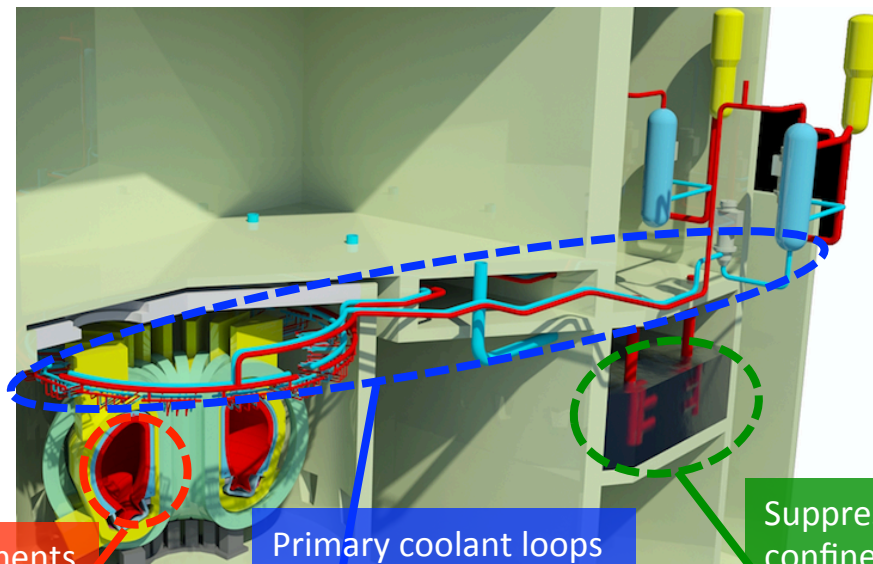


Highlight : DEMO plant concept related to tritium handling in the primary coolant system is developed



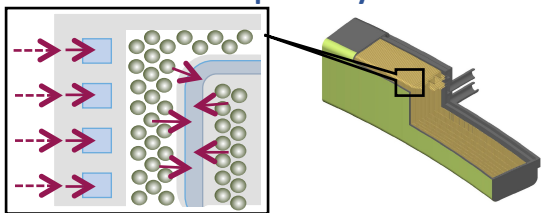
In-vessel components

Primary coolant loops

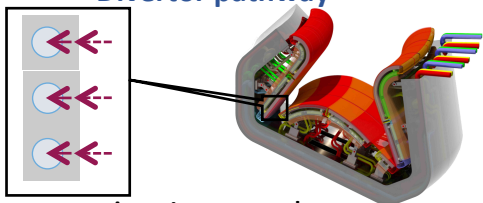
Suppression pool for T confinement concept

1. T permeation into coolant

Blanket pathways



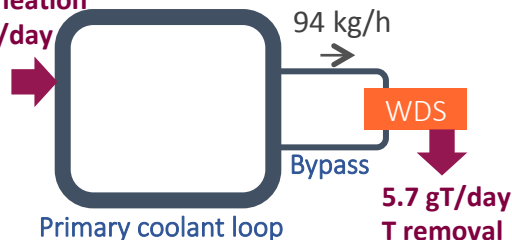
Divertor pathway



T permeation into coolant was estimated to be as low as **5.7 gT/day** = 2.5% of produced T

2. T extraction from coolant

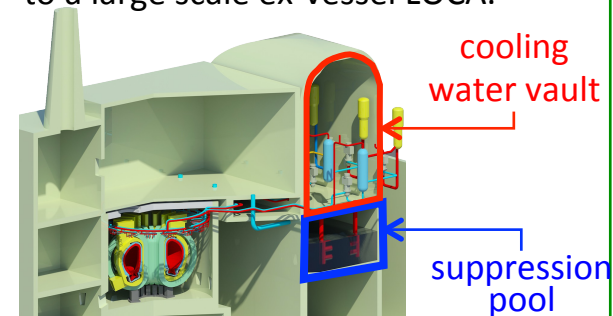
T permeation
5.7 gT/day



Management of T concentration in the coolant is viable by applying an existing water detritiation system (WDS) of CANDU.

3. Confinement of T at LOCA

Combination of "cooling water vault" and "suppression pool" is effective to mitigate T environmental release due to a large scale ex-vessel LOCA.



Early public dose: as low as 1.8mSv << 50mSv of no evacuation limit