

107TH CONGRESS  
2D SESSION

# S. 2453

To provide for the disposition of weapons-usable plutonium at the Savannah River Site, South Carolina.

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## IN THE SENATE OF THE UNITED STATES

MAY 2, 2002

Mr. THURMOND (for himself and Mr. ALLARD) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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## A BILL

To provide for the disposition of weapons-usable plutonium at the Savannah River Site, South Carolina.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. FINDINGS.**

4       Congress makes the following findings:

5               (1) In September 2000, the United States and  
6       the Russian Federation signed a Plutonium Manage-  
7       ment and Disposition Agreement by which each  
8       agreed to dispose of 34 metric tons of weapons-  
9       grade plutonium.

1           (2) The agreement with Russia is a significant  
2           step toward safeguarding nuclear materials and pre-  
3           venting their diversion to rogue states and terrorists.

4           (3) The Department of Energy plans to dispose  
5           of 34 metric tons of weapons-grade plutonium of the  
6           United States before the end of 2019 by converting  
7           the plutonium to a mixed-oxide fuel to be used in  
8           commercial nuclear power reactors.

9           (4) The Department has formulated a plan for  
10          implementing the agreement with Russia through  
11          construction of a mixed-oxide fuel fabrication facility  
12          and a pit disassembly and conversion facility at the  
13          Savannah River Site.

14          (5) The United States and the State of South  
15          Carolina have a compelling interest in the safe,  
16          proper, and efficient operation of the plutonium dis-  
17          position facilities at the Savannah River Site. The  
18          MOX facility will also be economically beneficial to  
19          the State of South Carolina, and that economic ben-  
20          efit will not be fully realized unless the MOX facility  
21          is built.

22          (6) The State of South Carolina desires to en-  
23          sure that all plutonium transferred to the State of  
24          South Carolina is stored safely; that the full benefits  
25          of the MOX facility are realized as soon as possible;

1 and, specifically, that all defense plutonium or de-  
2 fense plutonium materials transferred to the Savan-  
3 nah River Site either be processed or be removed ex-  
4 peditiously.

5 **SEC. 2. DEFINITIONS.**

6 (a) MOX PRODUCTION OBJECTIVE DEFINED.—The  
7 term “MOX production objective” means production at  
8 the MOX facility of mixed-oxide fuel from defense pluto-  
9 nium and defense plutonium materials at an average rate  
10 equivalent to not less than one metric ton of mixed-oxide  
11 fuel per year. The average rate shall be determined by  
12 measuring production at the MOX facility from the date  
13 the facility is declared operational to the Nuclear Regu-  
14 latory Commission through the date of assessment.

15 (b) MOX FACILITY DEFINED.—The term “MOX fa-  
16 cility” means the mixed-oxide fuel fabrication facility at  
17 the Savannah River Site, Aiken, South Carolina.

18 (c) DEFENSE PLUTONIUM AND DEFENSE PLUTO-  
19 NIUM MATERIALS DEFINED.—The term “defense pluto-  
20 nium or defense plutonium materials” means weapons-us-  
21 able plutonium.

22 **SEC. 3. DISPOSITION OF WEAPONS-USABLE PLUTONIUM AT**  
23 **SAVANNAH RIVER SITE, SOUTH CAROLINA.**

24 (a) PLAN FOR CONSTRUCTION AND OPERATION OF  
25 MOX FACILITY.—

1           (1) Not later than February 1, 2003, the Sec-  
2       retary of Energy shall submit to Congress a plan for  
3       the construction and operation of the MOX facility.

4           (2) The plan under paragraph (1) shall  
5       include—

6           (A) a schedule for construction and oper-  
7       ations so as to achieve, as of January 1, 2009,  
8       and thereafter, the MOX production objective,  
9       and to produce 1 metric ton of mixed oxide fuel  
10      by December 31, 2009, and

11          (B) a schedule of operations of the MOX  
12      facility designed so that 34 metric tons of de-  
13      fense plutonium and defense plutonium mate-  
14      rials at the Savannah River Site will be proc-  
15      essed into mixed oxide fuel by January 1, 2019.

16          (3)(A) Not later than February 15 each year,  
17      beginning in 2004 and continuing for as long as the  
18      MOX facility is in use, the Secretary shall submit to  
19      Congress a report on the implementation of the plan  
20      required by paragraph (1).

21          (B) Each report under subparagraph (A) for  
22      years before 2010 shall include—

23           (i) an assessment of compliance with the  
24      schedules included with the plan under para-  
25      graph (2); and

1 (ii) a certification by the Secretary whether  
2 or not the MOX production objective can be  
3 met by January 2009.

