

AMENDMENTS

2024—Subsec. (a). Pub. L. 118–159, §3111(c)(6)(A), amended subsec. (a) generally. Prior to amendment, text read as follows: “The Secretary of Energy shall accelerate the schedule for defense environmental cleanup activities and projects for a site at a Department of Energy defense nuclear facility if the Secretary determines that such an accelerated schedule will achieve meaningful, long-term cost savings to the Federal Government and could substantially accelerate the release of land for local reuse.”

Subsec. (b). Pub. L. 118–159, §3111(c)(6)(B), added par. (1) and redesignated former pars. (1) to (4) as (2) to (5), respectively.

2013—Pub. L. 113–66, §3146(e)(6)(A), substituted “defense environmental cleanup” for “environmental restoration and waste management” in section catchline.

Subsec. (a). Pub. L. 113–66, §3146(e)(6)(B), substituted “defense environmental cleanup” for “environmental restoration and waste management”.

Subsec. (b)(2) to (5). Pub. L. 113–66, §3146(e)(6)(C), redesignated pars. (3) to (5) as (2) to (4), respectively, and struck out former par. (2), which read as follows: “The amount of time for completion of environmental restoration and waste management activities and projects at the site that can be reduced from the time specified for completion of such activities and projects in the baseline environmental management report required to be submitted for 1995 under section 3153 of the National Defense Authorization Act for Fiscal Year 1994 (42 U.S.C. 7274k), the predecessor provision to section 2584 of this title.”

Subsecs. (c), (d). Pub. L. 113–66, §3146(e)(6)(D)–(F), redesignated subsec. (d) as (c), substituted “specific defense environmental cleanup” for “specific environmental restoration or waste management” and “regulatory defense environmental cleanup” for “regulatory environmental restoration and waste management”, and struck out former subsec. (c) which required Secretary to report on each site for which schedule for environmental restoration and waste management activities had been accelerated.

2003—Subsec. (b)(2). Pub. L. 108–136, §3141(g)(6)(D), inserted “, the predecessor provision to section 2584 of this title” before period at end.

§ 2586. Defense environmental cleanup technology program

(a) Establishment of program

The Secretary of Energy shall establish and carry out a program of research for the development of technologies useful for—

- (1) the reduction of environmental hazards and contamination resulting from defense waste; and
- (2) environmental restoration of inactive defense waste disposal sites.

(b) Definitions

As used in this section:

- (1) The term “defense waste” means waste, including radioactive waste, resulting primarily from atomic energy defense activities of the Department of Energy.
- (2) The term “inactive defense waste disposal site” means any site (including any facility) under the control or jurisdiction of the Secretary of Energy which is used for the disposal of defense waste and is closed to the disposal of additional defense waste, including any site that is subject to decontamination and decommissioning.

(Pub. L. 107–314, div. D, title XLIV, §4406, formerly Pub. L. 101–189, div. C, title XXXI, §3141, Nov. 29, 1989, 103 Stat. 1679; Pub. L. 105–85, div. C,

title XXXI, §3152(g), Nov. 18, 1997, 111 Stat. 2042; renumbered Pub. L. 107–314, div. D, title XLIV, §4406, and amended Pub. L. 108–136, div. C, title XXXI, §3141(g)(7), Nov. 24, 2003, 117 Stat. 1765; Pub. L. 113–66, div. C, title XXXI, §3146(e)(7), Dec. 26, 2013, 127 Stat. 1077; Pub. L. 113–291, div. C, title XXXI, §3142(g), Dec. 19, 2014, 128 Stat. 3900.)

Editorial Notes

CODIFICATION

Section was formerly classified to section 7274a of Title 42, The Public Health and Welfare, prior to renumbering by Pub. L. 108–136.

AMENDMENTS

2014—Subsec. (a). Pub. L. 113–291 substituted “useful for—” for “useful for” before par. (1) designation and “; and” for “, and” at end of par. (1) and realigned margins of pars. (1) and (2).

2013—Pub. L. 113–66, §3146(e)(7)(A), substituted “environmental” for “waste” in section catchline.

Subsecs. (b), (c). Pub. L. 113–66, §3146(e)(7)(B), (C), which directed amendment of section by striking subsecs. (b) and (c) and redesignating subsec. (d) as (b), was executed by striking subsec. (b), which related to coordination of research activities, and redesignating subsec. (c) as (b) to reflect the probable intent of Congress and the amendment by Pub. L. 105–85, §3152(g), which redesignated former subsec. (d) as (c). See 1997 Amendment note below.

