AIR POLLUTION ABATEMENT BY FEDERAL FACILITIES

REPORT

OF THE

ADMINISTRATOR

TO THE

UNITED STATES CONGRESS

JANUARY, 1971

ENVIRONMENTAL PROTECTION AGENCY

Air Pollution Programs

TABLE OF CONTENTS

I. OVERVIEW

On February 4, 1970, President Nixon issued Executive Order 11507, which set forth requirements for the prevention and control of air and water pollution at Federal facilities. This Executive Order, which is reproduced in Appendix A of this report, superseded Executive Order 11282, dated May 26, 1966.

The principal provisions of the new Executive Order are as follows:

- Federal facilities are defined as including buildings, installations, structures, public works, equipment, aircraft, vessels, and other vehicles and property owned by or constructed or manufactured for the purpose of leasing to the Federal Government.
- Federal facilities are required to comply with air quality standards, including implementation plans, adopted under the Clean Air Act, as amended.
- In areas not covered by air quality standards, including implementation plans, Federal facilities are required to comply with the regulations promulgated by the Secretary of Health, Education, and Welfare in June 1966, as amended in July 1969. These regulations (42 C.F.R. 76) are reproduced in Appendix A.
- With respect to Federal facilities in existence on the date of issuance of the Executive Order, actions necessary to meet the requirements outlined above must be underway or completed by December 31, 1972.

The requirements set forth in the Executive Order must be considered at the earliest possible stage of planning for new Federal facilities.

To meet the December 1972 deadline, Federal departments and agencies

will have to initiate, during Fiscal 1972 and Fiscal 1973, many air pollution abatement projects that previously were not scheduled for action until subsequent Fiscal years. This needed acceleration is reflected in budget requests for Fiscal 1972.

Lack of adequate emission control technology will necessitate the postponement of some projects until after Fiscal 1973. These projects deal primarily with smoke from fire-fighting schools, nitrogen oxides emissions from Army ammunition plants, emissions from testing of jet engines, and problems associated with disposal of munitions and propellants. Efforts to devise solutions to these problems are in progress; these efforts are discussed in greater detail in Chapter IV of this report.

As of the date of issuance of the new Executive Order, the Secretary of Health, Education, and Welfare was responsible for promulgation of air pollution abatement regulations applicable to Federal facilities; providing technical assistance to Federal departments and agencies in preparing and implementing abatement plans; and furnishing the Office of Management and Budget assistance in making technical and administrative reviews of the abatement plans. On December 2, 1970, with the creation of the Environmental Protection Agency (EPA), these responsibilities were assumed by the EPA Administrator.

II. Progress: Stationary Sources

Federal departments and agencies submitted their most recent annual reports of progress to the Office of Management and Budget in June 1970. These reports reflected conditions as they existed on April 1, 1970.

Over that period, 500 remedial actions were initiated at 391 Federal installations in 49 States, the District of Columbia, and Puerto Rico.

The 500 remedial actions included 121 involving fuel conversions, 46 involving cessation of open burning, closing of 20 incinerators, upgrading of 11 incinerators, and construction of 11 new incinerators.

Appendix B of this report provides statistical summary of remedial actions classified by agencies and types of projects. Appendix B provides a brief description of each project.

For Fiscal 1970, appropriations were made for nearly every abatement project for which funds were requested. It is now estimated that a total of more than $74,000,000 has been invested by Federal departments and agencies in air pollution abatement projects initiated or completed over the past four years.

III. Progress: Mobile Sources

At the request of the President, the Administrator of General Services issued, in October 1970, a regulation requiring the use of lead-free or low-lead (containing not more than 0.5 grams of lead per gallon) gasoline in motor vehicles operated by the Federal Government except where it is clearly impractical or unfeasible to comply. The regulation excludes cost as a factor in determining whether compliance is practical or feasible.

In announcing issuance of the regulation, the President also released the text of a letter in which he urged all Governors to undertake similar efforts with respect to the States' use of gasoline.

The President's announcement, the text of his letter to Governors, and the regulation issued by the Administrator of General Services are reproduced in Appendix D of this report.

Within the Department of Defense, the Air Force has a program underway to install new burner cans and fuel nozzles in certain jet engines to reduce emissions of particulate matter (smoke). These programs are being carried out as part of routine maintenance operations. In addition, Navy contracts for procurement of new production engines now contain stringent specifications regarding emission standards. The Air Force also has underway or planned a number of studies aimed at providing new or better solutions to the problem of air pollution from jet engines.

The General Services Administration and the Postal Service, in cooperation with EPA, have undertaken a number of studies of the desirability and feasibility of using fuels such as compressed natural gas

and liquified petroleum gas in their motor vehicle fleets. These studies are being conducted in several cities. The Tennessee Valley Authority also is engaged in efforts to upgrade control of emissions from its motor vehicles.

The Coast Guard is converting boilers on 18 of its cutters to use Navy Special Fuel Oil, a relatively clean-burning fuel. In addition, six cutters equipped with gas turbine propulsion systems are being upgraded through the installation of improved burner cans.

IV. Special Problems

This section describes increased efforts made by Federal agencies to define and solve various special problems in the field of air pollution control.

Because of the continuing concern about emissions from Army Ammunition Plants (AAP), especially nitrogen oxides emissions, a three-day seminar was conducted in June 1970. This seminar was devoted to an in-depth discussion of the best available technology for the control of nitrogen oxides. Participants included representatives of the Army Materiel Command, Army Munitions Command, Corps of Engineers, and the Army Environmental Health Agency.

The Navy has undertaken a great deal of developmental work relating to the control of visible smoke from fire-fighting training schools. Fire-fighting training requires the use of open tank fires, open flight-deck fires, helicopter-pad fires, and contained fires in ship mock-up structures. At its Treasure Island facility, the Navy has installed an afterburner, which significantly reduces visible emissions during fire-fighting training operations in ship mockup structures.

A prototype facility for the elimination of smoke from large open tank fires is under construction at the Fleet Training Center in San Diego. The open-fire pollution control technology developed at these facilities, together with the results of research and development work at the Navy Training Device Center in Orlando, Florida, will facilitate design of smoke-elimination facilities for other fire-fighting training schools.

At the Great Lakes Training Facility, another prototype system has been installed and is being tested as a means of controlling smoke from

open tank fires and ship mock-up fires. This system consists essentially of devices which inject a fine spray of water at the burning surface. Objectionable smoke is eliminated and, at the same time, the training requirements for flame and heat are maintained. Such a system is less expensive than an afterburner facility.

An incinerator used for the disposal of harbor driftwood by the Corps of Engineers at its Caven Point Facility in New Jersey was evaluated in September 1970. Participants were sampling teams from the Air Force, the Army, and EPA. The evaluation provided a basis for necessary corrective measures to bring emissions into compliance with applicable standards.

The continuing problem of munition and propellant disposal is under active study by both the Army and Navy. At Picatinny Arsenal in New Jersey, an existing incineration system, incorporating well instrumented scrubbers, afterburners, and catalytic converters, is being modified to permit detailed study and evaluation of new methods for the disposal of such materials.

At the Naval Ordnance Station in Indian Head, Maryland, and the Naval Weapons Laboratory in Dahlgren, Virginia, work is underway on improved incineration techniques for shipboard destruction of monopropellants and other waste munitions. The Naval Ordnance Environmental Health Center in Cincinnati, Ohio, is also undertaking a substantial program to develop ways to recycle or reclaim useful products from explosives and propellants. Among the methods receiving special attention are controlled incineration, chemical destruction, and biological degradation.

Control of emissions from jet engine test cells is a particularly difficult problem. Research on this problem, for both the Air Force and

Navy, is being carried out at the Naval Air Rework Facility in Jacksonville, Florida. A prototype nucleation-scrubber is under construction on one test cell and will be studied for operating characteristics, efficiency, and cost.

Technical assistance was provided to the General Services Administration (GSA) on the disposal of approximately 30,000 pounds of surplus or deteriorated morphine. In cooperation with officials of the State of New Jersey, the morphine was incinerated under controlled conditions. Extensive advice was obtained from recognized experts on morphine and on its chemistry and disposal. While there were no precise data on the end-products resulting from the combustion of morphine, it was concluded that by maintaining sufficiently high temperatures, in excess of 1200-1400°F, there would be no deleterious products.

In two instances during the past year, problems arose with facilities which involved technical, rather than direct, Federal ownership. In one case, the Federal Housing Administration (FHA) had assumed ownership of two properties with incinerator problems in the State of New Jersey due to default by the original owners of the properties. In another instance, the Rural Electrification Administration (REA) had assumed ownership of a power plant utilizing high-sulfur coal in sourthern Indiana. In each of these instances, after appropriate consultation with EPA, these agencies initiated steps to correct the air pollution problems associated with the facilities.

V. Emission Studies

Preparation of emission inventory reports on Federal Facilities has been initiated with respect to 34 air quality control regions. Thus far, 21 reports have been completed and distributed to the agencies and personnel involved in the evaluation and control of air pollution from Federal sources within the regions. Reports on the other 13 regions will be completed by June 30, 1971.

Work is continuing on a data bank on the estimated 20,000 Federally owned installations in the Nation. The data bank is designed to store data on air pollution emissions from each of these installations in a form readily accessible for study and problem evaluation. The data bank has been useful in responding to various requests from State and local agencies for facility and emission data on Federal sources within their areas of jurisdiction.