4 (C) Each report under subparagraph (A) for  
5 years after 2009 shall—

6 (i) address whether the MOX production  
7 objective has been met; and

8 (ii) assess progress toward meeting the ob-  
9 ligations of the United States under the Pluto-  
10 nium Management and Disposition Agreement.

11 (D) For years after 2017, each such report  
12 shall also include an assessment of compliance with  
13 the MOX production objective and, if not in compli-  
14 ance, the plan of the Secretary for achieving one of  
15 the following:

16 (i) Compliance with such objective; and

17 (ii) Removal of all remaining defense plu-  
18 tonium and defense plutonium materials from  
19 the State of South Carolina.

20 (b) CORRECTIVE ACTIONS.—

21 (1) If a report under subsection (a)(3) indicates  
22 that construction or operation of the MOX facility is  
23 behind the applicable schedule under subsection  
24 (a)(2) by 12 months or more, the Secretary shall  
25 submit to Congress, not later than August 15 of the

1 year in which such report is submitted, a plan for  
2 corrective actions to be implemented by the Sec-  
3 retary to ensure that the MOX facility project is ca-  
4 pable of meeting the MOX production objective by  
5 January 1, 2009.

6 (2) If a plan is submitted under paragraph (1)  
7 in any year after 2008, the plan shall include correc-  
8 tive actions to be implemented by the Secretary to  
9 ensure that the MOX production objective is met.

10 (3) Any plan for corrective actions under para-  
11 graph (1) or (2) shall include establish milestones  
12 under such plan for achieving compliance with the  
13 MOX production objective.

14 (4) If before January 1, 2009, the Secretary  
15 determines that there is a substantial and material  
16 risk that the MOX production objective will not be  
17 achieved by 2009 because of a failure to achieve  
18 milestones set forth in the most recent corrective ac-  
19 tion plan under this subsection, the Secretary shall  
20 suspend further transfers of defense plutonium and  
21 defense plutonium materials to be processed by the  
22 MOX facility until such risk is addressed and the  
23 Secretary certifies that the MOX production objec-  
24 tive can be met by 2009.

1           (5) If after January 1, 2009, the Secretary de-  
2           termines that the MOX production objective has not  
3           been achieved because of a failure to achieve mile-  
4           stones set forth in the most recent corrective action  
5           plan under this subsection, the Secretary shall sus-  
6           pend further transfers of defense plutonium and de-  
7           fense plutonium materials to be processed by the  
8           MOX facility until the Secretary certifies that the  
9           MOX production objective can be met.

10          (6)(A) Upon making a determination under  
11          paragraph (4) or (5), the Secretary shall submit to  
12          Congress a report on the options for removing from  
13          the State of South Carolina an amount of defense  
14          plutonium or defense plutonium materials equal to  
15          the amount of defense plutonium or defense pluto-  
16          nium materials transferred to the State of South  
17          Carolina after April 15, 2002.

18          (B) Each report under subparagraph (A) shall  
19          include an analysis of each option set forth in the  
20          report, including the cost and schedule for imple-  
21          mentation of such option, and any requirements  
22          under the National Environmental Policy Act of  
23          1969 (42 U.S.C. 4321 et seq.) relating to consider-  
24          ation or selection of such option.

1 (C) Upon submittal of a report under para-  
2 graph (A), the Secretary shall commence any anal-  
3 ysis that may be required under the National Envi-  
4 ronmental Policy Act of 1969 in order to select  
5 among the options set forth in the report.

6 (c) CONTINGENT REQUIREMENT FOR REMOVAL OF  
7 PLUTONIUM AND MATERIALS FROM SAVANNAH RIVER  
8 SITE.—If the MOX production objective is not achieved  
9 as of January 1, 2009, the Secretary shall, consistent with  
10 the National Environmental Policy Act of 1969 and other  
11 applicable laws, remove from the State of South Carolina,  
12 for storage or disposal elsewhere—

13 (1) not later than January 1, 2011, not less  
14 than 1 metric ton of defense plutonium or defense  
15 plutonium materials; and

16 (2) not later than January 1, 2017, an amount  
17 of defense plutonium or defense plutonium materials  
18 equal to the amount of defense plutonium or defense  
19 plutonium materials transferred to the Savannah  
20 River Site between April 15, 2002 and January 1,  
21 2017, but not processed by the MOX facility.

22 (d) ECONOMIC AND IMPACT ASSISTANCE.—

23 (1) If the MOX production objective is not  
24 achieved as of January 1, 2011, the Secretary shall  
25 pay to the State of South Carolina each year begin-



1       ning on or after that date through 2016 for eco-  
2       nomic and impact assistance an amount equal to  
3       \$1,000,000 per day until the later of—

4               (A) the passage of 100 days in such year;

5               (B) the MOX production objective is  
6       achieved in such year; or

7               (C) the Secretary has removed from the  
8       State of South Carolina in such year at least 1  
9       metric ton of defense plutonium or defense plu-  
10      tonium materials.

