

## Reduced Temperature ITP

The reduced temperature ITP option is a variation of the current ITP flowsheet. The plant configuration would remain the same except for the addition of cooling capabilities. The temperature of the TPB slurry and filtrate would be maintained below 25° C by use of chillers until transport to the DWPF salt cell or the Saltstone Facility, respectively. Reducing the temperature of the ITP process reduces the benzene generation rate to approximately the rate for radiolytic decomposition of TPB. Temperature control would need to be added to the following existing equipment and systems: Tank 48, Tank 49, Filtrate Hold Tanks in ITP, Tank 50, The Salt Solution Hold Tank in the Saltstone facility, and the Late Wash Precipitate Tank, Late Wash Hold Tank, and Low Point Pump Pit Precipitate Tank.

Variations:

- 1) None

Merits:

- 1) Minimal facility modifications
- 2) Minimal impact on current DWPF process and waste form

