studies conducted under paragraph (1), data from the Western Lakes Survey, and other appropriate research and utilize predictive modeling techniques that take into account the unique geographic, climatological, and atmospheric conditions which exist in the western United States to determine the potential occurrence and effects of acid deposition due to any projected increases in the emission of sulfur dioxide and nitrogen oxides in that part of the United States located west of the Mississippi River. The Administrator shall include the results of the project conducted under this paragraph in the reports issued to Congress under paragraph (1)."

CONSULTATION WITH AND TRANSMISSION OF REPORTS AND STUDIES TO CONGRESSIONAL COMMITTEE

Pub. L. 95–95, title I, §101(c), Aug. 7, 1977, 91 Stat. 687, provided that: "The Administrator of the Environmental Protection Agency shall consult with the House Committee on Science and Technology [now Committee on Science, Space, and Technology] on the environmental and atmospheric research, development, and demonstration aspects of this Act [see Short Title of 1977 Amendment note set out under section 7401 of this title]. In addition, the reports and studies required by this Act that relate to research, development, and demonstration issues shall be transmitted to the Committee on Science and Technology [now Committee on Science, Space, and Technology] at the same time they are made available to other committees of the Congress."

STUDY OF SUBSTANCES DISCHARGED FROM EXHAUSTS OF MOTOR VEHICLES

Pub. L. 86–493, June 8, 1960, 74 Stat. 162, directed Surgeon General of Public Health Service to conduct a thorough study for purposes of determining, with respect to the various substances discharged from exhausts of motor vehicles, the amounts and kinds of such substances which, from the standpoint of human health, it is safe for motor vehicles to discharge into the atmosphere under the various conditions under which such vehicles may operate, and, not later than two years after June 8, 1960, submit to Congress a report on results of the study, together with such recommendations, if any, based upon the findings made in such study, as he deemed necessary for the protection of the public health.

§7404. Research relating to fuels and vehicles

(a) Research programs; grants; contracts; pilot and demonstration plants; byproducts research

The Administrator shall give special emphasis to research and development into new and improved methods, having industry-wide application, for the prevention and control of air pollution resulting from the combustion of fuels. In furtherance of such research and development he shall—

(1) conduct and accelerate research programs directed toward development of improved, cost-effective techniques for—

(A) control of combustion byproducts of fuels,

(B) removal of potential air pollutants from fuels prior to combustion,

(C) control of emissions from the evaporation of fuels,

(D) improving the efficiency of fuels combustion so as to decrease atmospheric emissions, and

(E) producing synthetic or new fuels which, when used, result in decreased atmospheric emissions.¹

(2) provide for Federal grants to public or nonprofit agencies, institutions, and organizations and to individuals, and contracts with public or private agencies, institutions, or persons, for payment of (A) part of the cost of acquiring, constructing, or otherwise securing for research and development purposes, new or improved devices or methods having industrywide application of preventing or controlling discharges into the air of various types of pollutants; (B) part of the cost of programs to develop low emission alternatives to the present internal combustion engine; (C) the cost to purchase vehicles and vehicle engines, or portions thereof, for research, development, and testing purposes; and (D) carrying out the other provisions of this section, without regard to section 3324(a) and (b) of title 31 and section 6101 of title 41: Provided, That research or demonstration contracts awarded pursuant to this subsection (including contracts for construction) may be made in accordance with, and subject to the limitations provided 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; Provided further, That no grant may be made under this paragraph in excess of \$1,500,000;

(3) determine, by laboratory and pilot plant testing, the results of air pollution research and studies in order to develop new or improved processes and plant designs to the point where they can be demonstrated on a large and practical scale;

(4) construct, operate, and maintain, or assist in meeting the cost of the construction, operation, and maintenance of new or improved demonstration plants or processes which have promise of accomplishing the purposes of this chapter;²

(5) study new or improved methods for the recovery and marketing of commercially valuable byproducts resulting from the removal of pollutants.

(b) Powers of Administrator in establishing research and development programs

In carrying out the provisions of this section, the Administrator may—

(1) conduct and accelerate research and development of cost-effective instrumentation techniques to facilitate determination of quantity and quality of air pollutant emissions, including, but not limited to, automotive emissions;

(2) utilize, on a reimbursable basis, the facilities of existing Federal scientific laboratories;

(3) establish and operate necessary facilities and test sites at which to carry on the research, testing, development, and programming necessary to effectuate the purposes of this section;

(4) acquire secret processes, technical data, inventions, patent applications, patents, licenses, and an interest in lands, plants, and facilities, and other property or rights by purchase, license, lease, or donation; and

 $^{^1\,\}mathrm{So}$ in original. The period probably should be a semicolon.

²So in original. The word "and" probably should appear.

(5) cause on-site inspections to be made of promising domestic and foreign projects, and cooperate and participate in their development in instances in which the purposes of the chapter will be served thereby.

(c) Clean alternative fuels

The Administrator shall conduct a research program to identify, characterize, and predict air emissions related to the production, distribution, storage, and use of clean alternative fuels to determine the risks and benefits to human health and the environment relative to those from using conventional gasoline and diesel fuels. The Administrator shall consult with other Federal agencies to ensure coordination and to avoid duplication of activities authorized under this subsection.

(July 14, 1955, ch. 360, title I, §104, as added Pub. L. 90-148, §2, Nov. 21, 1967, 81 Stat. 487; amended Pub. L. 91-137, Dec. 5, 1969, 83 Stat. 283; Pub. L. 91-604, §§2(b), (c), 13(a), 15(c)(2), Dec. 31, 1970, 84 Stat. 1676, 1677, 1709, 1713; Pub. L. 93-15, §1(a), Apr. 9, 1973, 87 Stat. 11; Pub. L. 93-319, §13(a), June 22, 1974, 88 Stat. 265; Pub. L. 101-549, title IX, §901(d), Nov. 15, 1990, 104 Stat. 2706.)

