results for PWR Plants
- Preliminary Conclusions

Westinghouse Analysis to Risk Inform Appendix G

PWR Plants Analyzed

- ***Seabrook***
- ***Salem 2***
- ***Calvert Cliffs 1***
- ***Kewaunee***
- ***Beaver Valley 1***
- ***Indian Point 3***
- ***Palisades***

Westinghouse Analysis to Risk Inform Appendix G

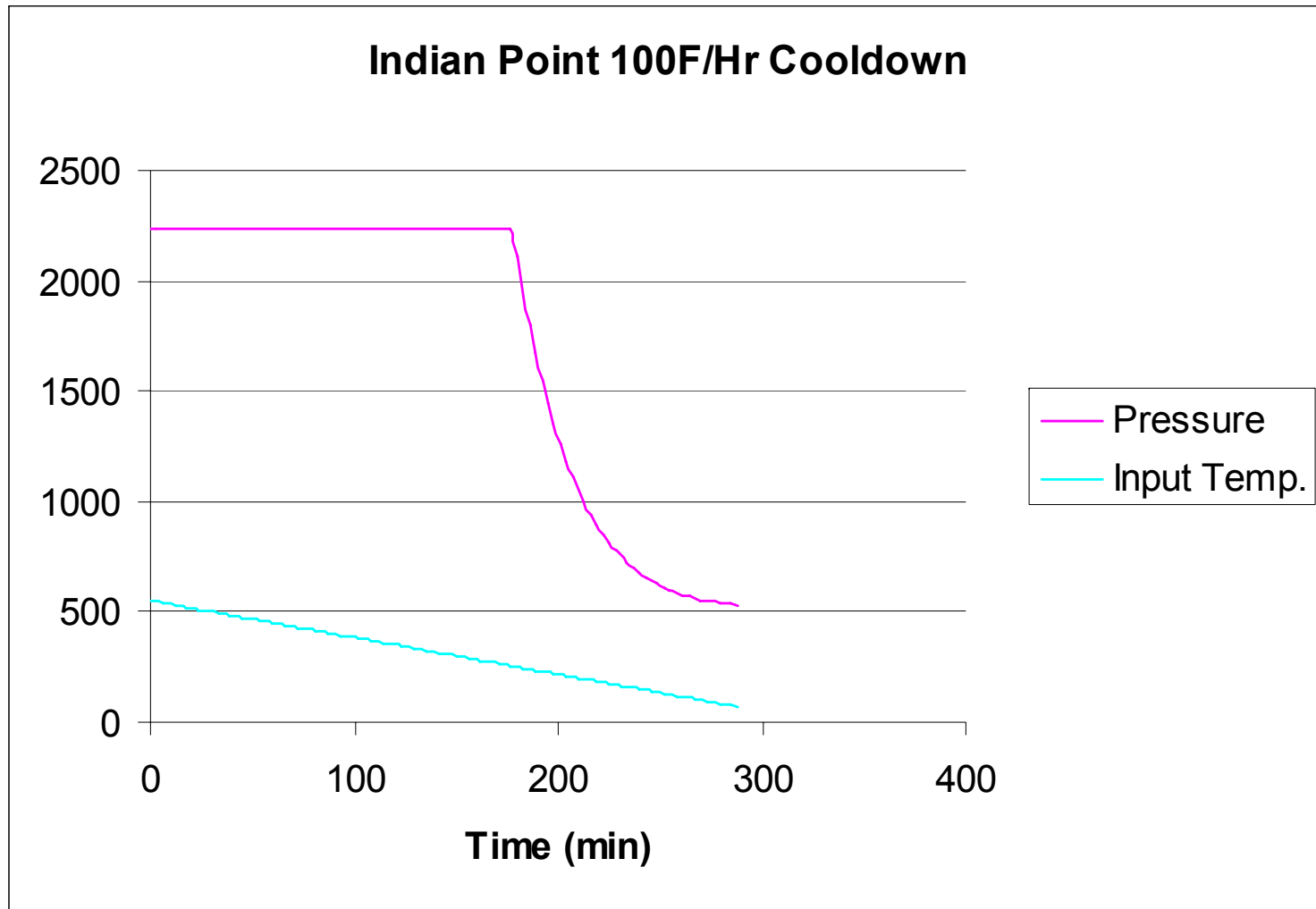
Assumptions and Analysis Input for PWR Vessels

- Warm Prestressing
- Plant-specific Embedded Flaw Distributions
- Cooldown Rates of 100°F/Hr and 60°F/Hr
- Margins of 0°F and 60°F on Irradiated RT_{NDT}
- Margin of 1.0 and 1.5 on K_{IM}
- 54 EFPY Fluences

