

with respect to research contracts of the military departments in section 2353 of title 10, except that the determination, approval, and certification required thereby shall be made by the Administrator.

(3) Any invention made or conceived in the course of, or under, any contract under this chapter shall be subject to section 9 of the Federal Nonnuclear Energy Research and Development Act of 1974 [42 U.S.C. 5908] to the same extent and in the same manner as inventions made or conceived in the course of contracts under such Act [42 U.S.C. 5901 et seq.], except that in applying such section, the Environmental Protection Agency shall be substituted for the Secretary of Energy and the words "solid waste" shall be substituted for the word "energy" where appropriate.

(4) For carrying out the purpose of this chapter the Administrator may detail personnel of the Environmental Protection Agency to agencies eligible for assistance under this section.

(Pub. L. 89-272, title II, §8001, as added Pub. L. 94-580, §2, Oct. 21, 1976, 90 Stat. 2829; amended Pub. L. 95-91, title III, §301, title VII, §§703, 707, Aug. 4, 1977, 91 Stat. 577, 606, 607; Pub. L. 95-609, §7(s), Nov. 8, 1978, 92 Stat. 3083.)

REFERENCES IN TEXT

Such Act, referred to in subsec. (c)(3), means the Federal Nonnuclear Energy Research and Development Act of 1974, Pub. L. 93-577, Dec. 31, 1974, 88 Stat. 1878, as amended, which is classified generally to chapter 74 (§5901 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 5901 of this title and Tables.

PRIOR PROVISIONS

Provisions similar to those in this section were contained in section 3253 of this title, prior to the general amendment of the Solid Waste Disposal Act by Pub. L. 94-580.

AMENDMENTS

1978—Subsec. (a)(2). Pub. L. 95-609, §7(s)(1), substituted "management" for "disposal".

Subsec. (a)(13). Pub. L. 95-609, §7(s)(2), inserted "treatment," after "for purpose of".

TRANSFER OF FUNCTIONS

"Secretary of Energy" was substituted for "Administrator of the Federal Energy Administration, the Administrator of the Energy Research and Development Administration, or the Chairman of the Federal Power Commission" in subsec. (a), and for "Energy Research and Development Administration" in subsecs. (b)(2) and (c)(3), in view of the termination of the Federal Energy Administration, the Energy Research and Development Administration, and the Federal Power Commission and the transfer of their functions and the functions of the Administrators and Chairman thereof (with certain exceptions) to the Secretary of Energy pursuant to sections 301, 703, and 707 of Pub. L. 95-91, which are classified to sections 7151, 7293, and 7297 of this title.

For transfer of certain enforcement functions of Administrator or other official of Environmental Protection Agency under this chapter to Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, and subsequent transfer to Secretary of Energy, then to Federal Coordinator for Alaska Natural Gas Transportation Projects, see note set out under section 6903 of this title.

EPA STUDY OF METHODS TO REDUCE PLASTIC POLLUTION

Pub. L. 100-220, title II, §2202, Dec. 29, 1987, 101 Stat. 1465, directed Administrator of Environmental Protection Agency, in consultation with Secretary of Commerce, to conduct a study of the adverse effects of improper disposal of plastic articles on environment and on waste disposal, and various methods to reduce or eliminate such adverse effects, and directed Administrator, within 18 months after Dec. 29, 1987, to report results of this study to Congress.

NATIONAL ADVISORY COMMISSION ON RESOURCE CONSERVATION AND RECOVERY

Pub. L. 96-482, §33, Oct. 21, 1980, 94 Stat. 2356, as amended by Pub. L. 105-362, title V, §501(g), Nov. 10, 1998, 112 Stat. 3284, provided for establishment, membership, functions, etc., of a National Advisory Commission on Resource Conservation and Recovery, directed Commission, upon expiration of the two-year period beginning on the date when all initial members of the Commission have been appointed or the date initial funds become available, whichever is later, to transmit a final report to President and Congress containing a detailed statement of the findings and conclusions of the Commission, and terminated the Commission 30 days after submission of its final report.

