

Dose Estimation for First-of-a-Kind CANDU Configuration

The replacement of pressure relief ducts requires partial draining of the shield tank, which provides the majority of radiation protection. This is a FOAK reactor configuration and the resulting dose rates are unknown. This SCALE model allows determination of the feasibility of work and the optimal time period during reactor refurbishment to balance schedule, dose, and cost considerations.

1. Equilibrium (~190 days) fuel composition developed in TRITON
2. 18 reactor materials activated over reactor operating history (~30 years) in TRITON
3. Dose rate estimated at various locations and reactor configurations in MAVRIC