VI. Incineration

In 1970, EPA personnel witnessed tests on four manufacturers' lines of incinerators proposed for use at Federal facilities. The purpose of witnessing the tests is to determine whether the incinerator units comply with the emission limitations contained in the regulations applicable to Federal sources (42 C.F.R. 76). In each instance, the emissions were within allowable particulate and visible emission limits. This brings to seven the number of incinerator lines or units which have been shown to meet the emission regulations. All Federal agencies have been informed of these findings for their use and guidance when procuring incinerators.

Technical problems associated with testing of incinerators received considerable attention. Meetings were held with officials of the Incinerator Institute of America to resolve differences between their test method and the official Federal method, as described in the manual, "Specifications for Incinerator Testing at Federal Facilities". A comparative study showed that the methods are not compatible. The procedures in the Federal manual continue to serve as the basis for determining compliance.

An "Interim Guide of Good Practice for Incineration at Federal Facilities" is among the guidance documents prepared for use by Federal agencies. EPA also assisted the Building Research Advisory Board (BRAB), the Federal Construction Council (FCC) and the National Academy of Sciences (NAS) in issuing a document entitled "Impact of Air Pollution Regulations on Design Criteria for Power Plants." Presentations were made at incineration seminars held for the National Parks Service, the Department of Agriculture, the Department of the Army, and the Department of Health, Education, and Welfare.

APPENDIX A

Control of Air and Water Pollution at Federal Facilities

Statement by the President Upon Signing Executive Order 11507. February 4, 1970

A wise man once told a friend, "What you do speaks so loudly, I cannot hear what you say." Because actions speak louder than words, I have today issued an Executive order which will eliminate air and water pollution caused by Federal facilities.

Over the past several years, the Federal Government has become one of the Nation's worst polluters. Clearly, the Federal Government cannot be an effective leader in the battle to save the environment so long as this intolerable situation continues.

The order I am issuing today will require that all projects or installations owned by or leased to the Federal Government be designed, operated, and maintained so as to conform with air and water quality standards—present and future—which are established under Federal legislation.

Specific performance requirements for each facility will be set by agency heads with the approval of the Secretary of Health, Education, and Welfare in the case of air pollution controls and the Secretary of the Interior in the case of water pollution controls. All existing facilities must comply with this order by December 31, 1972.

The order establishes a $359 million program for achieving this objective and prohibits the transfer of these funds to other programs. The order also requires that all facilities which are built in the future must be pollution free; budget requests for new facilities must include all necessary funds for pollution control.

Orders similar to this one have been issued in the past but their requirements have been ambiguously worded, poorly enforced, and generally ineffective. This order remedies the deficiencies of these earlier efforts: It sets precise standards, it provides for strict enforcement, and it guarantees that pollution control funds will not be diverted to other uses. The order also establishes procedures for operating pollution control facilities, handling materials which may cause air or water pollution, and eliminating pollution of ground waters.

The order I am issuing today represents another important step in our efforts to clean up the environment, one which takes advantage of the fact that Federal legislation already sets quality standards for air and water. There are other Federal activities, of course, which affect the environment in other important ways. I have asked the Environmental Quality Council to maintain surveillance over such activities and to recommend any further actions which may be needed.

Federal facilities are owned by all the people. This order will see to it that they are operated in the interests of all the people. As the Federal Government considers and institutes further pollution abatement measures in the future, it can do so with the confidence that it has first moved to sweep its own doorstep clean.

Control of Air and Water Pollution at Federal Facilities

Executive Order 11507. February 4, 1970

PREVENTION, CONTROL, AND ABATEMENT OF AIR AND WATER POLLUTION AT FEDERAL FACILITIES

By virtue of the authority vested in me as President of the United States and in furtherance of the purpose and policy of the Clean Air Act, as amended (42 U.S.C. 1857), the Federal Water Pollution Control Act, as amended (33 U.S.C. 466), and the National Environmental Policy Act of 1969 (Public Law No. 91-190, approved January 1, 1970), it is ordered as follows:

SECTION 1. *Policy.* It is the intent of this order that the Federal Government in the design, operation, and maintenance of its facilities shall provide leadership in the nationwide effort to protect and enhance the quality of our air and water resources.

SEC. 2. *Definitions.* As used in this order:

(a) The term "respective Secretary" shall mean the Secretary of Health, Education, and Welfare in matters pertaining to air pollution control and the Secretary of the Interior in matters pertaining to water pollution control.

(b) The term "agencies" shall mean the departments, agencies, and establishments of the executive branch.

(c) The term "facilities" shall mean the buildings, installations, structures, public works, equipment, aircraft, vessels, and other vehicles and property, owned by or constructed or manufactured for the purpose of leasing to the Federal Government.

(d) The term "air and water quality standards" shall mean respectively the quality standards and related plans of implementation, including emission standards, adopted pursuant to the Clean Air Act, as amended, and the Federal Water Pollution Control Act, as amended, or as prescribed pursuant to section 4(b) of this order.

(e) The term "performance specifications" shall mean permissible limits of emissions, discharges, or other values applicable to a particular Federal facility that would, as a minimum, provide for conformance with air and water quality standards as defined herein.

(f) The term "United States" shall mean the fifty States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, and Guam.

SEC. 3. *Responsibilities.* (a) Heads of agencies shall, with regard to all facilities under their jurisdiction:

(1) Maintain review and surveillance to ensure that the standards set forth in section 4 of this order are met on a continuing basis.

(2) Direct particular attention to identifying potential air and water quality problems associated with the use and production of new materials and make provisions for their prevention and control.

(3) Consult with the respective Secretary concerning the best techniques and methods available for the protection and enhancement of air and water quality.

(4) Develop and publish procedures, within six months of the date of this order, to ensure that the facilities under their jurisdiction are in conformity with this order. In the preparation of such procedures there shall be timely and appropriate consultation with the respective Secretary.

(b) The respective Secretary shall provide leadership in implementing this order, including the provision of technical advice and assistance to the heads of agencies in connection with their duties and responsibilities under this order.

(c) The Council on Environmental Quality shall maintain continuing review of the implementation of this order and shall, from time to time, report to the President thereon.

SEC. 4. *Standards.* (a) Heads of agencies shall ensure that all facilities under their jurisdiction are designed, operated, and maintained so as to meet the following requirements:

(1) Facilities shall conform to air and water quality standards as defined in section 2(d) of this order. In those cases where no such air or water quality standards are in force for a particular geographical area, Federal facilities in that area shall conform to the standards established pursuant to subsection (b) of this section. Federal facilities shall also conform to the performance specifications provided for in this order.

(2) Actions shall be taken to avoid or minimize wastes created through the complete cycle of operations of each facility.

(3) The use of municipal or regional waste collection or disposal systems shall be the preferred method of disposal of wastes from Federal facilities. Whenever use of such a system is not feasible or appropriate, the heads of agencies concerned shall take necessary measures for the satisfactory disposal of such wastes, including:

(A) When appropriate, the installation and operation of their own waste treatment and disposal facilities in a manner consistent with this section.

(B) The provision of trained manpower, laboratory and other supporting facilities as appropriate to meet the requirements of this section.

(C) The establishment of requirements that operators of Federal pollution control facilities meet levels of proficiency consistent with the operator certification requirements of the State in which the facility is located. In the absence of such State requirements the respective Secretary may issue guidelines, pertaining to operator qualifications and performance, for the use of heads of agencies.

(4) The use, storage, and handling of all materials, including but not limited to, solid fuels, ashes, petroleum products, and other chemical and biological agents, shall be carried out so as to avoid or minimize the possibilities for water and air pollution. When appropriate, preventive measures shall be taken to entrap spillage or discharge or otherwise to prevent accidental pollution. Each agency, in consultation with the respective Secretary, shall establish appropriate emergency plans and procedures for dealing with accidental pollution.

(5) No waste shall be disposed of or discharged in such a manner as could result in the pollution of ground water which would endanger the health or welfare of the public.

(6) Discharges of radioactivity shall be in accordance with the applicable rules, regulations, or requirements of the Atomic Energy Commission and with the policies and guidance of the Federal Radiation Council as published in the Federal Register.

(b) In those cases where there are no air or water quality standards as defined in section 2(d) of this order in force for a particular geographic area or in those cases where more stringent requirements are deemed advisable for Federal facilities, the respective Secretary, in consultation with appropriate Federal, State, interstate, and local agencies, may issue regulations establishing air or water quality standards for the purpose of this order, including related schedules for implementation.

(c) The heads of agencies, in consultation with the respective Secretary, may from time to time identify facilities or uses thereof which are to be exempted, including temporary relief, from provisions of this order in the interest of national security or in extraordinary cases where it is in the national interest. Such exemptions shall be reviewed periodically by the respective Secretary and the heads of the agencies concerned. A report on exemptions granted shall be submitted to the Council on Environmental Quality periodically.

SEC. 5. *Procedures for abatement of air and water pollution at existing Federal facilities.* (a) Actions necessary to meet the requirements of subsections (a)(1) and (b) of section 4 of this order pertaining to air and water pollution at existing facilities are to be completed or under way no later than December 31, 1972. In cases where an enforcement conference called pursuant to law or air and water quality standards require earlier actions, the earlier date shall be applicable.

(b) In order to ensure full compliance with the requirements of section 5(a) and to facilitate budgeting for necessary corrective and preventive measures, heads of agencies shall present to the Director of the Bureau of the Budget by June 30, 1970, a plan to provide for such improvements as may be necessary to meet the required date. Subsequent revisions needed to keep any such plan up-to-date shall be promptly submitted to the Director of the Bureau of the Budget.

(c) Heads of agencies shall notify the respective Secretary as to the performance specifications proposed for each facility to meet the requirements of subsections 4 (a)(1) and (b) of this order. Where the respective Secretary finds that such performance specifications are not adequate to meet such requirements, he shall consult with the agency head and the latter shall thereupon develop adequate performance specifications.