SOLID WASTE CLEANUP ON FEDERAL LANDS IN ALASKA; STUDY AND REPORT TO CONGRESSIONAL COMMITTEES

Pub. L. 94-580, §3, Oct. 21, 1976, 90 Stat. 2840, provided for a study of procedures for removal of solid waste from Federal lands in Alaska and submission of a Presidential Report to the Senate Committee on Public Lands and House Committee on Interstate and Foreign Commerce no later than one year after Oct. 21, 1976, and implementing recommendations to such committees within six months thereafter, prior to repeal by Pub. L. 96-482, §30, Oct. 21, 1980, 94 Stat. 2352.

LEACHATE CONTROL RESEARCH PROGRAM IN DELAWARE

Pub. L. 94-580, §4, Oct. 21, 1976, 90 Stat. 2840, directed Administrator of Environmental Protection Agency, in order to demonstrate effective means of dealing with contamination of public water supplies by leachate from abandoned or other landfills, to provide technical and financial assistance for a research program, designed by New Castle County areawide waste treatment management program, to control leachate from Llangollen Landfill in New Castle County, Delaware, and provided up to \$250,000 in each of the fiscal years 1978 and 1979 for the operating costs of a counter-pumping program to contain the leachate from the Llangollen Landfill during the period of this study.

§ 6982. Special studies; plans for research, development, and demonstrations

(a) Glass and plastic

The Administrator shall undertake a study and publish a report on resource recovery from glass and plastic waste, including a scientific, technological, and economic investigation of potential solutions to implement such recovery.

(b) Composition of waste stream

The Administrator shall undertake a systematic study of the composition of the solid waste stream and of anticipated future changes in the composition of such stream and shall publish a report containing the results of such study and quantitatively evaluating the potential utility of such components.

(c) Priorities study

For purposes of determining priorities for research on recovery of materials and energy from

solid waste and developing materials and energy recovery research, development, and demonstration strategies, the Administrator shall review, and make a study of, the various existing and promising techniques of energy recovery from solid waste (including, but not limited to, water-wall furnace incinerators, dry shredded fuel systems, pyrolysis, densified refuse-derived fuel systems, anaerobic digestion, and fuel and feedstock preparation systems). In carrying out such study the Administrator shall investigate with respect to each such technique—

(1) the degree of public need for the potential results of such research, development, or demonstration,

(2) the potential for research, development, and demonstration without Federal action, including the degree of restraint on such potential posed by the risks involved, and

(3) the magnitude of effort and period of time necessary to develop the technology to the point where Federal assistance can be ended.

(d) Small-scale and low technology study

The Administrator shall undertake a comprehensive study and analysis of, and publish a report on, systems of small-scale and low technology solid waste management, including household resource recovery and resource recovery systems which have special application to multiple dwelling units and high density housing and office complexes. Such study and analysis shall include an investigation of the degree to which such systems could contribute to energy conservation.

(e) Front-end source separation

The Administrator shall undertake research and studies concerning the compatibility of front-end source separation systems with high technology resource recovery systems and shall publish a report containing the results of such research and studies.

(f) Mining waste

The Administrator, in consultation with the Secretary of the Interior, shall conduct a detailed and comprehensive study on the adverse effects of solid wastes from active and abandoned surface and underground mines on the environment, including, but not limited to, the effects of such wastes on humans, water, air, health, welfare, and natural resources, and on the adequacy of means and measures currently employed by the mining industry, Government agencies, and others to dispose of and utilize such solid wastes and to prevent or substantially mitigate such adverse effects. Such study shall include an analysis of—

(1) the sources and volume of discarded material generated per year from mining;

(2) present disposal practices;

(3) potential dangers to human health and the environment from surface runoff of leachate and air pollution by dust;

(4) alternatives to current disposal methods;

(5) the cost of those alternatives in terms of the impact on mine product costs; and

(6) potential for use of discarded material as a secondary source of the mine product.

