

Zinc injection for dose rate reduction was started during Hot Function Test (HFT) at TOMARI Unit 3 for the first time in the world. From the results of SG (Steam Generator) insert plate analysis after HFT, we confirmed the stable oxide films were formed on the inner surface of primary materials. The dose rates during a test operation were about 40 to 60% lower than those in reference plant (3-Loop PWR plant in Japan).

The material of SG tube is 690TT at TOMARI Unit 3. Generally, Dose rate of a plant with 690TT SG is the highest at 1st RFO (refueling outage). Therefore the dose rates on the 1st RFO at TOMARI Unit 3 were compared with the values of the reference plant. The dose rates of main components and piping such as SG, MCP (Main Coolant Pipe) and inner surface of RV (Reactor Vessel) were about 50% less than the reference plant. Therefore, we hope that the dose rates decrease moreover by the effect of zinc injection and reduction of Ni release rate from 690TT.

Now we introduce the results of dose rates measurement on primary main components, trends of water chemistry and effects of zinc injection for dose rates reduction.