(d) As may be found necessary, heads of agencies may submit requests to the Director of the Bureau of the Budget for extensions of time for a project beyond the time specified in section 5(a). The Director, in consultation with the respective Secretary, may approve such request if the Director deems that such project is not technically feasible or immediately necessary to meet the requirements of subsections 4 (a) and (b). Full justification as to the extraordinary circumstances necessitating any such extension shall be required.

(e) Heads of agencies shall not use for any other purpose any of the amounts appropriated and apportioned for corrective and preventive measures necessary to meet the requirements of subsection (a) for the fiscal year ending June 30, 1971, and for any subsequent fiscal year.

SEC. 6. *Procedures for new Federal facilities.* (a) Heads of agencies shall ensure that the requirements of section 4 of this order are considered at the earliest possible stage of planning for new facilities.

(b) A request for funds to defray the cost of designing and constructing new facilities in the United States shall be included in the annual budget estimates of an agency only if such request includes funds to defray the costs of such measures as may be necessary to assure that the new facility will meet the requirements of section 4 of this order.

(c) Heads of agencies shall notify the respective Secretary as to the performance specifications proposed for each facility when action is necessary to meet the requirements of subsections 4 (a)(1) and (b) of this order. Where the respective Secretary finds that such performance specifications are not adequate to meet such requirements he shall consult with the agency head and the latter shall thereupon develop adequate performance specifications.

(d) Heads of agencies shall give due consideration to the quality of air and water resources when facilities are constructed or operated outside the United States.

SEC. 7. *Procedures for Federal water resources projects.* (a) All water resources projects of the Departments of Agriculture, the Interior, and the Army, the Tennessee Valley Authority, and the United States Section of the International Boundary and Water Commission shall be consistent with the requirements of section 4 of this order. In addition, all such projects shall be presented for the consideration of the Secretary of the Interior at the earliest feasible stage if they involve proposals or recommendations with respect to the authorization or construction of any Federal water resources project in the United States. The Secretary of the Interior shall review plans and supporting data for all such projects relating to water quality, and shall prepare a report to the head of the responsible agency describing the potential impact of the project on water quality, including recommendations concerning any changes or other measures with respect thereto which he considers to be necessary in connection with the design, construction, and operation of the project.

(b) The report of the Secretary of the Interior shall accompany at the earliest practicable stage any report proposing authorization or construction, or a request for funding, of such a water resource project. In any case in which the Secretary of the Interior fails to submit a report within 90 days after receipt of project plans, the head of the agency concerned may propose authorization, construction, or funding of the project without such an accompanying report. In such a case, the head of the agency concerned shall explicitly state in his request or report concerning the project that the Secretary of the Interior has not reported on the potential impact of the project on water quality.

SEC. 8. *Saving provisions.* Except to the extent that they are inconsistent with this order, all outstanding rules, regulations, orders, delegations, or other forms of administrative action issued, made, or otherwise taken under the orders superseded by section 9 hereof or relating to the subject of this order shall remain in full force and effect until amended, modified, or terminated by proper authority.

SEC. 9. *Orders superseded.* Executive Order No. 11282 of May 26, 1966, and Executive Order No. 11288 of July 2, 1966, are hereby superseded.

RICHARD NIXON

The White House
February 4, 1970

Title 42—PUBLIC HEALTH

Chapter I—Public Health Service Department of Health, Education, and Welfare

SUBCHAPTER F—QUARANTINE, INSPECTION, AND LICENSING

PART 76—PREVENTION, CONTROL, AND ABATEMENT OF AIR POLLUTION FROM FEDERAL GOVERNMENT ACTIVITIES: PERFORMANCE STANDARDS AND TECHNIQUES OF MEASUREMENT

Sec.

AUTHORITY: The provisions of this Part 76 issued under section 5 of Executive Order 11282; 3 CFR, 1966 comp.

SOURCE: The provisions of this Part 76 appear at 31 F.R. 7902, June 3, 1966, unless otherwise noted.

§76.1 Definitions.

As used in this part:

(a) "Executive Order" means Executive Order No. 11282.

(b) "Nonurban areas" means all areas other than urban areas.

(c) "Ringelmann Scale" means the Ringelmann Scale as published in the latest U.S. Bureau of Mines Information Circular entitled "Ringelmann Smoke Chart".

(d) "Secretary" means the Secretary of Health, Education, and Welfare.

(e) "Smoke Inspection Guide" means the U.S. Public Health Service Smoke Inspection Guide described in Part 75 of this title.

(f) "Urban areas" means those areas classified as urban in the latest available Federal census, or as Standard Metropolitan Statistical Areas by the Bureau of the Budget.

(g) "Unit" means all indirect heat exchangers connected to a single stack.

(h) "Particulate matter" means any material, except uncombined water, that exists as a solid or liquid at standard conditions.

(i) "Standard conditions" means a temperature of 70° Fahrenheit a. d a pressure of 14.7 pounds per square inch, absolute.

(j) "Waste" means any solid, liquid, or gaseous substance, the disposal of which may create an air pollution problem.

[31 F.R. 7902, June 3, 1966, as amended at 34 F.R. 11419, July 10, 1969]

§76.2 Intent.

It is the intent of these standards that emissions to the atmosphere from Federal facilities and buildings shall not be permitted if such emissions endanger health or welfare and that emissions which are likely to be injurious or hazardous to people, animals, vegetation, or property shall be minimized.

§76.3 Applicability.

(a) Unless otherwise indicated, the standards in this part apply to both new and existing Federal facilities and buildings. These standards are effective upon publication in the FEDERAL REGISTER, except for those facilities and buildings which are likely to require installation of improvements under the plan to be submitted in accordance with section 3 of the Executive Order.

(b) Except for discharges of radioactive effluents which are regulated by the Atomic Energy Commission, Federal facilities and buildings shall conform to the air pollution standards prescribed by the State or community in which they are located. If State or local standards are not prescribed for a particular location, or if the State or local standards are less stringent than the standards prescribed herein, the standards in this part shall be applicable to discharges from such Federal facilities and buildings except as otherwise indicated.

(c) Temporary operations that may result in potential air pollution problems, such as those associated with research, development, test, evaluation, space, and military activities, shall be conducted with such precautions and safeguards as are needed to achieve the intent of these standards.

(d) The Secretary may, upon application of the relevant department, agency or establishment, exempt any Federal facility or building from the objectives contained in section 4 of the Executive order and from any or all of these standards whenever he determines that the activities of such building or facility will not significantly conflict with the intent of the Executive order and that such an exemption is in the public interest.

§76.4 Combustion of fuel.

(a) The following standards apply to the combustion units of facilities and buildings having a heat

input of less than 1,000 million B.t.u./hour, other than fireplaces, stoves, or grills burning wood or charcoal:

(1) Manually fired equipment shall not be installed as new or replacement equipment, except for the burning of anthracite, coke, or smokeless fuel.

(2) (i) For new units, except during startup, cleaning of fires, or soot blowing, the density of any emission to the atmosphere shall not exceed No. 1 on the Ringelmann Scale or the Smoke Inspection Guide.

(ii) For existing units, except during startup, cleaning of fires, or soot blowing, the density of any emission to the atmosphere shall not exceed No. 2 on the Ringelmann Scale or Smoke Inspection Guide.

(3) A photoelectric or other type smoke detector, recorder, or alarm shall be installed on units larger than ten million BTU per hour input, except where gas or light oil (No. 2 or lighter) is burned.

(4) During routine operation, the emission of particles larger than 60 microns shall not normally occur.

(5) Means shall be provided in all newly constructed units and wherever practicable in existing units to allow the periodic measurement of flyash and other particulate matter.

(6) All new or replacement spreader stoker installations shall be of a type that automatically discharges ashes to the ash pit either continuously or in very frequent small increments, and flyash shall be reinjected only from boiler passes.

(7) For units of less than 10 million BTU/hour heat input, the emission of flyash and other particulate matter shall not exceed 0.6 pounds of particulate matter per million BTU heat input, as measured by the American Society of Mechanical Engineers Power Test Code No. 27 for "Determining Dust Concentrations in a Gas Stream," or equivalent test method.