In furtherance of this study, the Administrator shall, as he deems appropriate, review studies

and other actions of other Federal agencies concerning such wastes with a view toward avoiding duplication of effort and the need to expedite such study. Not later than thirty-six months after October 21, 1980, the Administrator shall publish a report of such study and shall include appropriate findings and recommendations for Federal and non-Federal actions concerning such effects. Such report shall be submitted to the Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

(g) Sludge

The Administrator shall undertake a comprehensive study and publish a report on sludge. Such study shall include an analysis of—

(1) what types of solid waste (including but not limited to sewage and pollution treatment residues and other residues from industrial operations such as extraction of oil from shale, liquefaction and gasification of coal and coal slurry pipeline operations) shall be classified as sludge;

(2) the effects of air and water pollution legislation on the creation of large volumes of sludge;

(3) the amounts of sludge originating in each State and in each industry producing sludge;

(4) methods of disposal of such sludge, including the cost, efficiency, and effectiveness of such methods;

(5) alternative methods for the use of sludge, including agricultural applications of sludge and energy recovery from sludge; and

(6) methods to reclaim areas which have been used for the disposal of sludge or which have been damaged by sludge.

(h) Tires

The Administrator shall undertake a study and publish a report respecting discarded motor vehicle tires which shall include an analysis of the problems involved in the collection, recovery of resources including energy, and use of such tires.

(i) Resource recovery facilities

The Administrator shall conduct research and report on the economics of, and impediments, to the effective functioning of resource recovery facilities.

(j) Resource Conservation Committee

(1) The Administrator shall serve as Chairman of a Committee composed of himself, the Secretary of Commerce, the Secretary of Labor, the Chairman of the Council on Environmental Quality, the Secretary of Treasury, the Secretary of the Interior, the Secretary of Energy, the Chairman of the Council of Economic Advisors, and a representative of the Office of Management and Budget, which shall conduct a full and complete investigation and study of all aspects of the economic, social, and environmental consequences of resource conservation with respect to—

(A) the appropriateness of recommended incentives and disincentives to foster resource conservation;

(B) the effect of existing public policies (including subsidies and economic incentives and

disincentives, percentage depletion allowances, capital gains treatment and other tax incentives and disincentives) upon resource conservation, and the likely effect of the modification or elimination of such incentives and disincentives upon resource conservation;

(C) the appropriateness and feasibility of restricting the manufacture or use of categories of consumer products as a resource conservation strategy;

(D) the appropriateness and feasibility of employing as a resource conservation strategy the imposition of solid waste management charges on consumer products, which charges would reflect the costs of solid waste management services, litter pickup, the value of recoverable components of such product, final disposal, and any social value associated with the nonrecycling or uncontrolled disposal of such product; and

(E) the need for further research, development, and demonstration in the area of resource conservation.

(2) The study required in paragraph (1)(D) may include pilot scale projects, and shall consider and evaluate alternative strategies with respect to—

(A) the product categories on which such charges would be imposed;

(B) the appropriate state in the production of such consumer product at which to levy such charge;

(C) appropriate criteria for establishing such charges for each consumer product category;

(D) methods for the adjustment of such charges to reflect actions such as recycling which would reduce the overall quantities of solid waste requiring disposal; and

(E) procedures for amending, modifying, or revising such charges to reflect changing conditions.

(3) The design for the study required in paragraph (1) of this subsection shall include timetables for the completion of the study. A preliminary report putting forth the study design shall be sent to the President and the Congress within six months following October 21, 1976, and followup reports shall be sent six months thereafter. Each recommendation resulting from the study shall include at least two alternatives to the proposed recommendation.

(4) The results of such investigation and study, including recommendations, shall be reported to the President and the Congress not later than two years after October 21, 1976.

