2012 MELCOR Users' Workshop

Preliminary Agenda

Bethesda, MD, September 10, 2012

September 10 – Monday- Beginning at 8:30 am

Registration begins at 8:00 am and sessions begin at 8:30 am. This workshop is an introductory and advanced user workshop, though it will focus on the COR package. Sessions will have lectures and demonstrations, but no exercises. Laptops will not be required.

- 1 COR Package Overview (1 hr) .....Humphries
  This introductory session provides an overview of the COR package geometry, components, properties, and models. A brief description of alternate reactor types (PWR, BWR, SFP-PWR, SFP-BWR, PBR, and PMR) and geometry will be provided.
- 2 COR Package Heat Transfer (45 min) ..... Phillips
  Discussion of conductive, convective, and radiative heat transfer in the COR package for various reactor types. This session includes a description of heat transfer in the lower plenum as well as the dT/dZ model.
- 3 Oxidation Models (45 min).....Young
  This session provides a detailed review of MELCOR modeling of oxidation of zirconium, steel, and B_4C in steam and oxygen and comparison with experiments (FPT1, FPT3, CORA-13, LOFT-FP2).
- 4 FP Release Models (1/2 hr).....Young
  This session provides a detailed review of MELCOR fission product release models and a comparison with experiments (VERCORS, ORNL VI).
- 5 COR Degradation (45 min).....Humphries
  This session presents a review of core degradation modeling, including fuel rod failure modeling, support/failure logic, core relocation models, and lower head failure modeling.
- 6 COR Nodalization (45 min) .....Weber
  In this session we will discuss the significance of COR nodalization with respect to heat transfer, oxidation, and other MELCOR models.
- 7 COR package Modeling with SNAP (1 1/2 hr) ..... Phillips
  This session provides a hands-on tutorial on preparing a COR package model using the SNAP interface and post-processing animations of COR data.