

MELCOR Activities in Sweden

Abstract

This presentation summarizes the reactor safety analysis activities using the MELCOR code at KTH, Sweden. Currently the effort is focused on assessment of severe accident risk in Swedish nuclear power plants related to their power uprate. Some results and lessons learnt from the MELCOR analysis for Ringhals-3 pressurized water reactor (PWR) and Oskarshamn-3 boiling water reactor (BWR) is presented here. Moreover, the MELCOR code was also used to analyze the efficiency of control rod guide tube (CRGT) cooling of a BWR, and to perform SA analyses to provide the corium state (e.g., mass, compositions, temperature) for our deterministic study on in-vessel coolability and ex-vessel melt risk.