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(12) **United States Patent**
Root

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(54) **SEISMIC SAFE NUCLEAR POWER PLANT**

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G21C 9/00 (2006.01)

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See application file for complete search history.

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(57) **ABSTRACT**

A system and method isolate a nuclear power plant from effects of seismic action. An artificial lake is formed as a depressed area in the ground surrounded by walls or banks to constrain a volume of water within the depressed area. The lake has a concrete reinforced bed. The lake is surrounded by a land-based support area. The lake is filled from a source of water in liquid communication with the lake. The source is controlled to release water into the lake to maintain the lake at a selected level. At least one vessel floats on the surface of the water. The vessel is connected to the walls or banks of the lake with a plurality of shock absorbers to dampen movement of the vessel. A nuclear power plant erected on the vessel includes at least one cooling tower that receives cooling water from the lake.

9 Claims, 8 Drawing Sheets