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?

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