(5) There are authorized to be appropriated not to exceed \$2,000,000 to carry out this subsection.

(k) Airport landfills

The Administrator shall undertake a comprehensive study and analysis of and publish a report on systems to alleviate the hazards to aviation from birds congregating and feeding on landfills in the vicinity of airports.

(l) Completion of research and studies

The Administrator shall complete the research and studies, and submit the reports, required under subsections (b), (c), (d), (e), (f), (g), and (k) not later than October 1, 1978. The Administrator shall complete the research and

studies, and submit the reports, required under subsections (a), (h), and (i) not later than October 1, 1979. Upon completion, each study specified in subsections (a) through (k) of this section, the Administrator shall prepare a plan for research, development, and demonstration respecting the findings of the study and shall submit any legislative recommendations resulting from such study to appropriate committees of Congress.

(m) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or natural gas or geothermal energy

(1) The Administrator shall conduct a detailed and comprehensive study and submit a report on the adverse effects, if any, of drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil or natural gas or geothermal energy on human health and the environment, including, but not limited to, the effects of such wastes on humans, water, air, health, welfare, and natural resources and on the adequacy of means and measures currently employed by the oil and gas and geothermal drilling and production industry, Government agencies, and others to dispose of and utilize such wastes and to prevent or substantially mitigate such adverse effects. Such study shall include an analysis of—

(A) the sources and volume of discarded material generated per year from such wastes;

(B) present disposal practices;

(C) potential danger to human health and the environment from the surface runoff or leachate;

(D) documented cases which prove or have caused danger to human health and the environment from surface runoff or leachate;

(E) alternatives to current disposal methods;

(F) the cost of such alternatives; and

(G) the impact of those alternatives on the exploration for, and development and production of, crude oil and natural gas or geothermal energy.

In furtherance of this study, the Administrator shall, as he deems appropriate, review studies and other actions of other Federal agencies concerning such wastes with a view toward avoiding duplication of effort and the need to expedite such study. The Administrator shall publish a report of such study and shall include appropriate findings and recommendations for Federal and non-Federal actions concerning such effects.

(2) The Administrator shall complete the research and study and submit the report required under paragraph (1) not later than twenty-four months from October 21, 1980. Upon completion of the study, the Administrator shall prepare a summary of the findings of the study, a plan for research, development, and demonstration respecting the findings of the study, and shall submit the findings and the study, along with any recommendations resulting from such study, to the Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

(3) There are authorized to be appropriated not to exceed \$1,000,000 to carry out the provisions of this subsection.

(n) Materials generated from the combustion of coal and other fossil fuels

The Administrator shall conduct a detailed and comprehensive study and submit a report on the adverse effects on human health and the environment, if any, of the disposal and utilization of fly ash waste, bottom ash waste, slag waste, flue gas emission control waste, and other by-product materials generated primarily from the combustion of coal or other fossil fuels. Such study shall include an analysis of—

- (1) the source and volumes of such material generated per year;
- (2) present disposal and utilization practices;
- (3) potential danger, if any, to human health and the environment from the disposal and reuse of such materials;
- (4) documented cases in which danger to human health or the environment from surface runoff or leachate has been proved;
- (5) alternatives to current disposal methods;
- (6) the costs of such alternatives;
- (7) the impact of those alternatives on the use of coal and other natural resources; and
- (8) the current and potential utilization of such materials.

In furtherance of this study, the Administrator shall, as he deems appropriate, review studies and other actions of other Federal and State agencies concerning such material and invite participation by other concerned parties, including industry and other Federal and State agencies, with a view toward avoiding duplication of effort. The Administrator shall publish a report on such study, which shall include appropriate findings, not later than twenty-four months after October 21, 1980. Such study and findings shall be submitted to the Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

(o) Cement kiln dust waste

The Administrator shall conduct a detailed and comprehensive study of the adverse effects on human health and the environment, if any, of the disposal of cement kiln dust waste. Such study shall include an analysis of—

- (1) the source and volumes of such materials generated per year;
- (2) present disposal practices;
- (3) potential danger, if any, to human health and the environment from the disposal of such materials;
- (4) documented cases in which danger to human health or the environment has been proved;
- (5) alternatives to current disposal methods;
- (6) the costs of such alternatives;
- (7) the impact of those alternatives on the use of natural resources; and
- (8) the current and potential utilization of such materials.

