108TH CONGRESS
1ST SESSION

S. 193

To direct the Secretary of Energy to carry out a program to evaluate and demonstrate the operation of radiation detection systems for use at seaports in the United States.

IN THE SENATE OF THE UNITED STATES

JANUARY 17, 2003

Ms. LANDRIEU introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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A BILL

To direct the Secretary of Energy to carry out a program to evaluate and demonstrate the operation of radiation detection systems for use at seaports in the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Radiation Detection for Dirty Bomb Material in Containers and Bulk Cargo Act of 2003''.

SEC. 2. FINDINGS.

Congress finds that—

(1) the possibility of a terrorist group using a dirty bomb as a weapon against the United States is 1 of the greatest threats to national security;

(2) it is not difficult to transport dirty bomb material and conventional explosives into the United States in a sea freight container or bulk material cargo;

(3) because of the threat of dirty bombs to national security and the limitations of the current radiation detection system with respect to detecting dirty bombs, the Secretary of Energy should carry out a program to demonstrate the operation of a large-scale radiation detection system that uses advanced scanning technologies to enable more sea freight containers and bulk material cargo to be inspected at seaports and places of entry by land;

(4) in selecting a system for demonstration, the Secretary should give priority to existing radiation detection technologies that—

(A) have proven to be effective nationally and internationally;

(B) may be quickly implemented; and

(C) are capable of detecting radioactive sources in sea freight containers and bulk material cargo to a reasonable depth;

(5) the selected system should—

(A) screen sea freight containers and bulk material cargo without, to the maximum extent practicable, inhibiting the flow of commerce at seaports and places of entry by land;

(B) operate at a level capable of detecting a heavily shielded, concealed, radioactive source; and

(C) have the capability of distinguishing between—

(i) a nonthreatening radioactive source; and

(ii) a radioactive source that is being used, or capable of being used, as a dirty bomb;

(6) any information that is obtained during the scanning of sea freight containers and bulk material cargo should be maintained in a central data collection system to be archived in real-time and made available to the appropriate Federal, State, and local agencies for use in tracking and analyzing trends and alarm conditions and operating radiation detection systems;

(7) pilot projects for monitoring sea freight containers and bulk material cargo that are carried out

under this Act should incorporate information obtained from all other national and international projects pertaining to inspection of sea containers and cargo shipped across places of entry by land; and

(8) in developing the final procedures and protocols for monitoring sea freight containers and bulk material cargo for radiation, the Secretary should ensure that the procedures and protocols—

(A) address situations that seaport and land authorities may confront during the scanning of incoming cargoes; and

(B) provide the seaport and land authorities with the necessary guidance to adequately respond to the situations.

SEC. 3. DEFINITIONS.

In this Act:

(1) PROGRAM.—The term ''program'' means the radiation detection system demonstration program carried out under section 4.

(2) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(3) SYSTEM.—The term ''system'' means a radiation detection system.

SEC. 4. RADIATION DETECTION SYSTEM DEMONSTRATION PROGRAM.

(a) IN GENERAL.—The Secretary shall carry out a program to—

(1) maintain and expand ongoing seaport and land radiation detection system projects;

(2) use existing laboratory relationships and expertise in large-scale radiation monitoring systems;

(3) evaluate radiation detection systems for use at seaports and places of entry by land in the United States; and

(4) select at least 1 system for demonstration at a seaport and 1 system for demonstration at a place of entry by land.

(b) EVALUATION OF SYSTEMS.—

(1) IN GENERAL.—The Secretary shall conduct an evaluation of existing state-of-the-art systems that provide the highest degree of detection capability for radioactive sources that may be hidden in sea freight containers or cargo crossing land borders.

(2) TECHNOLOGY.—The Secretary shall emphasize the rapid development of existing technology and systems on completion of the evaluation.

(c) SELECTION OF SYSTEM FOR DEMONSTRATION.—

(1) IN GENERAL.—A system selected by the Secretary—

(A) may include hardware components such as detectors, instrumentation, and communication hardware; and

(B) shall include—

(i) integration of the hardware;

(ii) reporting procedures and protocols; and

(iii) coordination for decisionmaking, databases, and related software developments.

(2) PROXIMITY TO MATERIAL.—In selecting a system for demonstration, the Secretary shall—

(A) take into consideration that it is critical that the system be located as close as possible to the material to be scanned; and

(B) select a system that allows for close proximity.

(3) TECHNOLOGY FIELD OPERATIONAL TIME.—The Secretary shall select for demonstration a system that uses a technology that has proven field operational time.

(d) DEMONSTRATION.—

(1) USE OF KNOWLEDGE GAINED FROM PREVIOUS STUDY.—In the demonstration phase of the program, the Secretary shall—

(A) incorporate knowledge gained from the study conducted at Port of New Orleans before the date of enactment of this Act; and

(B) expand on that knowledge to account for material shipped in containers.

(2) DURATION.—The demonstration phase of the program shall be completed not later than 2 years after the date on which funding is made available for the program.

(3) FUTURE NEEDS.—As part of the demonstration phase, the Secretary shall—

(A) identify needs for future research and improvement for continued development of emerging systems; and

(B) make Federal, State, and local agencies with responsibilities relating to seaport and land authorities aware of those needs.

(e) REQUIREMENTS.—

(1) DATA.—Regardless of the operational condition of a system, all data detected by the system shall be collected, displayed, and archived.

(2) DURABILITY.—A system shall be capable of withstanding critical acceleration caused by severe impacts and rough handling, that are attendant to the monitoring of containers and bulk material being unloaded from a ship.

(3) RADIATION DETECTED.—A system shall be capable of detecting gammas and neutrons emitted by isotopes that could be used to construct a dirty bomb, including cobalt-60, cesium-137, iridium-192, iodine-131, and americium-241/beryllium.

(4) SYSTEM OPERATION.—The operation of a system shall be fully automatic.

(5) DETECTION TIME.—A system shall be capable of detecting radiation in a container that will not significantly inhibit the flow of commerce.

(6) BACKGROUND.—A system shall be sensitive to fluctuations in background levels.

SEC. 5. PROCEDURES AND PROTOCOLS FOR DETECTION AND REPORTING.

In connection with the program, the Secretary shall develop standard procedures and protocols for detection and reporting of data collected from radiation collection systems to allow synchronization of technical approaches to detection and harmonize coordination efforts among agencies.

SEC. 6. TECHNICAL ASSISTANCE.

(a) IN GENERAL.—The Secretary shall develop a national technical assistance program to share and propagate the experiences gained in conducting the program.

(b) STAKEHOLDERS.—In carrying out subsection (a), the Secretary shall solicit the views of stakeholders (including members of the National Maritime Security Advisory Committee, local port authorities, the Conference of Radiation Control Program Directors, Inc., and the Health Physics Society) to encourage the greatest level of participation in the development of a national program of radiation detection systems.

SEC. 7. INTERNSHIPS.

In connection with the program, the Secretary shall provide student internships to universities in States with significant seaports that focus on academic programs pertaining to radiation detection and radiation health physics.

SEC. 8. REPORT.

At the conclusion of the program, the Secretary shall submit to Congress a report that describes the results of the program.

SEC. 9. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated for each of fiscal years 2004 through 2007 such sums as are necessary to carry out this Act.

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