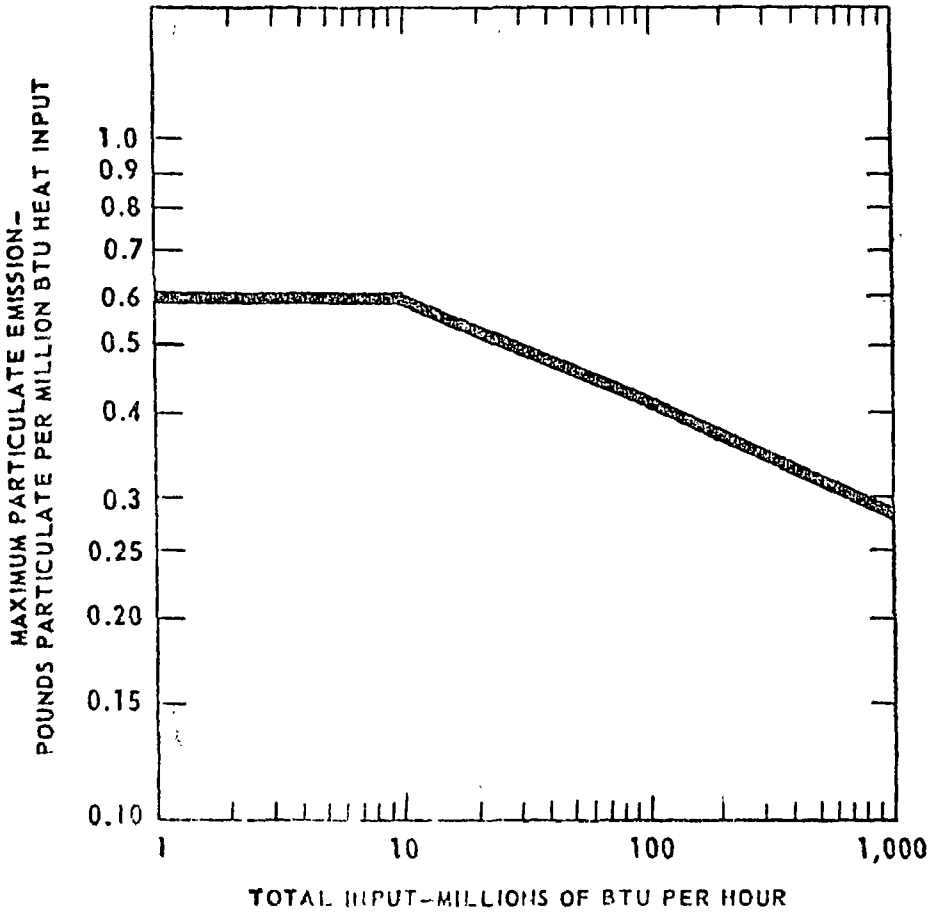
(8) For units between 10 million and 1,000 million BTU/hour heat input, the emission of flyash and other particulate matter shall not exceed that specified in figure 1, as measured by the test method specified in subparagraph (7) of this paragraph. Existing units shall meet this standard within the time designated by the plan submitted in accordance with section 3 of the Executive order except that with respect to existing spreader stoker units the plan may specify certain units which may emit particulate matter at an interim rate not exceeding 0.6 lb/million BTU heat input.

(b) For units having a heat input of more than 1,000 million BTU/hour, the appropriate department, agency, or establishment shall seek special advice from the Secretary with regard to smoke, flyash, and other particulate emissions.

§76.5 Sulfur oxides.

(a) Combustion units of facilities or buildings not located in areas specified by the Scretary under paragraph (c) of this section and whose heat input is less than 1,000 million BTU/hour shall burn the lowest sulfur content fuel that is reasonably available. In determining reasonable availability, the factors to be considered include, among others, price, firmness of supply, extent of existing pollution, and assurance of

FIGURE 1. -- MAXIMUM EMISSION OF PARTICULATE MATTER FROM FUEL BURNING INSTALLATIONS



supply under adverse weather and natural disaster conditions.

(b) For combustion units or Federal facilities or buildings not located in areas specified by the Secretary under paragraph (c) of this section and whose heat input is more than 1,000 million BTU/hour, the appropriate department, agency, or establishment shall seek special advice from the Secretary with regard to sulfur-oxide emissions.

(c) (1) Effective October 1, 1969, combustion units of all Federal facilities or buildings located in the following areas shall comply with applicable emission limitations and control measures set out below:

(i) In the New Jersey-New York Connecticut Interstate Air Quality Control Region as defined by 42 CFR Part 81, the emission rate of sulfur oxides (calculated as sulfur dioxide) from fuels used in combustion units shall not exceed 0.35 pounds per million B.t.u. (gross value) heat input.

(ii) In the Metropolitan Chicago Interstate Air Quality Control Region (Indiana-Illinois) and in the Metropolitan Philadelphia Interstate Air Quality Control Region (Pennsylvania-New Jersey- Delaware) as defined in 42 CFR Part 81, the emission rate of sulfur oxides (calculated as sulfur dioxide) from fuels used in combustion units shall not exceed 0.65 pounds per million B.t.u. (gross value) heat input.

(2) If compliance with the above emission standard is to be accomplished by means of controlled fuel quality, the agency responsible for each Federal facility in the designated areas shall establish appropriate fuel specifications to insure that the above emission limitations are met and shall provide for adequate tests to ascertain that delivered fuel meets the applicable specifications. If removal of sulfur oxides from flue gases is used to control emissions, the facility shall provide for continuous monitoring and recording of the sulfur oxide content of flue gases emitted. The sulfur content of fuels shall be determined in accordance with current recognized testing procedures of the American Society for Testing and Materials. The sulfur content of the flue gases shall be determined in accordance with current recognized testing procedures of the American Society of Mechanical Engineers.

(3) The limitations and measures established in subparagraph (1) of this paragraph shall be revised or amended only after consultation with appropriate Federal, State, and local officials and affected parties. Not less than 30 days prior to prescribing such revised or amended limits or measures, the Secretary will publish in the FEDERAL REGISTER notice of his intention to adopt such limits or measures, and will thereafter publish in the FEDERAL REGISTER the limits or measures established. The Secretary may at any time designate other urban areas which suffer from extremely high air pollution levels, and after similar consultation, and publication in the FEDERAL REGISTER, prescribe such limits or measures as he determines are necessary to carry out the intent of Executive Order 11282.

(d) The emission of the oxides of sulfur the atmosphere shall be monitored at regular intervals by determining the sulfur content of the fuel used or by determining the sulfur content of flue gases.

[31 F.R. 7902, June 3, 1966, as amended at 32 F.R. 4415, Mar. 23, 1967; 34 F.R. 11419, July 10, 1969]

§76.6 Stacks.

For buildings or facilities in nonurbanized areas, the particle emission standards of § 76.4(a) (7) and (8) may be revised for an individual installation by amount to be determined by the Secretary, when:

(a) The stack height exceeds by 2½ times the height of the highest building in that area, and

(b) The pollution level in any area will not be significantly increased thereby.

For large plants the determination of chimney height shall be based on air quality criteria, land use, and meteorological, topographical, aesthetic, and operating factors.

§76.7 Storage and handling of fuels and ash.

(a) Solid fuels and ash shall be stored and handled so as not to release to the atmosphere dust in significant quantities.

(b) In quantities of 40,000 gallons or more, gasoline or any volatile petroleum distillate or organic liquid having a vapor pressure of 1.5 p.s.i.a. or greater under actual storage conditions shall be stored in pressure tanks or reservoirs or shall be stored in containers equipped with a floating roof or vapor recovery system or other vapor emission control device.

(c) Stationary gasoline storage tanks with a capacity of 250 gallons or more shall be equipped with either submerged filling inlets or with vapor recovery or emission control systems such that loss of vapor to the atmosphere during filling operations shall be minimized.

(d) Gasoline or petroleum distillate tank car or tank truck loading facilities handling 20,000 gallons per day or more shall be equipped with submersible filling arms or other vapor emission control systems.

§76.8 Disposal of waste.

(a) (1) Waste shall not be burned in open fires in urban areas.

(2) In nonurban areas, there shall not be burned in open fires, within a 24-hour period, more than 25 pounds of waste at a single site nor more than 500 pounds of waste at any number of sites within a 1-mile radius, except that these quantities may be exceeded in the case of onsite burning of waste produced in connection with operations performed at railroad rights-of-way, interurban highways, irrigation canals, forests, agricultural sites, etc., and provided that care is exercised to prevent creation of localized air pollution which endangers health or welfare. Deteriorated or unused explosives, munitions, rocket propellants, and certain hazardous wastes may be burned in open fires, in accordance with recognized procedures.

(3) Wastes shall not be left in open dumps.

(4) Wastes that are disposed of in sanitary landfills shall be disposed of in accordance with procedures described in "Sanitary Landfill Facts" (PHS publication No. 1792, 1968) and any amendments or revisions thereof. Said document is available to any interested person, whether or not affected by the provisions of this part, upon request to the National Air Pollution Control Administration, Rockville, Md 20852, which maintains an official historic file of the document, or to the Public Health Service Information Center as listed in 45 CFR 5.31 (32 F.R. 9316).

(b) (1) Waste shall be burned only in facilities especially designed for that purpose, except as provided in paragraph (a) of this section.

(2) For incinerators acquired on or after June 3, 1966 the density of any emission to the atmosphere shall not exceed number 1 on the Ringelmann Scale or the Smoke Inspection Guide for a period or periods aggregating more than 3 minutes in any 1 hour, or be of such opacity as to obscure an observer's view to an equivalent degree.

(3) For incinerators acquired prior to June 3, 1966 the density of any emission to the atmosphere shall not exceed number 2 on the Ringelmann Scale or the Smoke Inspection Guide for a period or periods aggregating more than 3 minutes in any 1 hour, or be of such opacity as to obscure an observer's view to an equivalent degree.

(c) (1) In addition, for installations burning more than 200 pounds of waste per hour, emissions shall not exceed 0.2 grain of particulate matter per standard cubic foot of dry flue gas corrected to 12 percent carbon dioxide (without the contribution of carbon dioxide from auxiliary fuel), measured in accordance with the test procedures described in "Specifications for Incinerator Testing at Federal Facilities" (PHS publication, October, 1967) and any amendments or revisions thereof. Said document is available to any interested person, whether or not affected by the provisions of this part, upon request to the National Air Pollution Control Administration, Rockville, Md. 20852, which maintains an official historic file of the document, or to the Public Health Service Information Center or Regional Office Information Center as listed in 45 CFR 5.31 (32 F.R. 9316).

(2) For installations burning 200 pounds of waste per hour or less, emissions shall not exceed 0.3 grain of particulate matter per standard cubic foot of dry flue gas corrected to 12 percent carbon dioxide (without the contribution of carbon dioxide from auxiliary fuel), measured in accordance with the test specifications described in "Specifications for Incinerator Testing at Federal Facilities" (PHS publication, October 1967) and any amendments or revisions thereof.