2003—Pub. L. 108–136, §3141(g)(7)(D), made technical amendment to section catchline.

1997—Subsecs. (c), (d). Pub. L. 105–85 redesignated subsec. (d) as (c) and struck out former subsec. (c) which required Secretary of Energy to submit to Congress not later than Apr. 1 each year a report on research activities of Department of Energy for development of technologies referred to in subsec. (a).

§ 2586a. Other programs relating to technology development

(a) Incremental Technology Development Program

(1) Establishment

The Secretary may establish a program, to be known as the “Incremental Technology Development Program”, to improve the efficiency and effectiveness of the defense environmental cleanup processes of the Office.

(2) Focus

(A) Improvements

In carrying out the Incremental Technology Development Program, the Secretary shall focus on the continuous improvement of new or available technologies, including—

- (i) decontamination chemicals and techniques;
- (ii) remote sensing and wireless communication to reduce manpower and laboratory efforts;
- (iii) detection, assay, and certification instrumentation; and
- (iv) packaging materials, methods, and shipping systems.

(B) Other areas

The Secretary may include in the Incremental Technology Development Program mission-relevant development, demonstration, and deployment activities unrelated to

the focus areas described in subparagraph (A).

(3) Use of new and emerging technologies

(A) Development and demonstration

In carrying out the Incremental Technology Development Program, the Secretary shall ensure that site offices of the Office conduct technology development, demonstration, testing, permitting, and deployment of new and emerging technologies to establish a sound technical basis for the selection of technologies for defense environmental cleanup or infrastructure operations.

(B) Collaboration required

The Secretary shall collaborate, to the extent practicable, with the heads of other departments and agencies of the Federal Government, the National Laboratories, other Federal laboratories, appropriate State regulators and agencies, and the Department of Labor in the development, demonstration, testing, permitting, and deployment of new technologies under the Incremental Technology Development Program.

(4) Agreements to carry out projects

(A) Authority

In carrying out the Incremental Technology Development Program, the Secretary may enter into agreements with nongovernmental entities for technology development, demonstration, testing, permitting, and deployment projects to improve technologies in accordance with paragraph (2).

(B) Selection

The Secretary shall select projects under subparagraph (A) through a rigorous process that involves—

- (i) transparent and open competition; and
- (ii) a review process that, if practicable, is conducted in an independent manner consistent with Department guidance on selecting and funding public-private partnerships.

(C) Cost-sharing

The Federal share of the costs of the development, demonstration, testing, permitting, and deployment of new technologies carried out under this paragraph shall be not more than 70 percent.

(D) Briefing

Not later than 120 days before the date on which the Secretary enters into the first agreement under subparagraph (A), the Secretary shall provide to the congressional defense committees a briefing on the process of selecting and funding efforts within the Incremental Technology Development Program, including with respect to the plans of the Secretary to ensure a scientifically rigorous process that minimizes potential conflicts of interest.

(b) High-Impact Technology Development Program

(1) Establishment

The Secretary shall establish a program, to be known as the “High-Impact Technology De-

velopment Program”, under which the Secretary shall enter into agreements with nongovernmental entities for projects that pursue technologies that, with respect to the mission—

- (A) holistically address difficult challenges;
- (B) hold the promise of breakthrough improvements; or
- (C) align existing or in-use technologies with difficult challenges.

(2) Areas of focus

The Secretary may include as areas of focus for a project carried out under the High-Impact Technology Development Program the following:

(A) Developing and demonstrating improved methods for source and plume characterization and monitoring, with an emphasis on—

- (i) real-time field acquisition; and
- (ii) the use of indicator species analyses with advanced contaminant transport models to enable better understanding of contaminant migration.

(B) Developing and determining the limits of performance for remediation technologies and integrated remedial systems that prevent migration of contaminants, including by producing associated guidance and design manuals for technologies that could be widely used across the complex.

(C) Demonstrating advanced monitoring approaches that use multiple lines of evidence for monitoring long-term performance of—

- (i) remediation systems; and
- (ii) noninvasive near-field monitoring techniques.

(D) Developing and demonstrating methods to characterize the physical and chemical attributes of waste that control behavior, with an emphasis on—

- (i) rapid and nondestructive examination and assay techniques; and
- (ii) methods to determine radio-nuclide, heavy metals, and organic constituents.

(E) Demonstrating the technical basis for determining when enhanced or natural attenuation is an appropriate approach for remediation of complex sites.

(F) Developing and demonstrating innovative methods to achieve real-time and, if practicable, in situ characterization data for tank waste and process streams that could be useful for all phases of the waste management program, including improving the accuracy and representativeness of characterization data for residual waste in tanks and ancillary equipment.