11       (2)(A) If the MOX production objective is not  
12      achieved as of January 1, 2017, the Secretary shall  
13      pay to the State of South Carolina each year begin-  
14      ning on or after that date through 2024 for eco-  
15      nomic and impact assistance an amount equal to  
16      \$1,000,000 per day until the later of—

17              (i) the passage of 100 days in such year;

18              (ii) the MOX production objective is  
19      achieved in such year; or

20              (iii) the Secretary has removed from the  
21      State of South Carolina an amount of defense  
22      plutonium or defense plutonium materials equal  
23      to the amount of defense plutonium or defense  
24      plutonium materials transferred to the Savan-  
25      nah River Site between April 15, 2002, and

1           January 1, 2017, but not processed by the  
2           MOX facility.

3           (B) Nothing in this paragraph may be con-  
4           strued to terminate, supersede, or otherwise affect  
5           any other requirements of this section.

6           (3) The Secretary shall make payments, if any,  
7           under this subsection, from amounts authorized to  
8           be appropriated to the Department of Energy.

9           (4) If the State of South Carolina obtains an  
10          injunction that prohibits the Department from tak-  
11          ing any action necessary for the Department to meet  
12          any deadline specified by this subsection, that dead-  
13          line shall be extended for a period of time equal to  
14          the period of time during which the injunction is in  
15          effect.

16          (e) FAILURE TO COMPLETE PLANNED DISPOSITION  
17          PROGRAM.—If on July 1 each year beginning in 2020 and  
18          continuing for as long as the MOX facility is in use, less  
19          than 34 metric tons of defense plutonium or defense pluto-  
20          nium materials have been processed by the MOX facility,  
21          the Secretary shall submit to Congress a plan for—

22                (1) completing the processing of 34 metric tons  
23                of defense plutonium and defense plutonium mate-  
24                rial by the MOX facility; or

1           (2) removing from the State of South Carolina  
2       an amount of defense plutonium or defense pluto-  
3       nium materials equal to the amount of defense plu-  
4       tonium or defense plutonium materials transferred  
5       to the Savannah River Site after April 15, 2002, but  
6       not processed by the MOX facility.

7       (f) REMOVAL OF MIXED OXIDE FUEL UPON COM-  
8       PLETION OF OPERATIONS OF MOX FACILITY.—If one  
9       year after the date on which operation of the MOX facility  
10      permanently ceases any mixed oxide fuel remains at the  
11      Savannah River Site, the Secretary shall submit to  
12      Congress—

13           (1) a report on when such fuel will be trans-  
14      ferred for use in commercial nuclear reactors; or

15           (2) a plan for removing such fuel from the  
16      State of South Carolina.

17   **SEC. 4. STUDY OF FACILITIES FOR STORAGE OF PLUTO-**  
18                           **NIUM AND PLUTONIUM MATERIALS.**

19       (a) The Defense Nuclear Facilities Safety Board  
20      shall conduct a study of the adequacy of K-Area Materials  
21      Storage facility (KAMS), and related support facilities  
22      such as Building 235–F, at the Savannah River Site for  
23      the storage of defense plutonium and defense plutonium  
24      materials in connection with the disposition program pro-  
25      vided in this section and in connection with the amended

1 Record of Decision of the Department for fissile materials  
2 disposition.

3 (b) Not later than one year after the date of the en-  
4 actment of this Act, the Defense Nuclear Facilities Safety  
5 Board shall submit to Congress and the Secretary a report  
6 on the study conducted under paragraph (1).

7 (c) The report under paragraph (2) shall—

8 (1) address—

9 (A) the suitability of KAMS, and related  
10 support facilities, for monitoring and observing  
11 any defense plutonium or defense plutonium  
12 materials stored in KAMS;

13 (B) the adequacy of the provisions made  
14 by the Department for remote monitoring of  
15 such defense plutonium and defense plutonium  
16 materials by way of sensors and for handling of  
17 retrieval of such defense plutonium and defense  
18 plutonium materials; and

19 (C) the adequacy of KAMS should such  
20 defense plutonium and defense plutonium mate-  
21 rials continue to be stored at KAMS after  
22 2019; and

23 (2) include such recommendations as the De-  
24 fense Nuclear Facilities Safety Board considers ap-

1       appropriate to enhance the safety, reliability, and  
2       functionality of KAMS.

3       (d) Not later than six months after the date on which  
4 the report under paragraph (2) is submitted to Congress,  
5 and every year thereafter, the Secretary and the Board  
6 shall each submit to Congress a report on the actions  
7 taken by the Secretary in response to the recommenda-  
8 tions, if any, included in the report.

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