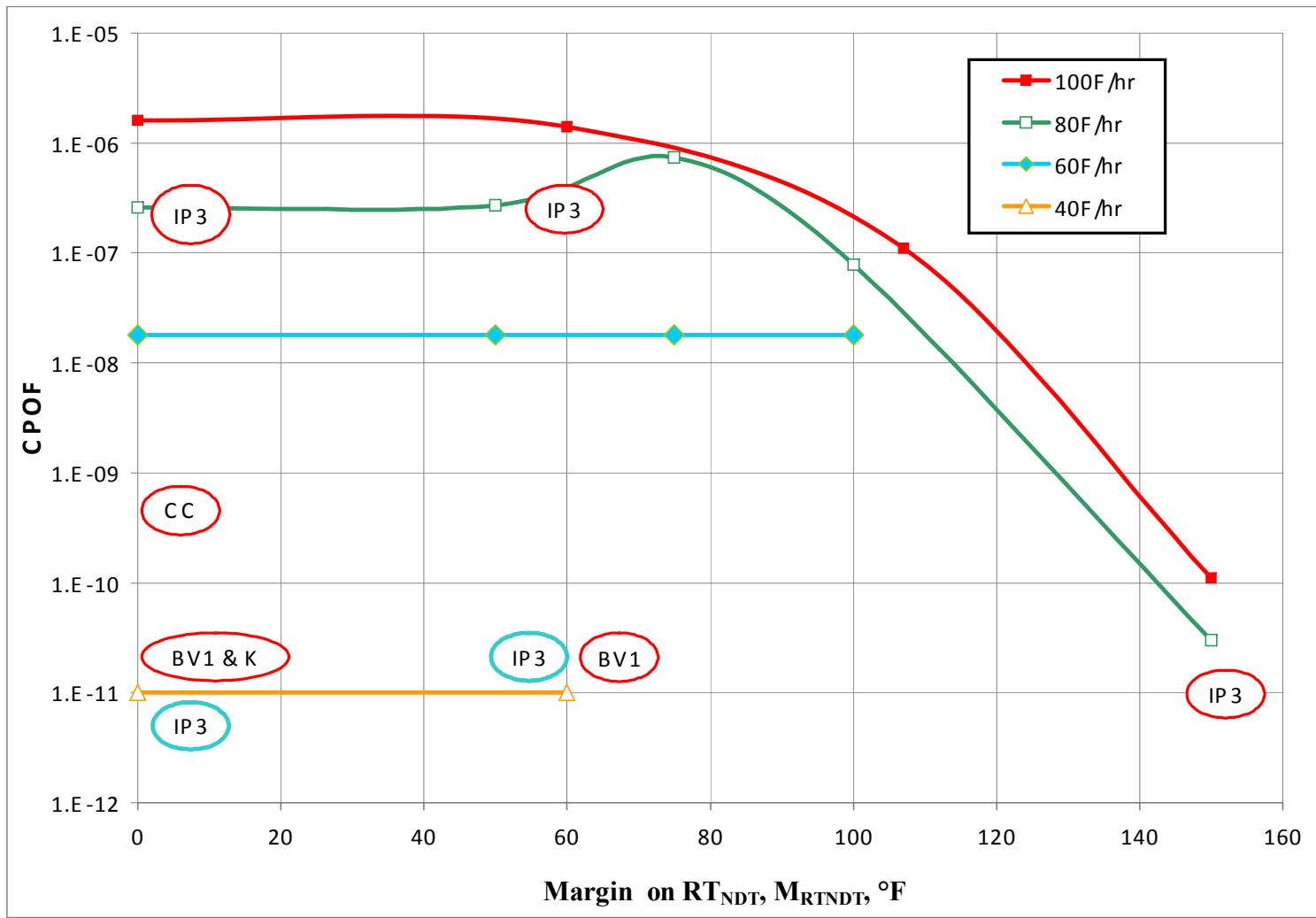
Test Matrix

Test Sequence	WPS	Surface Flaws	Margin on K_{Im}	Margin on RT_{NDT} ($^{\circ}F$)	Cool-down rate ($^{\circ}F/hr$)
Case 1	Yes	No	1	0	100
Case 2	Yes	No	1	60	100
Case 3	Yes	No	1	60	60
Case 4	Yes	No	1	0	60
Case 5	Yes	No	1.5	0	100
Case 6	Yes	No	1.5	0	60

Typical Cooldown Analyzed



Results from Westinghouse Study for PWR Plants



Preliminary Conclusions For These Cases

- It is feasible to increase allowable pressure by risk-informing ASME Section XI, Appendix G and remain well below the failure frequency goal.
- The Westinghouse study shows that the Palisades results are bounding for cooldown.