(G) Adapting existing waste treatment technologies or demonstrating new waste treatment technologies at the pilot plant scale using real wastes or realistic surrogates—

- (i) to address engineering adaptations;
- (ii) to ensure compliance with waste treatment standards and other applicable requirements under Federal and State law

and any existing agreements or consent decrees to which the Department is a party; and

(iii) to enable successful deployment at full-scale and in support of operations.

(H) Developing and demonstrating rapid testing protocols that—

(i) are accepted by the Environmental Protection Agency, the Nuclear Regulatory Commission, the Department, and the scientific community;

(ii) can be used to measure long-term waste form performance under realistic disposal environments;

(iii) can determine whether a stabilized waste is suitable for disposal; and

(iv) reduce the need for extensive, time-consuming, and costly analyses on every batch of waste prior to disposal.

(I) Developing and demonstrating direct stabilization technologies to provide waste forms for disposing of elemental mercury.

(J) Developing and demonstrating innovative and effective retrieval methods for removal of waste residual materials from tanks and ancillary equipment, including mobile retrieval equipment or methods capable of immediately removing waste from leaking tanks, and connecting pipelines.

(3) Project selection

(A) Selection

The Secretary shall select projects to be carried out under the High-Impact Technology Development Program through a rigorous process that involves—

(i) transparent and open competition; and

(ii) a review process that, if practicable, is conducted in an independent manner consistent with Department guidance on selecting and funding public-private partnerships.

(B) Briefing

Not later than 120 days before the date on which the Secretary enters into the first agreement under paragraph (1), the Secretary shall provide to the congressional defense committees a briefing on the process of selecting and funding efforts within the High-Impact Technology Development Program, including with respect to the plans of the Secretary to ensure a scientifically rigorous process that minimizes potential conflicts of interest.

(c) Environmental Management University Program

(1) Establishment

The Secretary shall establish a program, to be known as the “Environmental Management University Program”, to—

(A) engage faculty, post-doctoral fellows or researchers, and graduate students of institutions of higher education on subjects relating to the mission to show a clear path for students for employment within the environmental management enterprise;

(B) provide institutions of higher education and the Department access to advances in engineering and science;

(C) clearly identify to institutions of higher education the tools necessary to enter into the environmental management field professionally; and

(D) encourage current employees of the Department to pursue advanced degrees.

(2) Areas of focus

The Secretary may include as areas of focus for a grant made under the Environmental Management University Program the following:

(A) The atomic- and molecular-scale chemistries of waste processing.

(B) Contaminant immobilization in engineered and natural systems.

(C) Developing innovative materials, with an emphasis on nanomaterials or biomaterials, that could enable sequestration of challenging hazardous or radioactive constituents such as technetium and iodine.

(D) Elucidating and exploiting complex speciation and reactivity far from equilibrium.

(E) Understanding and controlling chemical and physical processes at interfaces.

(F) Harnessing physical and chemical processes to revolutionize separations.

(G) Tailoring waste forms for contaminants in harsh chemical environments.

(H) Predicting and understanding subsurface system behavior and response to perturbations.

(3) Individual research grants

In carrying out the Environmental Management University Program, the Secretary may make individual research grants to faculty, post-doctoral fellows or researchers, and graduate students of institutions of higher education for three-year research projects, with an option for an extension of one additional two-year period.

(4) Grants for interdisciplinary collaborations

In carrying out the Environmental Management University Program, the Secretary may make research grants for strategic partnerships among scientists, faculty, post-doctoral fellows or researchers, and graduate students of institutions of higher education for three-year research projects.

(5) Hiring of undergraduates

In carrying out the Environmental Management University Program, the Secretary may establish a summer internship program for undergraduates of institutions of higher education to work on projects relating to environmental management.

(6) Workshops

In carrying out the Environmental Management University Program, the Secretary may hold workshops with the Office of Environmental Management, the Office of Science, and members of academia and industry concerning environmental management challenges and solutions.

(d) Definitions

In this section:

(1) The term “complex” means all sites managed in whole or in part by the Office.

(2) The term “Department” means the Department of Energy.

(3) The term “institution of higher education” has the meaning given the term in section 1001(a) of title 20.

(4) The term “mission” means the mission of the Office.

(5) The term “National Laboratory” has the meaning given the term in section 15801 of title 42.

(6) The term “Office” means the Office of Environmental Management of the Department.

(7) The term “Secretary” means the Secretary of Energy, acting through the Assistant Secretary for Environmental Management.

