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**Date:** Fri, Oct 28, 2005 3:54 PM  
**Subject:** AP1000 Basis for Spent Fuel Make-up Flow

The following are the responses to your questions about make-up flow to the spent fuel pool from the PCS.

The 118 gpm flow from the passive containment cooling water storage tank (PCCWST) to the spent fuel pool is the flow required to provide sufficient makeup to the spent fuel pool to keep the fuel covered as the pool water boils off. This is the maximum flow required at the initiation of makeup flow from the PCCWST during the worst case conditions in the pool, which is a full core offload. The makeup flow rate required decreases with time as the decay heat decreases.

The 35 gpm flow provided from the passive containment cooling auxiliary water storage tank (PCCAWST) to the spent fuel pool by the recirculation pumps is the flow required to provide sufficient makeup to the spent fuel pool to keep the fuel covered as the pool water boils off. The plant condition associated with this flow is a loss of power combined with a seismic event when the plant is operating at full power, shortly after startup from a refueling outage. This condition results in the maximum flow required from the PCCAWST because cooling water must be supplied to both the PCCWST and the spent fuel pool to provide both containment and spent fuel cooling for a period of four days following the initial three days of passive systems operation.

D. A. Lindgren

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