

NRC GSI-191 Resolution Open Item for CE Plants

Failure of LPSI pump to trip upon
automatic initiation of recirculation

Resolution proposed by CE plants

- Design and test strainer for three pump (HPSI, LPSI, CS) flow
- Operator action can secure LPSI flow in short period of time (10-30 minutes, Note - the majority of the failure modes can be mitigated from the control room within 10 minutes or less):
 - Manual pump trip
 - Open breaker locally
 - Closing / throttling LPSI Injection MOVs
 - De-energizing the affected equipment train

Impact on Strainer during LPSI Operation

- During this short period of time, precipitant formation is very small when compared to the amount formed over 30 days thus causing a negligible impact on head loss so chemical effects are not considered
- Ensure structural integrity of the strainer is maintained to avoid additional debris bypass

Plants with two independent strainers

- Validate that insufficient debris is transported to the unaffected strainer to impact head loss

Plants with a single strainer

- Validate that insufficient debris is transported to the strainer to impact head loss

OR

- Validate that sufficient NPSH is available to compensate for increased headloss by crediting subcooled sump water or containment overpressure