(Pub. L. 107-314, div. D, title XLIV, §4406A, as added Pub. L. 117-81, div. C, title XXXI, §3114(a), Dec. 27, 2021, 135 Stat. 2221.)

§ 2587. Report on defense environmental cleanup expenditures

Each year, at the same time the President submits to Congress the budget for a fiscal year (pursuant to section 1105 of title 31), the Secretary of Energy shall submit to Congress a report on how the defense environmental cleanup funds of the Department of Energy were expended during the fiscal year preceding the fiscal year during which the budget is submitted. The report shall include details on expenditures by operations office, installation, budget category, and activity. The report also shall include any schedule changes or modifications to planned activities for the fiscal year in which the budget is submitted.

(Pub. L. 107-314, div. D, title XLIV, §4407, formerly Pub. L. 101-510, div. C, title XXXI, §3134, Nov. 5, 1990, 104 Stat. 1833; renumbered Pub. L. 107-314, div. D, title XLIV, §4407, and amended Pub. L. 108-136, div. C, title XXXI, §3141(g)(8), Nov. 24, 2003, 117 Stat. 1765; Pub. L. 113-66, div. C, title XXXI, §3146(e)(8), Dec. 26, 2013, 127 Stat. 1077.)

Editorial Notes

CODIFICATION

Section was formerly classified to section 7274c of Title 42, The Public Health and Welfare, prior to renumbering by Pub. L. 108-136.

AMENDMENTS

2013—Pub. L. 113-66 substituted “defense environmental cleanup” for “environmental restoration” in section catchline and “defense environmental cleanup funds” for “environmental restoration and waste management funds for defense activities” in text.

2003—Pub. L. 108-136, §3141(g)(8)(D), made technical amendment to section catchline.

§ 2588. Public participation in planning for defense environmental cleanup

The Secretary of Energy shall consult with the Administrator of the Environmental Protection Agency, the Attorney General, Governors and attorneys general of affected States, appropriate representatives of affected Indian tribes, and interested members of the public in any planning conducted by the Secretary for defense environmental cleanup activities at Department of Energy defense nuclear facilities.

(Pub. L. 107-314, div. D, title XLIV, §4408, formerly Pub. L. 103-337, div. C, title XXXI, §3160(e), Oct. 5, 1994, 108 Stat. 3095; renumbered Pub. L. 107-314, div. D, title XLIV, §4408, and amended Pub. L. 108-136, div. C, title XXXI, §3141(g)(9), Nov. 24, 2003, 117 Stat. 1765; Pub. L. 113-66, div. C, title XXXI, §3146(e)(9), Dec. 26, 2013, 127 Stat. 1077.)

Editorial Notes

CODIFICATION

Section was formerly set out as a note under section 7274g of Title 42, The Public Health and Welfare, prior to renumbering by Pub. L. 108-136.

AMENDMENTS

2013—Pub. L. 113-66 substituted “defense environmental cleanup” for “environmental restoration and waste management at defense nuclear facilities” in section catchline and substituted “attorneys general” for “Attorneys General” and “defense environmental cleanup activities” for “environmental restoration and waste management” in text.

2003—Pub. L. 108-136, §3141(g)(9)(C), substituted “Public participation in planning for environmental restoration and waste management at defense nuclear facilities” for “Public participation in planning” in section catchline.

§ 2589. Policy of Department of Energy regarding future defense environmental management matters

(a) Policy required

(1) Commencing not later than October 1, 2005, the Secretary of Energy shall have in effect a policy for carrying out future defense environmental management matters of the Department of Energy. The policy shall specify each officer within the Department with responsibilities for carrying out that policy and, for each such officer, the nature and extent of those responsibilities.

(2) In paragraph (1), the term “future defense environmental management matter” means any environmental cleanup project, decontamination and decommissioning project, waste management project, or related activity that arises out of the activities of the Department in carrying out programs necessary for national security and is to be commenced after November 24, 2003. However, such term does not include any such project or activity the responsibility for which has been assigned, as of November 24, 2003, to the Environmental Management program of the Department.

(b) Reflection in budget

For fiscal year 2006 and each fiscal year thereafter, the Secretary shall ensure that the budget justification materials submitted to Congress in support of the Department of Energy budget for such fiscal year (as submitted with the budget of the President under section 1105(a) of title 31) reflect the policy required by subsection (a).

(c) Consultation

The Secretary shall carry out this section in consultation with the Administrator for Nuclear Security and the Under Secretary of Energy for Energy, Science, and Environment.

(d) Report

The Secretary shall include with the budget justification materials submitted to Congress in