CODIFICATION

In subsec. (a)(2)(D), "section 3324(a) and (b) of title 31 and section 6101 of title 41" substituted for "sections 3648 and 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5)" on authority of Pub. L. 97–258, §4(b), Sept. 13, 1982, 96 Stat. 1067, which Act enacted Title 31, Money and Finance, and Pub. L. 111–350, §6(c), Jan. 4, 2011, 124 Stat. 3854, which Act enacted Title 41, Public Contracts.

Section was formerly classified to section 1857b–1 of this title.

PRIOR PROVISIONS

A prior section 104 of act July 14, 1955, was renumbered section 105 by Pub. L. 90-148 and is classified to section 7405 of this title.

Amendments

1990—Subsecs. (a)(1), (b)(1). Pub. L. 101–549, 901(d)(1), substituted ''cost-effective'' for ''low-cost''.

Subsec. (c). Pub. L. 101-549, §901(d)(2), amended subsec. (c) generally. Prior to amendment, subsec. (c) read as follows: "For the purposes of this section there are authorized to be appropriated \$75,000,000 for the fiscal year ending June 30, 1971, \$125,000,000 for the fiscal year ending June 30, 1972, \$150,000,000 for the fiscal year ending June 30, 1973, and \$150,000,000 for the fiscal year ending June 30, 1975. Amounts appropriated pursuant to this subsection shall remain available until expended."

1974—Subsec. (c). Pub. L. 93-319 authorized appropriation of \$150,000,000 for fiscal year ending June 30, 1975. 1973—Subsec. (c). Pub. L. 93-15 authorized appropria-

tion of \$150,000,000 for fiscal year ending June 30, 1974. 1970—Subsec. (a). Pub. L. 91-604, \$15(c)(2), substituted "Administrator" for "Secretary".

Subsec. (a)(1). Pub. L. 91-604, \$2(b), inserted provisions authorizing research programs directed toward development of techniques for improving the efficiency of fuels combustion so as to decrease atmospheric emissions, and producing synthetic or new fuels which result in decreased atmospheric emissions.

Subsec. (a)(2). Pub. L. 91-604, §2(c), added cls. (B) and (C) and redesignated former cl. (B) as (D).

Subsec. (b). Pub. L. 91-604, §15(c)(2), substituted "Administrator" for "Secretary".

Subsec. (c). Pub. L. 91–604, §13(a), substituted provisions authorizing appropriations for fiscal years ending June 30, 1971, 1972, and 1973, for provisions authorizing appropriations for fiscal years ending June 30, 1968 and 1969.

1969—Subsec. (c). Pub. L. 91–137 authorized appropriation of \$45,000,000 for fiscal year ending June 30, 1970.

Hydrogen Fuel Cell Vehicle Study and Test Program

Pub. L. 101-549, title VIII, §807, Nov. 15, 1990, 104 Stat. 2689, provided that: "The Administrator of the Environmental Protection Agency, in conjunction with the National Aeronautics and Space Administration and the Department of Energy, shall conduct a study and test program on the development of a hydrogen fuel cell electric vehicle. The study and test program shall determine how best to transfer existing NASA hydrogen fuel cell technology into the form of a mass-producible, cost effective hydrogen fuel cell vehicle. Such study and test program shall include at a minimum a feasibility-design study, the construction of a prototype, and a demonstration. This study and test program should be completed and a report submitted to Congress within 3 years after the enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990]. This study and test program should be performed in the university or universities which are best exhibiting the facilities and expertise to develop such a fuel cell vehicle."

COMBUSTION OF CONTAMINATED USED OIL IN SHIPS

Pub. L. 101-549, title VIII, §813, Nov. 15, 1990, 104 Stat. 2693, provided that: "Within 2 years after the enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990], the Administrator of the Environmental Protection Agency shall complete a study and submit a report to Congress evaluating the health and environmental impacts of the combustion of contaminated used oil in ships, the reasons for using such oil for such purposes, the alternatives to such use, the costs of such alternatives, and other relevant factors and impacts. In preparing such study, the Administrator shall obtain the view and comments of all interested persons and shall consult with the Secretary of Transportation and the Secretary of the department in which the Coast Guard is operating."

EXTENSION TO AUG. 31, 1970 OF AUTHORIZATION PERIOD FOR FISCAL YEAR 1970

Pub. L. 91–316, July 10, 1970, 84 Stat. 416, provided in part that the authorization contained in section 104(c) of the Clean Air Act [subsec. (c) of this section] for the fiscal year ending June 30, 1970, should remain available through Aug. 31, 1970, notwithstanding any provisions of this section.

§7405. Grants for support of air pollution planning and control programs

(a) Amounts; limitations; assurances of plan development capability

(1)(A) The Administrator may make grants to air pollution control agencies, within the meaning of paragraph (1), (2), (3), (4), or (5) of section 7602 of this title, in an amount up to three-fifths of the cost of implementing programs for the prevention and control of air pollution or implementation of national primary and secondary ambient air quality standards. For the purpose of this section, "implementing" means any activity related to the planning, developing, establishing, carrying-out, improving, or maintaining of such programs.

(B) Subject to subsections (b) and (c) of this section, an air pollution control agency which receives a grant under subparagraph (A) and which contributes less than the required two-fifths minimum shall have 3 years following November 15, 1990, in which to contribute such