(d) Test procedures which are approved by the Commissioner, National Air Pollution Control Administration, as Equivalent to those prescribed by paragraphs (c) (1) and (c) (2) of this section may be used for the purpose of determining an installation's compliance with the emission standards for particulate matter contained in such paragraphs.

[34 F.R. 11419, July 10, 1969]

§76.9 Other pollution producing processes.

For dusts, fumes, or gases from any process not heretofore described, except for discharges of radioactive effluents regulated by the Atomic Energy Commission, whatever measures may be necessary to comply with the intent of these regulations shall be applied. This will generally require the installation of equipment or devices to minimize such emissions to the point where they will meet the standards contained in these regulations. For processes which emit toxic substances in quantities which might endanger health or welfare and for fires which emit smoke or fumes at official firefighting shcools, the appropriate department, agency, or establishment shall seek special advice from the Secretary.

APPENDIX B

SUMMARY OF REMEDIAL ACTIONS BY FEDERAL DEPARTMENTS AND AGENCIES -- FY 1970

DEPARTMENT OR AGENCY	FACILITY REPORTS	REMEDIAL ACTIONS	COMPLETED: IMPROVED FUEL BURNING SYSTEMS: CONVERSION: TO BURN GAS	TO BURN OIL	USING LOWER SULFUR FUEL	BUYING STEAM	NEW CONTROLS INSTALLED: SMOKE DETECTORS	SMOKE COLLECTORS	IMPROVED WASTE DISPOSAL PRACTICES: OPEN BURNING STOPPED	INCINERATORS: ELIMINATED	UPGRADED	NEW	VAPOR OR CHEM CONTROL	UNDERWAY: PROJECT CONTRACTS: AWARDED OR UNDER CONST.	OUT FOR BIDS	PROJECT STUDIES & DESIGNS: COMPLETED	UNDERWAY	OTHER
GRAND TOTALS	391	500	77	26	18	2	25	7	46	20	11	11	50	26	4	12	110	55
DEFENSE																		
ARMY	79	117	18	15			7	2	2	12	3	3	1-	4			22	11
NAVY	71	89	2	1	1		14	2	8	2	2		20				34	4
AIR FORCE	23	46	7	3	7	1		1	1	1	1	3	2		1		2	14
C. ENGINEERS	24	11			2				8			1						
AGRICULTURE	11	11			7											2	2	
ATOMIC ENERGY	16	23	1				4		3	1	2	1	1	3	1	2	2	
COMMERCE	1	1												1				
GENERAL SERVICES ADMIN.	72	72	30	4		1					3			7		1	2	2
HEALTH, EDUCATION & WELFARE	10	14	2						1	2		2			1	-		-
INTERIOR	10	26	3	3					10					1			1	1
JUSTICE	13	24	4						7							1	2	
NATL AERONAUTICS & SPACE	6	5			1							1						3
POST OFFICE	23	25		2					5				10		1			2
SMITHSONIAN INSTITUTION	1	1	1														1	
TENNESSEE VALLEY AUTHORITY	9	10						2									-	-
TRANSPORTATION	3	4			1				1					1			1	
VETERANS ADMINISTRATION	20	20	9											9			1	1

* "OTHER" - Includes: Operational Control programs established, projects discontinued or deferred due to inactivation, phase-out, changed procedures, or found in compliance with regulations.

APPENDIX C

ANNUAL REPORT OF PROGRESS BY INSTALLATION

DURING FISCAL YEAR 1970

DEPARTMENT OF AGRICULTURE

INSTALLATION	ACTION
U. S. NATIONAL ARBORETUM Washington, D. C.	Using fuel oil containing no more than 1% sulfur. Complies with local regulations.
AGRICULTURAL RESEARCH CENTER Beltsville, Maryland	DO
AGRICULTURAL RESEARCH STATION ADP Incinerator-129A ARC Beltsville, Maryland	Design completed for new incinerator in Post Mortem building.
AGRICULTURAL RESEARCH STATION Incinerator-204 ARC Beltsville, Maryland	Funds secured to design and construct a new incinerator.
AGRICULTURAL RESEARCH STATION Heating Plant-309A ARC Beltsville, Maryland	Design completed and funds secured to convert heating plant from coal to gas with #2 oil standby.
PLANT INTRODUCTION STATION Glendale, Maryland	Using fuel oil containing no more than 1% sulfur. Complies with local regulations.
SWC HEAT PLANT #1 Morris, Minnesota	Design completed and funds secured to convert heating plant from #4 oil to gas with #2 oil as standby.
PLANT INSPECTION HOUSE Hoboken, New Jersey	Using fuel oil containing no more than 1% sulfur. Complies with local regulations.
ENTOMOLOGY RESEARCH STATION Moorestown, New Jersey	DO
PLUM ISLAND ANIMAL DISEASE LABORATORY Plum Island, New York	DO
EASTERN UTILITIES RESEARCH AND DEVELOPMENT LABORATORY Wyndmoor, Pennsylvania	DO

ATOMIC ENERGY COMMISSION

INSTALLATION	ACTION
ROCKY FLATS PLANT Golden, Colorado	Replace existing incinerator with a disintegrator or compliant incinerator.
ARGONNE NATIONAL LABORATORY Argonne, Illinois	Funds have been secured to convert boilers to natural gas
BURLINGTON PLANT Burlington, Iowa	Conversion of steam plant to gas completed in December 1969.
PADUCAH GASEOUS DIFFUSION PLANT Paducah, Kentucky	Wet scrubber has been installed in incinerator.
ATOMIC ENERGY COMMISSION HEADQUARTERS Germantown, Maryland	Incinerator being designed for refuse disposal.
BENDIX PLANT Kansas City, Missouri	Installation of gas afterburner and flue gas washer completed in classified waste destructor. Pulverizer and shredder installed in lieu of incinerator.
KNOLLS ATOMIC POWER LABORATORY Niskayuna, New York	Stopped open burning. Using sanitary landfill temporarily pending construction of incinerator now out for bid.
KNOLLS ATOMIC POWER LABORATORY West Milton, New York	Smoke detectors and alarms have been installed on steam plant.
FEED MATERIAL PRODUCTION CENTER Fernald, Ohio	Convert from coal to natural gas firing. Replace open burning with sanitary landfill. Install incinerator or disintegrator for classified waste, and special purpose incinerator for uranium recovery.
MOUND LABORATORY Miamisburg, Ohio	Engineering work proceeding toward conversion of heating plant to gas and installation of special purpose incinerator.
PORTSMOUTH AREA GASEOUS DIFFUSION PLANT Portsmouth, Ohio	Special purpose incinerator being designed.
SAVANNAH RIVER PLANT Aiken, South Carolina	Monitors being installed in one of seven steam plants for evaluation purposes. Engineering study for a sanitary landfill is completed.

INSTALLATION	ACTION
OAK RIDGE GASEOUS DIFFUSION PLANT (K-25) Oak Ridge, Tennessee	Completed installation of smoke recorder. Study showed electrostatic precipitators not required.
OAK RIDGE NATIONAL LABORATORY Oak Ridge, Tennessee	Landfill site completed and in operation.
OAK RIDGE OPERATIONS DIV. OF TECHNICAL INFORMATION Oak Ridge, Tennessee	Construction of gas-fired boilers now underway.
RICHLAND OPERATIONS OFFICE Richland, Washington	Packed column counterflow scrubber installed on fume exhaust stack. Prototype smoke monitors evaluated and monitors for remaining installations being procured.

DEPARTMENT OF COMMERCE

INSTALLATION	ACTION
U.S. MERCHANT MARINE ACADEMY Kings Point, Long Island, New York	Contract awarded to convert existing boilers to use natural gas and #2 oil standby. Scheduled for completion in September 1970.

DEPARTMENT OF DEFENSE

AIR FORCE

INSTALLATION	ACTION
ACS COMMUNICATIONS STATIONS Alaska (remote sites)	Project to install incinerators at 11 remote Alaskan sites cancelled because of sale of Stations to RCA
MURPHY DOME AF STATION Fairbanks, Alaska	Incinerator installed in April 1970. Project completed.
WILLIAMS AIR FORCE BASE Chandler, Arizona	Underground jet fuel and aviation gas tanks equipped with submerged inlets. Project completed.
NORTON AIR FORCE BASE San Bernardino, California	Modification of liquid storage fill under design for 7 gasoline storage tanks and 2 solvent storage tanks.
U. S. AIR FORCE PLANT 57 Ventura, California	Waste oil separator installed in May 1970. Eliminates open burning. Project completed.
DOVER AIR FORCE BASE Dover, Delaware	Conversion from manual to automatic control at Central Heating Plant under design.
ROBINS AIR FORCE BASE Warner-Robins, Georgia	Pressure/vacuum valve installed on POL tank and heating plant in Bldg. 230 eliminated by extending steam lines.
CHANUTE AIR FORCE BASE Rantoul, Illinois	Ash collector hopper repaired.
ANDREWS AIR FORCE BASE Camp Springs, Maryland	Five boilers in Bldg. 1515 converted to 1% S oil max, in March 1970. Project completed.
WESTOVER AIR FORCE BASE Amherst, Massachusetts	Classified waste incinerator has been replaced by a waste destructor in August 1969.
WESTOVER AIR FORCE BASE Chicopee, Massachusetts	Classified waste incinerator has been replaced by a waste destructor in August 1969.
CALUMET AIR FORCE STATION Calumet, Michigan	Coal fired Central Heating Plant converted to oil in August 1969. Project completed.
WADENA AIR FORCE STATION Wadena, Minnesota	Project concerning heating plant and dust collector cancelled. Station inactivated in September 1970.

