

H.R. 6816, The Markey-Clinton Nuclear Facility and Materials Security Act of 2008

Section by Section

Section 1: The short title of the bill is the Nuclear Facility and Material Security Act of 2008

Section 2: This section requires that all new nuclear power plants approved for construction after the date of enactment be designed to withstand the impact of a large commercial aircraft. Under the bill, the safety features at these facilities must function long enough for the reactor to safely shut down after such an impact, and ensure that there would not be a release of radiation at levels that trigger evacuation. This section is similar to a proposal currently pending before the Nuclear Regulatory Commission (NRC) submitted by NRC Commissioner Gregory Jaczko.

Section 3: This section requires that i) spent nuclear fuel assemblies be stored using the safest possible configuration, ii) spent nuclear fuel be transferred into dry cask storage as soon as possible, and that iii) mitigation features such as water-spray systems be installed at spent fuel pools. This section also requires that spent fuel storage facilities be subject to force-on-force security exercises and Design Basis Threat requirements. This section includes recommendations from the 2006 report of the National Academy of Sciences entitled “Safety and Security of Commercial Spent Nuclear Fuel Storage.”¹

Section 4: This section requires the NRC to consider the likely consequences of a potential terrorist attack in any review it is required to undertake under the National Environmental Policy Act of 1969. This section requires nationwide implementation of the court decision in *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 449 F.3d 1016 (9th Cir. 2006). The NRC has chosen thus far to abide by this court decision only for nuclear facilities located within the 9th Circuit.

Section 5: This section repeals section 127(f) of the Bioterrorism Act and would in effect mandate that potassium iodide (KI) be distributed 20 miles out from a power reactor as opposed to 10 miles. Furthermore, this section states that Federal authority to distribute KI, shall be exercised exclusively by the Secretary of Health and Human Services.

This section requires that the NAS conduct a study examining emergency response plans for radiological releases no later than June 30, 2011 and then at least once every 5 years. These studies are to address evacuation, sheltering, food interdiction, and medical prophylaxes for radioiodine, and are required to specifically; (i) review relevant evacuations and food interdictions of the preceding 5 years for lessons learned; (ii) identify the population likely to be exposed and the consequences of the exposure; (iii) recommend best practices for emergency response to radiological releases; (iv) evaluate new research on medical prophylaxes for radioiodine and other radiological

¹ See http://books.nap.edu/openbook.php?record_id=11263&page=1

byproducts and recommend whether they should be considered for National, State or local Stockpiles.

This section requires the Secretary to consider these studies when determining procurements of other radioiodine prophylaxes for the Strategic National Stockpile and their distribution to State and local governments, and when updating the Federal distribution guidelines for KI. Finally, this section requires that the Secretary, in consultation with State and local agencies, establish guidelines for the stockpiling and distribution of KI tablets.

Section 6: This section requires a unit be established within the NRC's Office of the Inspector General with adequate technical staff, including engineers with nuclear power plant experience, to audit the oversight of safety and security of civilian nuclear facilities, and that the necessary funding be appropriated for this purpose.

Section 7: This section draws from some of the recommendations of the recent National Academies of Sciences report entitled "Radiation Source Use and Replacement"² and requires the Task Force on Radiation Source Protection and Security created by the 2005 Markey-Clinton Dirty Bomb Protection Act (and enacted into law as part of the 2005 Energy Bill) to evaluate the NRC's treatment of radiation sources for purposes of security, and recommend changes which must be implemented by the NRC based upon the risks associated with their deliberate dispersal as well as their potential to cause widespread contamination or economic damages. Furthermore it requires particularly high-risk radiation sources to be designated as such. In addition this section requires:

- a) shipments of the highest-risk radiation sources be equipped with covert technology that would enable location tracking and recovery in the event they are stolen or diverted
- b) transporters of the highest-risk radiation sources be licensed by the NRC
- c) that the National Source Tracking System be expanded to require real-time tracking and include Category 3 radiation sources, as well as sources that are 1/10 as radioactive as Category 3 sources. This is similar to a proposal currently pending at the NRC³.
- d) licensing for new high-risk radiation sources such as cesium chloride be discontinued as soon as is practicable, but within 10 years of enactment, unless no technological alternative exists; new license fee structures for new licenses of high-risk radiation sources be created to ensure that the costs of disposition are covered; incentives for decommissioning and replacing high-risk radiation sources be provided; the export of high-risk radiation sources be prohibited; and enhanced security measures for existing high-risk radiation sources be implemented.
- e) the Task Force on Radiation Source Protection and Security created by the 2005 Markey-Clinton Dirty Bomb Protection Act (and enacted into law as part

² See http://books.nap.edu/openbook.php?record_id=11976&page=3

³ See <http://www.nrc.gov/reading-rm/doc-collections/news/2008/08-073.html>

of the 2005 Energy Bill) is required within 4 years to review and recommend changes to these regulations to account for (1) the emergence of new technologies that can replace high risk radiation sources and (2) new security threats. The NRC is required to review and upgrade the regulations at least once every 5 years.

- f) This section provides that the necessary dollars be appropriated for this purpose from 2009 to 2013.
- g) The Department of Energy Radiological Threat Reduction Program is authorized to accept, store and dispose high-risk radiation sources, and is provided with \$50 million over ten years in order to do so.