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(54) **FUEL BASKET SPACER, APPARATUS AND METHOD USING THE SAME FOR STORING HIGH LEVEL RADIOACTIVE WASTE**

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250/506.1; 250/507.1

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See application file for complete search history.

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(57) **ABSTRACT**

A fuel basket spacer, and system and method for storing high level radioactive waste. In one aspect, the invention is an apparatus for transporting and/or storing radioactive materials comprising: a body having a cavity for receiving radioactive materials; a basket positioned in the cavity comprising a plurality of cells; and a structure having an outer surface and an inner surface forming a central passageway; the structure positioned in the cavity so that the basket extends through the central passageway of the structure; and wherein the internal perimeter of the structure corresponds to the external perimeter of the basket in size and shape and the external perimeter of the structure corresponds to the perimeter of the cavity in size and shape. Circumferential clearances are provided between structure and the basket and the structure and the body that are eliminated when exposed to a residual heat load of the radioactive waste.

21 Claims, 16 Drawing Sheets