DEPARTMENT OF DEFENSE

INSTALLATION	AIR FORCE	ACTION
KEESLER AIR FORCE BASE Biloxi, Mississippi		Submerged fill pipe installed on one 500 gallon gasoline storage tank in August 1969.
	AIR FORCE STATIONS	
McGUIRE AIR FORCE BASE Burlington, New Jersey		Heating plant 34-02 converted to oil in June 1969.
PALERMO AIR FORCE STATION Atlantic City, New Jersey		Project concerning conversion of heating plant cancelled. Station inactivated in June 1970.
PLATTSBURGH AIR FORCE BASE Plattsburgh, New York		Incinerators in Buildings 2385 and 2008 replaced with new incinerators. Project completed.
STEWART AIR FORCE BASE Newburgh, New York		Project to convert heating plant was cancelled. Station inactivated in December 1969.
MINOT AIR FORCE STATION Minot, North Dakota		Coal fired Central Heating Plant, Bldg. 106 converted to gas with light oil standby in November 1969. Project completed.
CLINTON COUNTY AIR FORCE BASE Wilmington, Ohio		Project to modify ash conveyors for boilers #1 and #2 for service by the ash conveyor system for boilers #3 and #4 not for bids. Modifications to be made at no cost to the government.
TINKER AIR FORCE BASE Oklahoma City, Oklahoma		Venturi scrubber installed on a pathological incinerator in June 1969. Project completed.
HILL AIR FORCE BASE Ogden, Utah		Funding and design completed for conversion of boilers in Bldg. 885 from coal to gas.
F.E. WARREN AIR FORCE BASE Cheyenne, Wyoming		Boilers in Bldgs. 810, 805, 841, 804, 151 and 150 converted from coal to gas in September 1969. Project completed.

DEPARTMENT OF DEFENSE

ARMY

INSTALLATION	ACTION
FORT RUCKER Daleville, Alabama	440 hand-fired coal furnaces eliminated by conversion to gas heat in September 1969. Conversion of central gas-fired heating plant with coal as standby now underway to provide oil standby in place of coal. Conversion of 440 hand-fired coal furnaces to gas or #2 oil now under design.
PETROLEUM DIST. OFFICE (Haines-Fairbanks) Alaska	Review of facilities indicates existing control measures meet HEW regulations. Project cancelled.
PETROLEUM DIST. OFFICE (Whittier - Anchorage) Alaska	DO
FORT WAINWRIGHT North Star Borough Alaska	New incinerator installed to replace two old oil-fired incinerators in June 1969.
NAVAJO ARMY DEPOT Flagstaff, Arizona	One coal-fired plant of 4 boilers in Bldg. S-111 converted to natural gas in March 1970.
FORT CHAFFEE Fort Smith, Arkansas	Project to provide paper shredder and to convert coal burning heating plant to gas cancelled because post is inactive.
FORT ORD Monterey Co., California	Design underway for repair of old incinerator as temporary measure until new hospital is completed.
RIVERBANK ARMY AMMUNITION PLANT Riverbank, California	Submerged inlet installed on a 1,000 gal. gasoline tank in May 1969.
SIERRA ARMY DEPOT Herlong, California	Conversion of 4 central coal-fired boilers to oil now under design.
FORT CARSON Colorado Springs, Colorado	Conversion of 208 individual hand-fired coal burning heating plants to gas now under design.
FITZSIMONS GENERAL HOSPITAL Aurora, Colorado	Two incinerators being modified now.
PUEBLO ARMY DEPOT Pueblo, Colorado	#2 fuel oil now used for two heating plants using 6 boilers. Change made in September 196 Project complete.

INSTALLATION	ACTION
ROCKY MT. ARSENAL Denver, Colorado	Instruments for expansionof air monitoring network now on order. To be installed when received.
FORT LESLIE J. McNAIR Washington, D. C.	Now using 1% max. fuel oil. Installed smoke recorder in May 1970.
ATLANTA ARMY DEPOT Forest Park, Georgia	Conversion of coal fired heating plants to natural gas now under design.
FORT BENNING Chattahoochee, Georgia	884 coal fired plants at the San Hill Area and 860 coal plants at the Harmony Church Area were converted to LPG and natural gas in May 1970.
HUNTER ARMY AIRFIELD Savannah, Georgia	12 coal fired heating plants were converted to oil in October 1969.
FORT STEWART Hinesville, Georgia	Hand-fired coal furnaces converted to gas or #2 fuel oil in October 1969. Conversion of 2 central coal-fired heating plants to gas with oil standby now under design.
U. S. ARMY RESERVE CENTER E. St. Louis, Illinois	Conversion of central coal-fired plant to natural gas now underway.
GRANITE CITY ARMY DEPOT Granite City, Illinois	Conversion of boilers to gas and installation of incinerator cancelled. Installation is to be inactivated in July 1971.
JOLIET ARMY AMMUNITION PLANT Joliet, Illinois	Conversion of 2 central coal fired heating plants (10-100 MBTUH) to natural gas now underway. Funds for this conversion have been appropriated.
ROCK ISLAND ARSENAL Rock Island, Illinois	Submerged inlets installed on two gasoline storage tanks in March 1970.
SAVANNA ARMY DEPOT Carroll Co., Illinois	Smoke detectors installed on five central oil fired heating plants in May 1970. A shredding machine has replaced an incinerator for disposal of classified waste.

INSTALLATION	ACTION
FORT BENJAMIN HARRISON Indianapolis, Indiana	30 small coal-fired heating plants were converted to gas and #2 oil in December 1969.
INDIANA ARMY AMMUNITION PLANT Charlestown, Indiana	Electrostatic precipitators for 5 boilers now under design.
U.S. ARMY RESERVE CENTER Indianapolis, Indiana	Coal fired heating system converted to gas in September 1969. Project completed.
U. S. ARMY RESERVE CENTER Lafayette, Indiana	Coal fired heating plant converted to gas in July 1969.
NEWPORT ARMY AMMUNITION PLANT Newport, Indiana	Fuel conversion not carried out because facility is inactive.
U.S. ARMY RESERVE CENTER South Bend, Indiana	One coal fired boiler (0-1 MBTUH) to be replaced by direct fired gas unit heaters. Now under design.
U.S. ARMY RESERVE CENTER Terre Haute, Indiana	Two coal fired heating plants converted to gas and oil.
KANSAS ARMY AMMUNITION PLANT Parsons, Kansas	Fly ash collectors and over-fire air system installed on 2 coal fired plants.
FORT RILEY Junction City, Kansas	44 submerged inlets installed on 44 gasoline storage tanks in June 1970.
SUNFLOWER ARMY AMMUNITION PLANT 13 miles east of Lawrence, Kansas	Conversion of gas and coal steam power plant (100-1000 MBTUH) to natural gas and #6 fuel oil now under design. Funds have been appropriated for this conversion. Fume scrubber for the nitrocotton nitration area now under design.
NICHOLS SUPPORT FACILITY Louisville, Kentucky	Fuel project cancelled. Facility to be transferred to City of Louisville, Ky.
FORT POLK Leesville, Louisiana	Submerged inlets and splash plates installed on 60 gasoline storage tanks in August 1969.

INSTALLATION	ACTION
ABERDEEN PROVING GROUND Aberdeen, Maryland	Project of fuel conversion at 101 coal-fired units (10-100 million BTUH input), 19 units (1-10 million BTUH input), and 87 units (less than 1 million BTUH input) cancelled because of inactivation of this facility.
FORT DETRICK Frederick, Maryland	Incinerator in Bldg. 1671 now being rehabilitated.
RADIO RECEIVING STATION Fort Detrick Frederick, Maryland	Project for submerged inlet cancelled by deactivation of facility in May 1970.
EDGEWOOD ARSENAL Edgewood, Maryland	Submerged inlets installed on 5 volatile liquid storage tanks (1000-10,000 gals. capacity) in July 1969.
FORT HOLABIRD Baltimore, Maryland	Submerged inlets now being installed on 12 gasoline storage tanks.
FORT GEORGE MEADE Odenton, Maryland	Central coal-fired heating plant (3 boilers) and 17 small coal-fired heating plants converted to gas or oil in October 1969. Submerged inlet for a gasoline storage tank now under design.
NIKE SITE W-44 Waldorf, Maryland	Submerged inlet for a gasoline storage tank now under design.
OFFICE OF CIVIL DEFENSE Olney, Maryland	Submerged inlet installed on a 5000 gal. gasoline storage tank in November 1969. Project completed.
USASTRATCOM,CONUS Suitland, Maryland	Submerged inlet installed on a 5,000 gal. gasoline storage tank in September 1969. Project completed.
FORT DEVENS Ayer, Massachusetts	Coal-fired heating plant now being converted to gas. Submerged inlets being installed on 6 gasoline storage tanks.
MICHIGAN ARMY MISSILE PLANT Sterling Heights, Michigan	Conversion of one boiler from coal to gas and disconnection of fly ash reinjection from remaining two boilers now under design. Funds have been appropriated for this project.
FORT SNELLING St. Paul, Minnesota	Combination of gas and oil fired heating plant to be converted to low-sulfur oil - now under design.