In furtherance of this study, the Administrator shall, as he deems appropriate, review studies and other actions of other Federal and State

agencies concerning such waste or materials and invite participation by other concerned parties, including industry and other Federal and State agencies, with a view toward avoiding duplication of effort. The Administrator shall publish a report of such study, which shall include appropriate findings, not later than thirty-six months after October 21, 1980. Such report shall be submitted to the Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

(p) Materials generated from extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from uranium mining

The Administrator shall conduct a detailed and comprehensive study on the adverse effects on human health and the environment, if any, of the disposal and utilization of solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from uranium mining. Such study shall be conducted in conjunction with the study of mining wastes required by subsection (f) of this section and shall include an analysis of—

- (1) the source and volumes of such materials generated per year;
- (2) present disposal and utilization practices;
- (3) potential danger, if any, to human health and the environment from the disposal and reuse of such materials;
- (4) documented cases in which danger to human health or the environment has been proved;
- (5) alternatives to current disposal methods;
- (6) the costs of such alternatives;
- (7) the impact of those alternatives on the use of phosphate rock and uranium ore, and other natural resources; and
- (8) the current and potential utilization of such materials.

In furtherance of this study, the Administrator shall, as he deems appropriate, review studies and other actions of other Federal and State agencies concerning such waste or materials and invite participation by other concerned parties, including industry and other Federal and State agencies, with a view toward avoiding duplication of effort. The Administrator shall publish a report of such study, which shall include appropriate findings, in conjunction with the publication of the report of the study of mining wastes required to be conducted under subsection (f) of this section. Such report and findings shall be submitted to the Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

(q) Authorization of appropriations

There are authorized to be appropriated not to exceed \$8,000,000 for the fiscal years 1978 and 1979 to carry out this section other than subsection (j).

(r) Minimization of hazardous waste

The Administrator shall compile, and not later than October 1, 1986, submit to the Congress, a report on the feasibility and desirability

of establishing standards of performance or of taking other additional actions under this chapter to require the generators of hazardous waste to reduce the volume or quantity and toxicity of the hazardous waste they generate, and of establishing with respect to hazardous wastes required management practices or other requirements to assure such wastes are managed in ways that minimize present and future risks to human health and the environment. Such report shall include any recommendations for legislative changes which the Administrator determines are feasible and desirable to implement the national policy established by section 6902 of this title.

(s) Extending landfill life and reusing landfilled areas

The Administrator shall conduct detailed, comprehensive studies of methods to extend the useful life of sanitary landfills and to better use sites in which filled or closed landfills are located. Such studies shall address—

- (1) methods to reduce the volume of materials before placement in landfills;
- (2) more efficient systems for depositing waste in landfills;
- (3) methods to enhance the rate of decomposition of solid waste in landfills, in a safe and environmentally acceptable manner;
- (4) methane production from closed landfill units;
- (5) innovative uses of closed landfill sites, including use for energy production such as solar or wind energy and use for metals recovery;
- (6) potential for use of sewage treatment sludge in reclaiming landfilled areas; and
- (7) methods to coordinate use of a landfill owned by one municipality by nearby municipalities, and to establish equitable rates for such use, taking into account the need to provide future landfill capacity to replace that so used.

The Administrator is authorized to conduct demonstrations in the areas of study provided in this subsection. The Administrator shall periodically report on the results of such studies, with the first such report not later than October 1, 1986. In carrying out this subsection, the Administrator need not duplicate other studies which have been completed and may rely upon information which has previously been compiled.

