

**AMENDMENT TO THE COMMITTEE PRINT**  
**OFFERED BY MR. MARKEY OF MASSACHUSETTS**

In title VI, subtitle D, add at the end the following  
new section:

1 **SEC. 669. SECURITY OF SPENT NUCLEAR FUEL.**

2 (a) STUDIES.—Not later than 180 days after the date  
3 of enactment of this Act—

4 (1) the Nuclear Regulatory Commission shall  
5 enter into an arrangement with the National Acad-  
6 emy of Sciences for the completion, before such 180  
7 days have expired, of an assessment of the effective-  
8 ness and adequacy of current surveillance and secu-  
9 rity measures used to protect stored spent nuclear  
10 fuel;

11 (2) the Nuclear Regulatory Commission shall  
12 undertake additional analyses to more fully under-  
13 stand the vulnerabilities and consequences of loss-of-  
14 pool-coolant events that could lead to a zirconium  
15 fire; and

16 (3) the Nuclear Regulatory Commission shall  
17 complete its plant-specific vulnerability analyses re-  
18 garding the security of spent fuel pool storage.



1 (b) REGULATORY ACTIONS.—Not later than 180  
2 days after the completion of the reports and analyses  
3 under subsection (a), and after opportunity for public no-  
4 tice and comment, the Nuclear Regulatory Commission  
5 shall promulgate regulations to—

6 (1) upgrade the security requirements for pro-  
7 tecting spent fuel rods not contained in fuel assem-  
8 blies from theft by knowledgeable insiders;

9 (2) upgrade the security requirements for spent  
10 nuclear fuel stored in spent fuel pools to address any  
11 significant vulnerabilities identified by the analysis  
12 under subsection (a)(2);

13 (3) reduce the consequences of a loss-of-pool-  
14 coolant event in spent fuel pools that could result in  
15 propagating zirconium cladding fires, including the  
16 reconfiguration of fuel in the spent fuel pools to im-  
17 prove radiative heat transfer in the event of a loss  
18 of pool coolant event, and, where necessary, the in-  
19 stallation of water-spray systems that would be able  
20 to cool the fuel even if the pool or structure storing  
21 it were severely damaged;

22 (4) upgrade the specifications for dry casks  
23 used to store spent fuel, based on vulnerability anal-  
24 yses indicating ways in which the casks' resistance  
25 to terrorist attacks could be improved;



1           (5) direct the earlier movement of spent fuel  
2           from pool storage to cask storage, if the analyses  
3           under subsection (a)(3) indicate the need for earlier  
4           than planned movements; and

5           (6) improve the sharing of pertinent informa-  
6           tion on vulnerability and consequence analyses on  
7           spent fuel storage with the public, nuclear power  
8           plant operators, and dry cask storage system ven-  
9           dors on a timely basis.