INSTALLATION	ACTION
FORT LEONARD WOOD Waynesville, Missouri	Eight coal-fired heating systems converted to #5 oil; 170 coal furnaces and 11 coal boilers converted to #2 oil. Work completed in June 1969 and January 1969 respectively. Submerged inlets being installed on 58 gasoline storage tanks.
FORT MISSOULA Missoula, Montana	4 coal-fired boilers (1-10 MBTUH) and 7 coal-fired boilers (less than 1 MBTUH) converted to gas in October 1969. Project completed.
CORNHUSKER ARMY AMMUNITION PLANT Grand Island, Nebraska	Incinerator installation cancelled. Waste disposed of in sanitary landfill.
FORT DIX Fort Dix, New Jersey	Submerged inlets being installed on nine volatile fuel storage tanks.
FORT HANCOCK (Highlands AADS) Highlands, New Jersey	Conversion of coal-fired heating plant to gas and standby low sulfur oil now under design.
FORT MONMOUTH (Coles Area) Red Bank, New Jersey	One central coal-fired heating plant converted to #2 oil in October 1969. Project completed.
FORT MOMMOUTH (Main) Monmouth, New Jersey	3 classified waste incinerators deactivated. One new multi-chamber incinerator (for Type 4 waste) of type approved by the N.J. State Dept. of Health installed in October 1969.
PICATINNY ARSENAL Dover, New Jersey	In Bldg. 506, two coal-fired boilers to be replaced with one package-type boiler to be fired with gas and #6 oil-now under design. In Bldg. 3013 replacement of boilers and conversion to gas and #6 fuel oil now under design. In Bldg. 3405 standby central coal fired steam generating plant being converted to gas (retaining coal stokers for possible major emergency) - now under design.
WHITE SANDS MISSILE RANGE Dona Ana, New Mexico	Submerged inlets being installed on 79 gasoline storage tanks.
FORT HAMILTON Brooklyn, New York	Refuse compactors installed December 1969.
WATERVLIET ARSENAL Watervliet, New York	Smoke recorders installed on central oil-fired heating plant in June 1969.

INSTALLATION	ACTION
FORT BRAGG Fayetteville, North Carolina	Conversion of 82nd Division Area central coal-fired heating plant to gas and standby fuel oil now under design. Conversion of 894 coal-fired, hand-fired heating plants now under design.
RIDGEWOOD ARMY AMMUNITION PLANT Cincinnati, Ohio	Electrostatic precipitators and gas scrubbers projects cancelled because installation is inactive.
INDIANTOWN GAP MILITARY RESERVATION Annville, Pennsylvania	9 central coal-fired heating plants being converted to oil. Submerged inlets for 44 fuel storage tanks now under design.
VALLEY FORGE GENERAL HOSPITAL Valley Forge, Pennsylvania	Short stacks eliminated on 9 boilers with breeching to existing 100 ft. stack and smoke detectors installed on all boilers over 10 MBTUH input. Work completed in March 1970. Construction underway to eliminate short stacks on 9 boilers by connecting to single tall stack. Smoke detectors being installed on boilers.
FORT JACKSON Columbia, South Carolina	12 coal-fired heating plants converted to oil or gas. Completed in October 1968.
FORT CAMPBELL Clarksville, Tennessee	Four individual coal-fired plants converted from coal to natural gas in October 1968.
MILAN ARMY AMMUNITION PLANT Milan, Tennessee	Submerged inlets being installed on 5 gasoline storage tanks.
FORT BLISS El Paso, Texas	Pulper installed to replace 3 classified waste incinerators in May 1970.
CAMP BULLIS San Antonio, Texas	Open burning eliminated; waste now contract hauled off base. Project to develop sanitary landfill cancelled.
FORT HOOD Fort Hood, Texas	Two classified waste incinerators replaced in October 1969 by classified waste shredders. Water spray system being designed for one pathological incinerator.
FORT SAM HOUSTON San Antonio, Texas	Open burning of waste oil discontinued; waste oil now sold by Disposal Officer.
FORT WOLTERS Mineral Wells, Texas	Shredders being installed to replace two (2) classified waste incinerators.

INSTALLATION	ACTION
FORT BELVOIR Fairfax County, Virginia	One coal-fired heating plant (2 boilers, 10-100 MBTUH) conversion to natural gas with standby low sulfur oil now under construction.
CAMERON STATION Alexandria, Virginia	New incinerator replaces old in December 1969. Submerged fill inlets installed on 9 gasoline storage tanks in December 1969.
FORT LEE Prince Georges County, Virginia	Bldg. 7201, 12054, 3701 and 11300 converted from coal to gas with #2 fuel oil standby in December 1969.
FORT MONROE Elizabeth City, Virginia	Submerged inlets being installed on 11 gasoline storage tanks.
CAMP PICKETT Blackstone, Virginia	Construction underway for 4 central coal-fired heating plants to unspecified fuel.
FORT LAWTON Seattle, Washington	Submerged inlets installed in June 1969 on two, 10,400 gal. gasoline storage tanks. Project completed.
FORT LEWIS Tacoma, Washington	450 coal-fired units converted to oil or gas in 1969; submerged inlets installed on 5 active gasoline storage tanks in May 1969; two, coal hand fired heating plants replaced by one, oil fired furance in June 1970; one, coal, stoker-fired heating plant connected to central heating plant to eliminate separate furnace in March 1970.
BADGER ARMY AMMUNITION PLANT Baraboo, Wisconsin	Conversion of coal-fired Power Plant #1 to oil and gas now under design.

DEPARTMENT OF DEFENSE

CORPS OF ENGINEERS

INSTALLATION	ACTION
SAN FRANCISCO HARBOR AND BAY Drift Removal Sausalito, California	Project to replace incinerator discontinued. Incinerator inoperative. Harbor debris will be disposed of in landfill.
JOHN MARTIN RESERVOIR Hasty, Colorado	Gas-fired incinerator being designed to conform to Colorado State regulations.
POTOMAC & ANACOSTIA RIVERS Washington, D. C.	Drift removal project. Incinerator on a barge is under design.
RATHBURN RESERVOIR Appanoose County, Iowa	Discontinued open burning of refuse from recreation area and established a sanitary landfill in May 1970.
KANOPOLIS RESERVOIR Ellsworth County, Kansas	Sanitary landfill established in March 1970.
PERRY RESERVOIR Perry, Kansas	Change from open burning to sanitary landfill made in March 1970.
POMONA RESERVOIR Osage County, Kansas	Sanitary landfill established in March 1970.
TUTTLE RESERVOIR Riley County, Kansas	Sanitary landfill established in April 1970.
WILSON RESERVOIR Russell County, Kansas	Sanitary landfill established in March 1969.
BALTIMORE HARBOR DRIFT REMOVAL Baltimore, Maryland	Open pit incinerator now under design. Harbor debris now being collected, hauled and placed in sanitary landfill.
POMME de TERRE RESERVOIR Hickory, Missouri	Sanitary landfill established in March 1970.
HARLAN COUNTY RESERVOIR Harlan County, Nebraska	Sanitary landfill established in March 1970.
OVERFIRE AIR PIT INCINERATOR Caven Point, New Jersey	Incinerator has been constructed and used for debris disposal.
W. T. PRESTON Seattle, Washington	Use of lighter oil has enabled this boat to meet local smoke density regulations.

DEPARTMENT OF DEFENSE

NAVY

INSTALLATION		ACTION
MARINE CORPS AIR STATION Yuma, Arizona		Open burning dump eliminated in July 1969. Refused disposed by contract.
NAVAL AIR STATION Alameda, California		Submerged fill inlet installed on gasoline storage tanks in June 1969.
	(O&M Project)	Pressure breather valves for AVGas storage tanks 97A-97E being installed.
MARINE CORPS SUPPLY CENTER Barstow, California		Sanitary landfill and plans to eliminate Boiler Plant #3 under design.
NAVAL WEAPONS STATION Concord, California		Submerged fill inlet installed on gasoline service tanks in June 1969.
NAVAL AIR STATION Lemore, California		Submerged fill inlet installed on gasoline service tanks in June 1969.
NAVAL AIR STATION Miramar, California		Development of sanitary landfill on NAS in cooperation with City of San Diego. Under design.
NAVAL AIR STATION, MOFFETT FIELD Santa Clara, California		Pressure gage indicators and submerged inlets installed on AVGas storage tanks in March and June 1969.
	(O&M Project)	Designing a multiple chamber incinerator to replace two inefficient incinerators.
NAVAL POSTGRADUATE SCHOOL Monterey, California	(O&M Project)	Designing pressure breather valve and pressure vacuum gage indicator for AVGas storage tank in Bldg. 55 of Naval Air Facility.
NAVAL AIR STATION, NORTH ISLAND San Diego, California		7 smoke detectors installed on boiler plant in Bldg. 653 in September 1969.
NAVAL SUPPLY CENTER Oakland, California		Design underway for canopy and dust collection system for boiler plant tube cleaning operations.
MARINE CORPS BASE Camp Pendleton Oceanside, California	(O&M(MARINE CORPS))	Smoke detectors installed on boiler plant in Bldg. 653 in September 1969. Control measures for metal plating and surface treating operations under design.

INSTALLATION	ACTION
PACIFIC MISSILE RANGE (O&M Project) Point Mugu Oxnard, California	Smoke detector installation under design. Sanitary landfill also under design to replace 5 open burning dumps.
NAVAL INDUSTRIAL RESERVE ORDNANCE PLANT Pomona, California	Painting facilities rehabilitated. Completed in June 1969.
PUBLIC WORKS CENTER (OPN) San Diego, California	Two smoke detectors being designed for Bldgs. 212-213, Naval Station.
FLEET TRAINING CENTER San Diego, California	Design underway for control system at fire-fighting school.
NAVAL SHIPYARD (HUNTERS POINT) San Francisco, California	Submerged inlets installed on gasoline service tanks in June 1969. Direct flame afterburners for paint bake ovens in Bldgs. 211 and 271 under construction. Conversion of boiler plant in Bldg. 231 to gas with #2 oil standby under design.
NAVAL SHIPYARD (MARE ISLAND) San Francisco, California	Submerged inlets installed on gasoline service tanks in January 1969. Improvements to eliminate odors from rubber milling operations in Bldg. 53 completed in January 1969. Direct flame afterburner for paint spray booths and ovens in Bldgs. 334 and 866 under design.
NAVAL FUEL DEPOT San Pedro, California	Vapor collection and flare system being designed to burn excess aviation gas vapors at truck loading stand.
NAVAL STATION (TREASURE ISLAND) San Francisco, California	Smoke collection system and afterburners installed. Completed in May 1969.
MARINE CORPS BASE Twentynine Palms, California	Sanitary landfill being designed to replace open burning dump.