(Pub. L. 89-272, title II, §8002, as added Pub. L. 94-580, §2, Oct. 21, 1976, 90 Stat. 2831; amended Pub. L. 95-609, §7(t), Nov. 8, 1978, 92 Stat. 3083; H. Res. 549, Mar. 25, 1980; Pub. L. 96-482, §29, Oct. 21, 1980, 94 Stat. 2349; Pub. L. 98-616, title II, §224(c), title VII, §702, Nov. 8, 1984, 98 Stat. 3253, 3289.)

AMENDMENTS

1984—Subsec. (r). Pub. L. 98-616, §224(c), added subsec. (r).

Subsec. (s). Pub. L. 98-616, §702, added subsec. (s).

1980—Subsec. (f). Pub. L. 96-482, §29(1), required publication of report no later than thirty-six months after Oct. 21, 1980, and its submission to Senate Committee on Environment and Public Works and House Committee on Energy and Commerce.

Subsecs. (m) to (q). Pub. L. 96-482, §29(2), added subsecs. (m) to (p) and redesignated former subsec. (m) as (q).

1978—Subsec. (g)(1). Pub. L. 95-609, §7(t)(1), substituted “shale, liquefaction” for “shale liquefaction”.

Subsec. (j)(1). Pub. L. 95-609, §7(t)(2), enacted a provision adding the Secretary of Energy and the Chairman of the Council of Economic Advisors to the Committee.

Subsec. (j)(2). Pub. L. 95-609, §7(t)(3), substituted “paragraph (1)(D)” for “paragraph (2)(D)”.

Subsec. (j)(3). Pub. L. 95-609, §7(t)(4), substituted “paragraph (1)” for “paragraph (2)(D)”.

Subsec. (l). Pub. L. 95-609, §7(t)(5), struck out requirement of submission of reports under subsec. (j) of this section.

CHANGE OF NAME

Committee on Interstate and Foreign Commerce of the House of Representatives changed to Committee on Energy and Commerce immediately prior to noon on Jan. 3, 1981, by House Resolution No. 549, Ninety-sixth Congress, Mar. 25, 1980. Committee on Energy and Commerce of House of Representatives treated as referring to Committee on Commerce of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress. Committee on Commerce of House of Representatives changed to Committee on Energy and Commerce of House of Representatives, and jurisdiction over matters relating to securities and exchanges and insurance generally transferred to Committee on Financial Services of House of Representatives by House Resolution No. 5, One Hundred Seventh Congress, Jan. 3, 2001.

TRANSFER OF FUNCTIONS

For transfer of certain enforcement functions of Administrator or other official of Environmental Protection Agency under this chapter to Federal Inspector, Office of Federal Inspector for the Alaska Natural Gas Transportation System, and subsequent transfer to Secretary of Energy, then to Federal Coordinator for Alaska Natural Gas Transportation Projects, see note set out under section 6903 of this title.

§ 6983. Coordination, collection, and dissemination of information

(a) Information

The Administrator shall develop, collect, evaluate, and coordinate information on—

- (1) methods and costs of the collection of solid waste;
- (2) solid waste management practices, including data on the different management methods and the cost, operation, and maintenance of such methods;
- (3) the amounts and percentages of resources (including energy) that can be recovered from solid waste by use of various solid waste management practices and various technologies;
- (4) methods available to reduce the amount of solid waste that is generated;
- (5) existing and developing technologies for the recovery of energy or materials from solid waste and the costs, reliability, and risks associated with such technologies;
- (6) hazardous solid waste, including incidents of damage resulting from the disposal of hazardous solid wastes; inherently and potentially hazardous solid wastes; methods of neutralizing or properly disposing of hazardous solid wastes; facilities that properly dispose of hazardous wastes;
- (7) methods of financing resource recovery facilities or, sanitary landfills, or hazardous solid waste treatment facilities, whichever is appropriate for the entity developing such facility or landfill (taking into account the