

	<p style="text-align: center;">INDIANA AND MICHIGAN POWER D. C. COOK NUCLEAR PLANT UPDATED FINAL SAFETY ANALYSIS REPORT</p>	<p>Revision: 22</p> <p>Table: 6.2-10</p> <p>Page: 1 of 1</p>
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RECIRCULATION SUMP COMPONENT DESIGN LOAD COMBINATIONS¹

Load Combination Case No.	Description	Load Combination
0	Full Recirculation Flow with Clean Main and Remote Strainers; Applicable to Main and Remote Strainers	$DW^2 + TAL^3 + DBE^4 + FRHL^5 + DL^6 + NL(t)^7$
1	Loads Immediately after the Pipe Rupture; Applicable to Main and Remote Strainers	$DW^{(2)} + TBL^8 + DBE^{(4)} + NL(t)^{(7)}$
2	Containment Fill; Forward Flow through Main Strainer with Reverse Flow through Waterway to Remote Strainer	$DW^{(2)} + TFL^9 + DBE^{(4)} + NL(t)^{(7)} + PFHL^{10}$
3	Plugged Main Strainer with Recirculation Flow from Remote Strainer	$DW^{(2)} + TAL^{(3)} + DBE^{(4)} + FRHL^{(5)} + DL^{(6)} + NL(t)^{(7)}$
4	Pressure Pulse at Instant of Pipe Rupture; Applicable to Main and Remote Strainers	$DW^{(2)} + TOL^{11} + PP^{12} + NL(t)^{(7)}$

¹ The load combinations are used for the design and qualification of the main and remote strainers and waterway, unless otherwise indicated in the Description column.

² DW - Dead Weight.

³ TAL - Thermal effects at accident temperature of 160°F when recirculation is initiated for a large break LOCA consistent with the time of maximum hydrodynamic load.

⁴ DBE - Design Basis Earthquake.

⁵ FRHL - Full Recirculation Hydraulic Loads at 14,400 gpm, the bounding value for ECCS flow

⁶ DL - Debris Load. For structural analysis of main and remote strainers, bounding debris mass values of 1986 lbs and 1530 lbs, respectively, were used.

⁷ NL(t) - Nozzle Loads. Loads applicable only to the remote strainer and local conditions at the time of the load case.

⁸ TBL - Thermal Break Load. Thermal effects at post-break containment environment temperature of 236°F.

⁹ TFL - Thermal Fill Loads During Pool Fill (200°F).

¹⁰ PFHL - Pool Fill Hydraulic Loads – reverse flow and waterway loads.

¹¹ TOL – Thermal effects at normal (maximum) operating temperature of 160°F for the main strainer and 120°F for the remote strainer.

¹² PP - Pressure Pulse. Short term pressure pulse of 5.0 psid acting outward from within the main strainer and waterway and 2.5 psid acting outward from within the interface between the waterway and the remote strainer.