PROBLEM 3-7N QUESTION

Decay Heat From A PWR Fuel Rod

A decay heat cooling system is capable of removing 1 kW from the surface of a typical PWR (Sequoyah, Table 1-2; and PWR(W), Table 2-3) fuel rod. Assume the rod has operated for an essentially infinite period before shutdown.

1. At what time will the decay energy generation rate be matched by the cooling capability?

2. What is the maximum amount of decay heat energy that will be stored in the rod following shutdown?

Rev August 28, 2000