

The NRC staff does not have the software license to analyze the ABAQUS and TRUMP computer codes provided for the NRBK-41 in RAI 3-2. The staff will treat the below as an alternative to verify the adequacy of the thermal evaluation. This will aid the staff to: 1) check the consistency between the model provided, the SAR, and the staff's independent analysis; and 2) exclude any unnecessary factors when comparing the model provided to the staff's model. Because the below is aimed at the model, all requested information must come directly from the computer model. **Note: Instead of copying the information/data from reports, the applicant should log in to their model, find the exact data used in the model, and provide all requested information from the model.**

Requested information for confirmatory review **(all information should come directly from computer model, rather than from the report)**

- 1) Drawing/plot of the geometry from the computer model (plane view of 2-D model or a cut view of 3-D model to show the complete configuration **(color drawing/plot)**).
- 2) Mark the dimensions (with units) directly on the plot/drawing of the model.
- 3) Identify all components in the drawing/plot (from model) and list material properties (density, specific heat, and thermal conductivity **with units**, exactly as used in the computer model). The list should include the material (U235 or UO2?) and its properties within the inner container.
- 4) Show/mark all boundary conditions (insolation, adiabatic, radiation, decay heat generation, and convection) on the geometry drawing/plot (from computer model).
- 5) List the exact values and units used in the model **(the values/units in the model may be different from the values/units in the report)**

Item	Value	Units
Volume of inner container		
Total volume which generates decay heat in the model		
Heat generation rate (240 Btu/hr) <b>per unit volume</b>		
Convection coefficient (during fire)		
Convection coefficient (post fire)		
Radiation emissivity	0.5	N/A
Insolation at flat surface		
Insolation at vertical surface		
Stephan Boltzmann Constant		
Time unit	No need to fill	sec, min, or hr?
Temperature	No need to fill	Degree F, K, or R?
Temperature difference between your Temp unit and degree R (for radiation temp conversion)		NA

If the material properties or any parameters are functions of temperature, provide them with tables and units.