

Uranium Thorium Separation Facility (UTSF)

Uranium Thorium Separation Facility (UTSF)



Thoria Irradiated in Research Reactor, CIRUS, were Processed- Two Step process adopted

Step 1 – Only ^{233}U recovery - Extraction with : 3% TBP/dodecane solvent

Step 2 – Recovery of thorium from Raffinate: Extraction with 38% TBP

Step 1- Completed (For Low Fissile Content, Lower TBP gives better DF from Th)

^{232}U ~ 2-3 ppm – Direct handling of Product ^{233}U

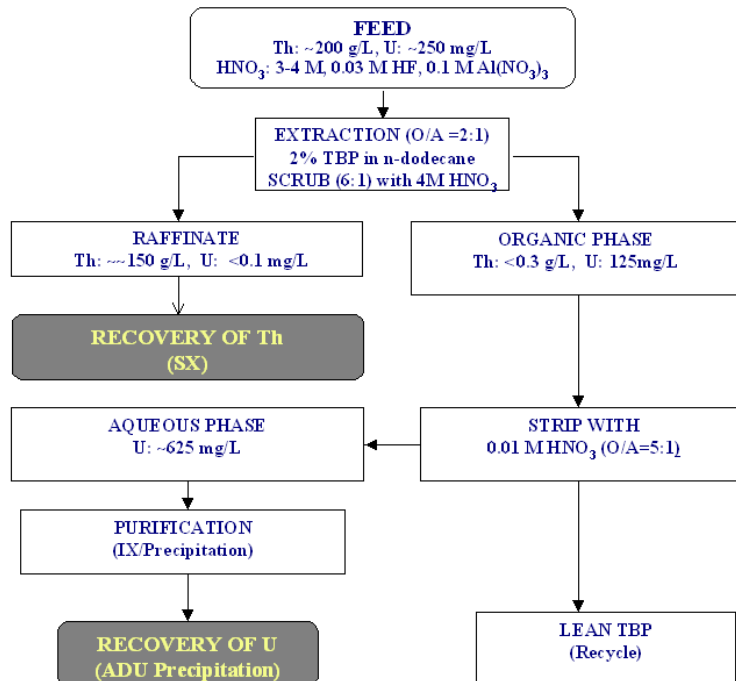
Step 2 -Currently in Progress

Thorium recovery by 38% TBP/dodecane from raffinate, ~1000L processed

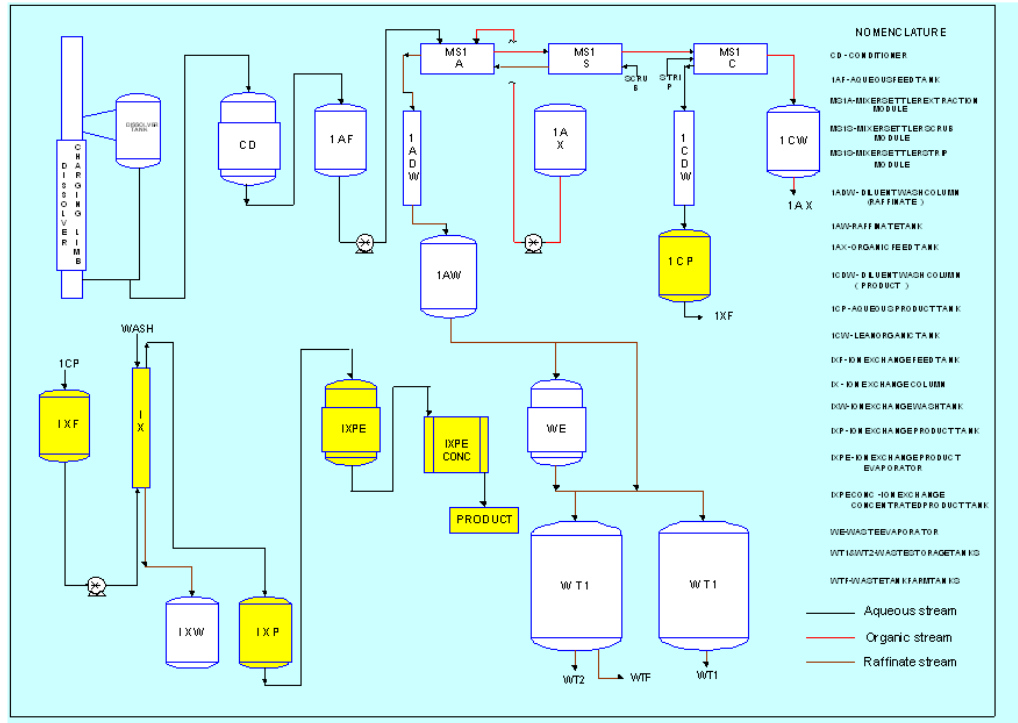
Thorium nitrate solution will be stored & Thorium Lean Raffinate is transport to WIP for further treatment



REPROCESSING OF IRRADIATED THORIA IN RESEARCH REACTORS



THOREX Flow-Sheet Used in UTSF for Recovery of ^{233}U



Flow-sheet used for the Recovery of Th from THOREX Raffinate of UTSF

