

3.5.3 Package Temperatures

The maximum temperatures in the fire shield, cask structure, and the lead all occur halfway up the cask. Table 3.4 summarizes the location, time of occurrence measured from the start of the fire, and value of the maximum temperature in each cask component. The cask seals are not explicitly modeled in the 1-d finite element model. The maximum temperatures of the primary and secondary lid seals are obtained from the 2-d finite element model analysis described in Section 3.5.1.3 and documented in Reference 11. It is shown that the seals attain a maximum temperature of 166.4°F 23.9 hours after the start of the fire. The HAC temperature criterion (maximum allowable) for the seal material is conservatively set at 400°F with a duration of 1 hour.