

## Small Tank TPB Precipitation

This option replaces batch precipitation in Tank 48 with continuous precipitation. This continuous precipitation unit operation could be a series of Continuous Stirred Tank Reactors (CSTRs). A stainless steel concentrate tank maintained at less than 25\_ C would follow the precipitation process. Existing filters could be used for this concentration operation. A washing facility would wash the slurry to meet DWPF nitrite requirements. The existing Late Wash Facility or a new facility/tank could be used for the washing operation. A filtrate storage facility would be required between the continuous precipitation facility and the Saltstone Facility.

### Variations:

- 1) A catalyst removal head end process could be added to this option
- 2) Continuous precipitation could be performed in vortex mixers
- 3) Continuous precipitation could be performed in a single CSTR
- 4) Low rate injection of TPB to effect a 5X separation of cesium from potassium

### Merits:

- 1) Reduced inventory of flammable material
- 2) Reduced cycle time, improved mixing and cooling reduces benzene generation
- 3) Eliminates the need for a second wash at Late Wash

