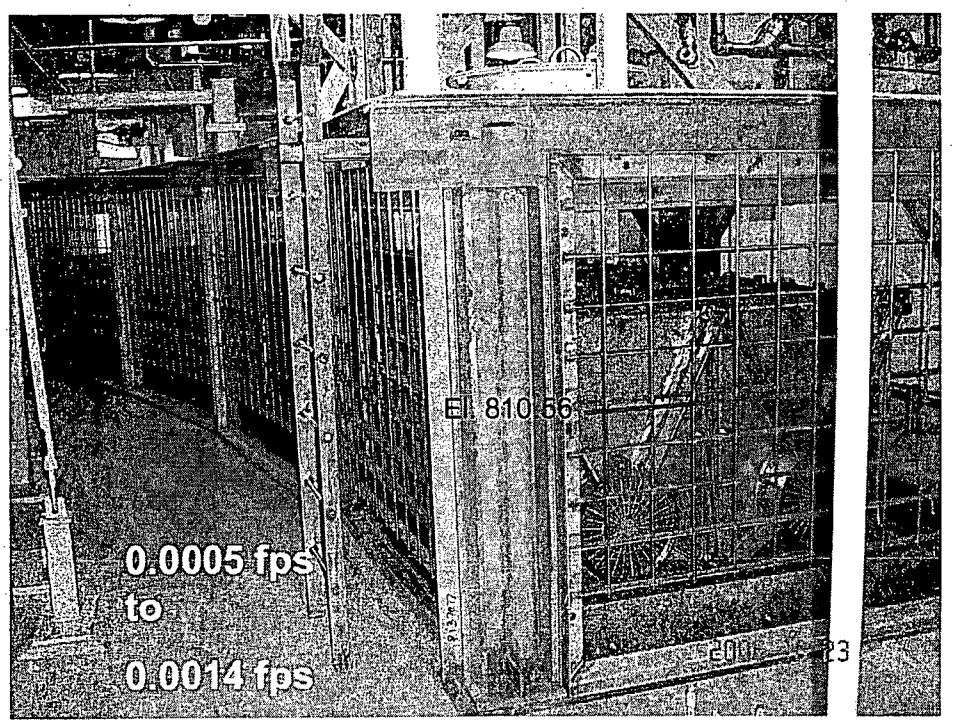
Luminant

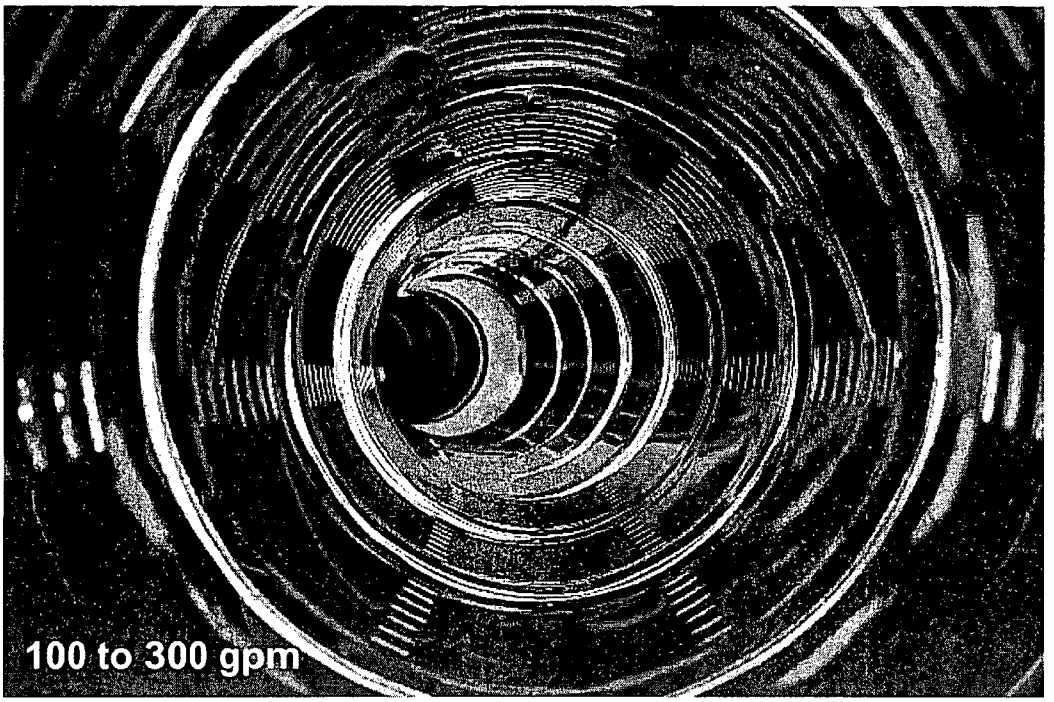
NRC – Luminant Power Public Meeting

Comanche Peak Nuclear Power Plant
SBLOCA (RAI 22 and 23)
July 9th
2009

SBLOCA Switchover



Core tube – 3% to 10 % design



Vortex Suppression

- PCI Sure-Flow® Strainer design utilizes a combination of recognized 'defense in depth' multiple vortex suppression devices – perforated plate, parallel disk plates, disk grill wires, core tube slots, module external bracing, and the resultant tortuous strainer internal flow path – all providing more than the single grating vortex suppressor recommended in RG 1.82 Revision 3.

Table 1 - CPNPP SBLOCA Comparison for CSHL						
CPNPP SBLOCA Scenarios	CSHL, ft of water			Comparison		
	120	212	250	120	212	250
SBLOCA (400 gpm)	0.0138	0.0114	0.0109	0.7657 > 0.0138	0.7657 > 0.0114	0.7657 > 0.0109
SBLOCA (1200 gpm)	0.0933	0.0847	0.0826	0.7657 > 0.0933	0.7657 > 0.0847	0.7657 > 0.0826

Table 2 - CPNPP SBLOCA Scenario Head Loss Comparison for TSHL						
CPNPP SBLOCA Scenarios	TSHL, ft of water			Comparison		
	120	212	250	120	212	250
SBLOCA (400 gpm)	0.4858	0.2514	0.2049	0.7657 > 0.4858	0.7657 > 0.2514	0.7657 > 0.2049
SBLOCA (1200 gpm)	0.5653	0.3247	0.2766	0.7657 > 0.5653	0.7657 > 0.3247	0.7657 > 0.2766