U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

RIC 2017

Office of Nuclear Regulatory Research

CODE APPLICATION AND MAINTENANCE PROGRAM

What is CAMP?

- An international program for sharing thermal-hydraulic assessments, research, code development, and accident analysis for reactor and plant systems
- A program coordinated by the U.S. Nuclear Regulatory Commission (NRC) with participants from 30 countries
- Participants equitably share both the resources resulting from this research and the effort required to develop those resources
- The NRC hosts biannual meetings (in May and November) to review progress and to report code development and assessment status

How do Members benefit?

Programs have provided a venue for members to develop and share knowledge about thermal-hydraulic safety analysis. The user community and the quality of the analysis codes benefit through the network effect of CAMP.

Examples include:

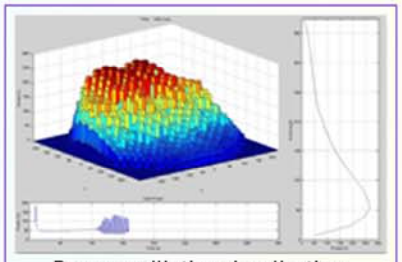
- Visualizing and understanding complex plant transients
- Applying the codes to plant safety analyses
- Applying the codes to analyses outside the NRC's assessment base

How does the NRC benefit?

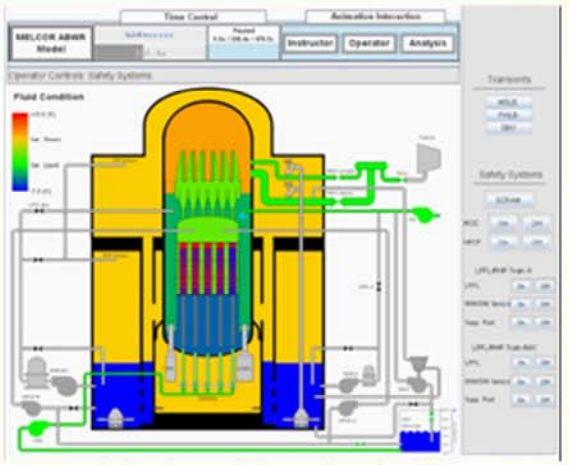
Member contributions have saved NRC resources and improved the codes. The larger user community and range of applications help to identify code problems and improved modeling approaches.

Examples include:

- Identifying code errors
- Plant modeling for new applications
- Making technical contributions
- Authoring NUREG/IAs



Power oscillation visualization



Animating analysis results using SNAP

TRAC/RELAP Advanced Computational Engine (TRACE)

Reactor Systems Thermal Hydraulic Analysis Includes Some Fuel Models from FRAPCON and FRAPTRAN

Symbolic Nuclear Analysis Package (SNAP)

Platform / Graphic User Interface
User Input Job(s) Flow
Post Processing
Storage of Engineering Templates
Storage of Work Flow & Process Steps

Triton Helios CASMO [GENPMAXS]

Cross Section Library Generation as a function of History Variables and Instantaneous Variables.

PARCS & PATHS

Core Physics
Neutron Kinetics
Core Follow and Depletion
Steady State and Transient Analysis

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