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*United States  
Nuclear Regulatory Commission*

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**Pebble-Bed Modular Reactor  
(PBMR)**

FF/S

NR  
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## Overview

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- Based upon a concept demonstrated in Germany
- South Africa (Eskom) is currently pursuing PBMR
- In the U.S. Exelon has indicated:
  - 12½% partner
  - possible request to license in the U.S.
  - desires preapplication interactions with NRC

## Main Characteristics

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- 110 Mwe
- Steel Reactor Vessel
- Passive Decay Heat Removal
- No Conventional Containment Building
- Coated Fuel Particles
- On-line Refueling
- Direct Cycle - He Turbine
- 536°c —900°c

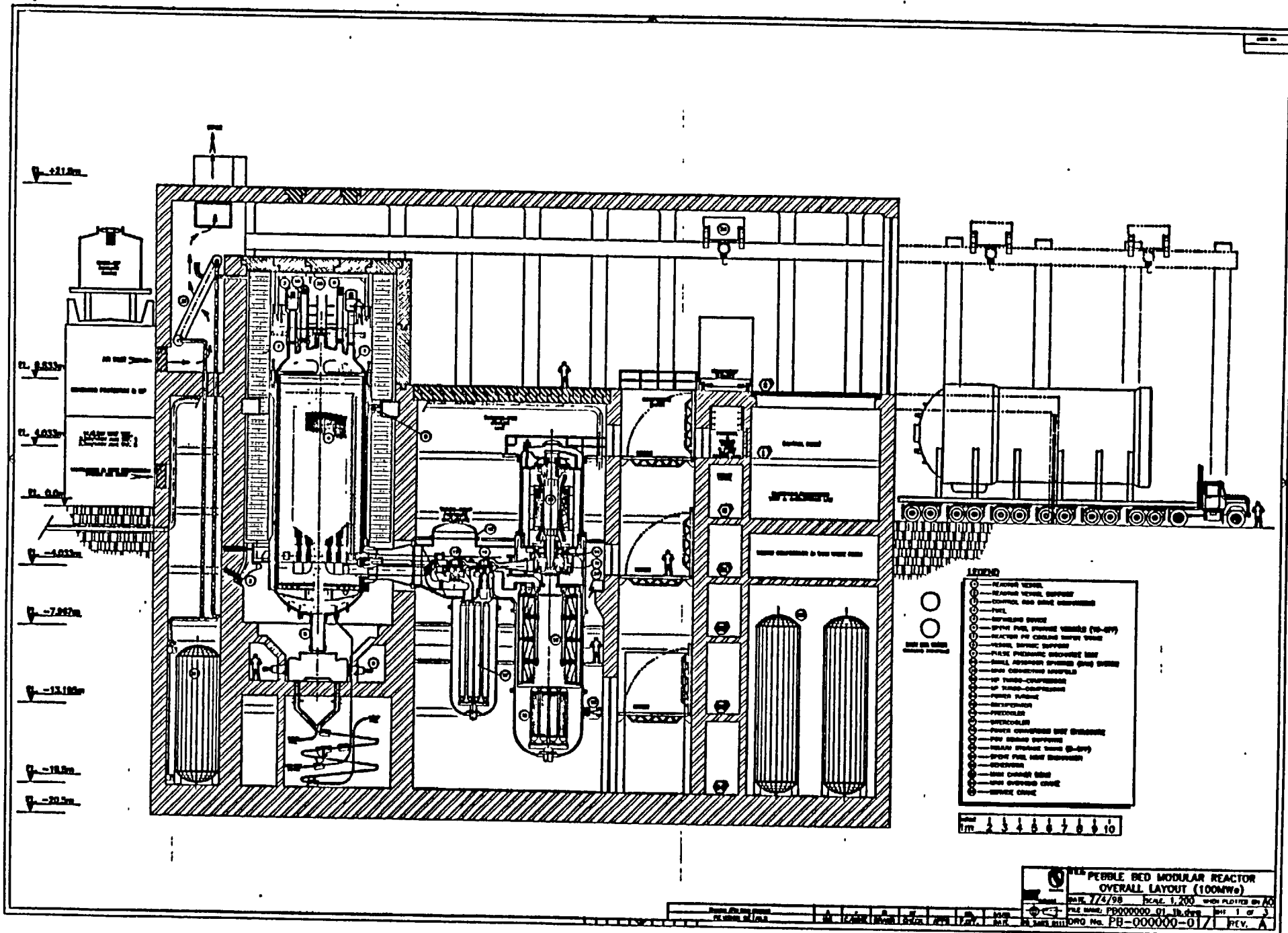


Figure 6: Overall Layout

# FUEL SPHERES

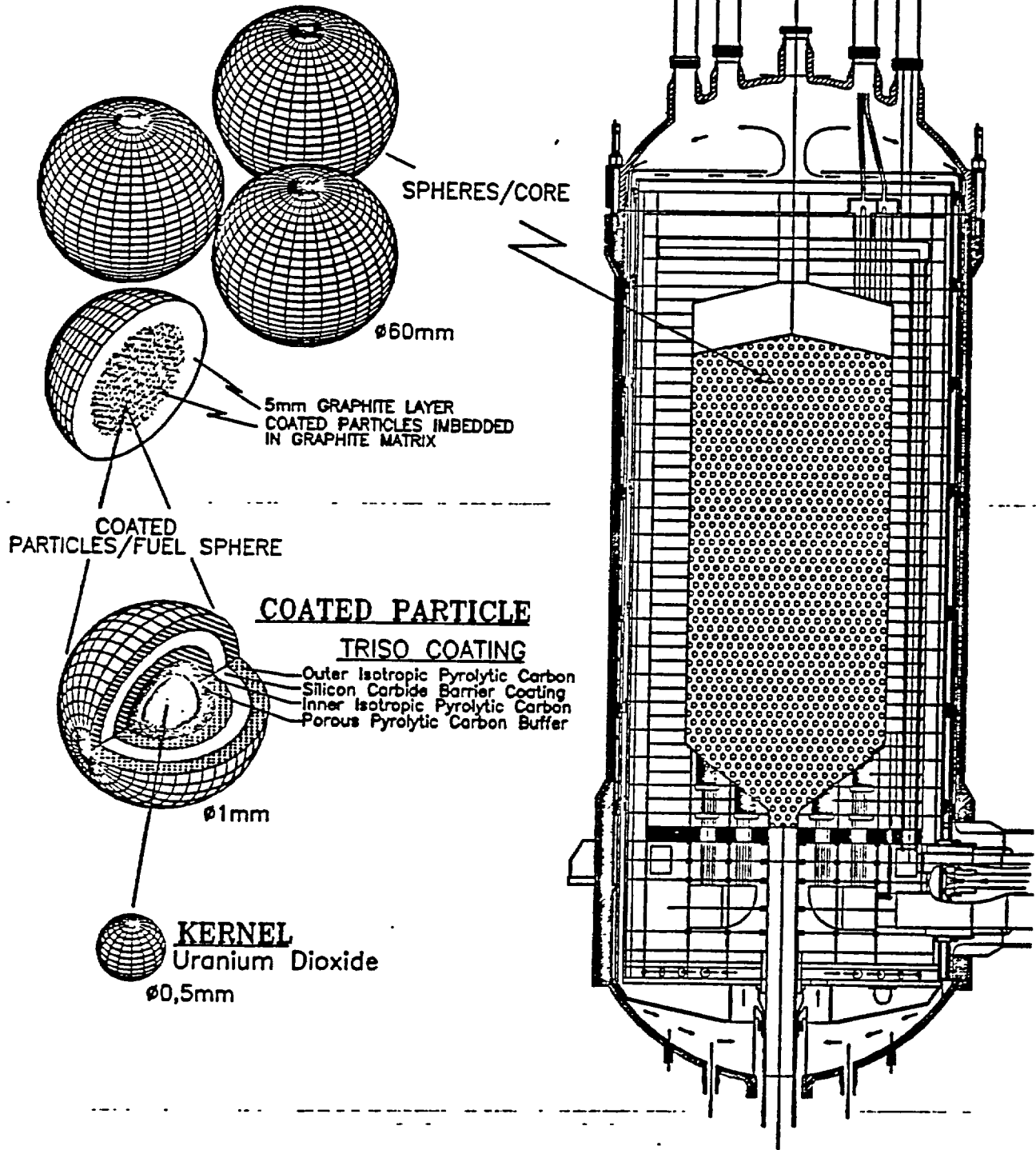


Figure 3: Fuel Spheres

# Post Failure Cooling

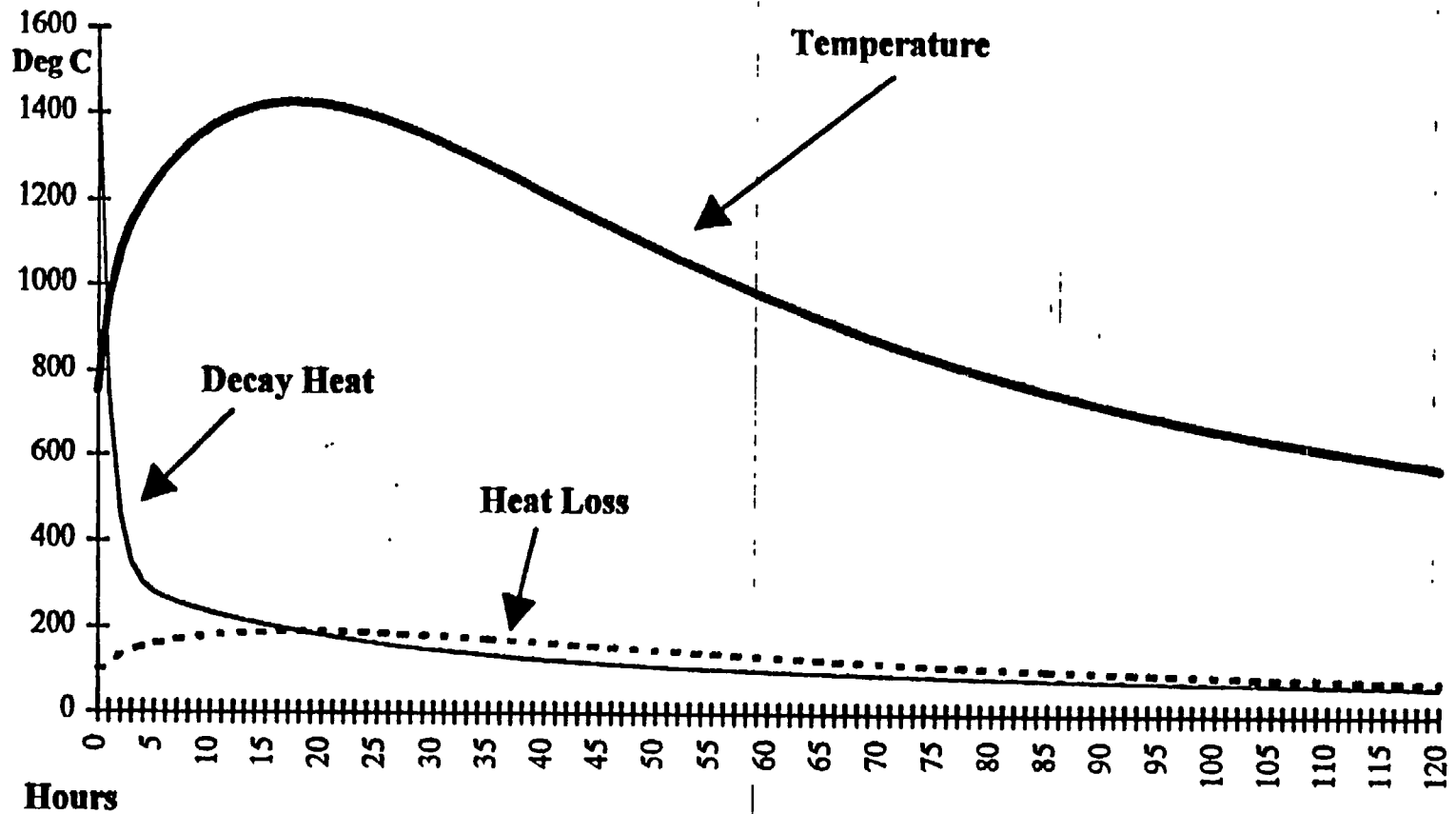


Figure 4