INSTALLATION		ACTION
SUBMARINE BASE New London, Connecticut	(O&M Project)	Smoke detectors being installed at Power Plant Bldg. 29A. Stack insulation being installed in Power Plant Bldg. 29A.
	(OPN)	Smoke detectors being installed on Power Plant Bldg. 29A.
NAVAL COMMUNICATION TRAINING CENTER (CORRY FIELD) Pensacola, Florida		Open burning dump converted to sanitary landfill in July 1969.
NAVAL AIR STATION Jacksonville, Florida	(OPN)	Smoke detectors and recorders being installed in Heating Plant, Bldgs. 104 and 650.
NAVAL HOSPITAL Jacksonville, Florida	(OPN)	Smoke detectors and recorders being installed at Heating Plant, Bldg. 2032.
NAVAL STATION Key West, Florida	(OPN)	Smoke detector and recorder being installed at Boiler Plant NS 116.
NAVAL STATION Mayport, Florida	(OPN)	Smoke recorder being installed at heating plant, Bldg. 250.
PUBLIC WORKS CENTER Pensacola, Florida		Four open burning dumps replaced by sanitary landfill in July 1969.
NAVAL AIR STATION (WHITING FIELD) Milton, Florida		Open burning dump converted to sanitary landfill in July 1969.
MARINE CORP SUPPLY CENTER Albany, Georgia	(O&M) (MARINE CORP)	Sanitary landfill to replace 2 open burning dumps under design.
NAVAL AIR STATION Barbers Point, Hawaii		Sanitary landfill to eliminate open burning dump completed in September 1969.
MARINE CORPS AIR STATION Kaneohe, Hawaii	(O&M Project)	Classified incinerators being modified and replaced in Bldgs. 505 and 1291. Project under design.

INSTALLATION		ACTION
PUBLIC WORKS CENTER Pearl Harbor, Hawaii		New incinerators being designed to replace single chamber incinerators near fire-fighting school site, Aiea, Hawaii.
NAVAL HOSPITAL Great Lakes, Illinois		Alterations to existing incinerator to provide air pollution control, to increase capacity and to improve combustion under design.
PUBLIC WORKS CENTER Great Lakes, Illinois		Conversion from coal to gas with #2 oil completed in April 1970.
NAVAL TRAINING CENTER Great Lakes, Illinois		Controls for fire fighting training school are under design.
NAVAL AMMUNITION DEPOT Crane, Indiana		Submerged inlets installed on underground gasoline tanks in June 1969.
NAVAL INDUSTRIAL RESERVE ORDNANCE Mishawaka, Indiana	(PA&M) (NAVY)	Refuse incinerator being installed to eliminate open dump.
NAVAL AIR STATION Brunswick, Maine	(OPN)	Smoke detectors being installed at heating plant.
NAVAL SHIPYARD RESEARCH DEVELOPMENT CENTER Carderock, Maryland		Smoke detectors installed on heating plant in Bldg. 6 in July 1969.
NAVAL COMMUNICATION STATION Cheltenham, Maryland	(O&M) (PROJECT)	New classified waste incinerator being designed.
NAVAL ORDNANCE STATION Indian Head, Maryland		Chemical incinerator with water scrubber to burn waste liquid chemical is under design.
NAVAL ORDNANCE LABORATORY Silver Spring, Maryland		Smoke detectors installed on heating plant in June 1969.
NAVAL SHIPYARD Boston, Massachusetts		New refuse incinerator being designed.
NAVAL HOSPITAL Chelsea, Massachusetts	(OPN)	Project to improve stack discharge from boiler plant cancelled because hospital is being rebuilt.

INSTALLATION		ACTION
NAVAL AIR STATION Twin Cities, Minnesota		Submerged inlets installed on three gasoline storage tanks in June 1969.
		Smoke indicators installed on steam plant in June 1969.
NAVAL AUXILIARY AIR STATION Fallon, Nevada		Submerged inlets installed on three gasoline service tanks in June 1969.
	(O&M) (Project)	Smoke density recorder and alarm system for Bldg. 314 being designed.
NAVAL AMMUNITION DEPOT Hawthorne, Nevada		Submerged inlets installed on gasoline service tanks in June 1969.
	(OPN)	Smoke density recording system being designed for boiler plants in Bldgs. 13 and 103-6.
NAVAL AMMUNITION DEPOT Earle, New Jersey		Converted boilers from #4 oil to #2 oil in March 1970.
NAVAL SHIPYARD Brooklyn, New York		Scrubbers and miscellaneous controls installed on incinerator in December 1969.
MITCHELL MANOR HOUSING Garden City, New York	(O&M)	Conversion to gas and #2 oil under design for boilers No. 2B, 4B, 7B, 9B, 11B, 13B, 15B, 17B, 2A, 5A, 8A, 10A and 13A.
NAVAL HOSPITAL St. Albans, New York		Scrubbers and miscellaneous controls installed on incinerator in Jan. 1970.
		Conversion of heating plant to #2 oil from #6 resid under design.
NAVAL RESERVE TRAINING FACILITY Youngstown, New York		Converted boiler from coal to #2 oil in December 1969.
MARINE CORPS AIR STATION New River, North Carolina	(O&M)	Pressure vacuum vent relief valves being installed on aviation fuel storage facilities.
	(OPN)	Smoke detectors, indicators and alarms being installed on one remaining boiler.
MARINE CORPS BASE (CAMP LEJEUNE) Jacksonville, North Carolina	(O&M) (MARINE CORPS)	Sanitary landfill to replace open burning is under design.

INSTALLATION		ACTION
NAVAL RESERVE TRAINING CENTER Bethlehem, Pennsylvania		Fuel conversion project cancelled. Activity disestablished in December 1969.
NAVAL DAMAGE CONTROL TRAINING CENTER Philadelphia, Pennsylvania		Smoke abatement system under design.
NAVAL SUPPLY DEPOT Philadelphia, Pennsylvania		Conversion to low sulfur oil and gas completed in June 1970.
NAVAL STATION ROOSEVELT ROADS Humacao, Puerto Rico		Submerged inlets installed on 3 underground gasoline tanks and installed filters in exhaust fans at paint spray operations. Project completed in June 1969.
NAVAL RADIO STATION Sabena Seca, Puerto Rico		Submerged inlets installed on four underground gasoline tanks in June 1970.
NAVAL STATION, SAN JUAN ANNEX San Juan, Puerto Rico		Submerged inlet and vapor emission control valves installed on gasoline service tanks in June 1969.
NAVAL STATION San Juan, Puerto Rico		Submerged inlet and vapor emission control valves installed on gasoline service tanks in June 1969. Completed in June 1970.
MARINE CORPS, CAMP GARCIA DETACHMENT Vieques, Puerto Rico		Vapor emission control valves installed on 2-2,000 gas. and 4-20,000 gas. gasoline storage tanks in March 1970.
PUBLIC WORKS CENTER Newport, Rhode Island	(OPN)	Smoke detectors under design for 4 boiler plants at this station.
NAVAL AIR STATION (QUONSET POINT) North Kingston, Rhode Island	(OPN)	New smoke detectors under design to replace obsolete equipment at NAS, QUON PT and CBC Davisbille Boiler Plants.

INSTALLATION		ACTION
NAVAL SHIPYARD Charleston, South Carolina	(OPN)	Smoke detector, recorder and alarm being installed on each stack of Bldgs. 123 and 1176.
NAVAL STATION Charleston, South Carolina	(OPN)	Smoke detectors and recorder being installed at Bldgs. 2, 44 and 61 of heating plants.
NAVAL AIR STATION Memphis, Tennessee		Open burning discontinued. Waste hauled to county sanitary landfill in packer trucks. Completed in June 1969.
NAVAL SUPPLY CENTER Norfolk, Virginia		Project for new incinerator cancelled. Refuse disposal by contract.
		Waste oil destructor being designed.
NAVAL WEAPONS STATION Yorktown, Virginia	(O&M)	Smoke detecting equipment being designed for heating plant, Bldg. 12.
NAVAL AMMUNITION DEPOT Bangor, Washington		Wood shredder for scrap lumber being designed.
	(O&M)	Project to install classified material destructor discontinued because activity was disestablished in July 1970.
NAVAL RADIO STATION (JIM CREEK) Oso, Washington		Refuse incinerator eliminated; commercial collection. Classified waste destructor installed in September 1969.

GENERAL SERVICES ADMINISTRATION

PUBLIC BUILDINGS SERVICE

INSTALLATION	ACTION
FEDERAL CENTER, Bldg. 47 Denver, Colorado	Conversion from coal to gas and #2 fuel oil completed in 1968 but not previously reported.
U.S. Post Office New Britain, Connecticut	Converted from coal to oil. Project completed.
U.S. POST OFFICE & COURTHOUSE New Haven, Connecticut	Converted from coal to gas. Project completed in February 1970.
U. S. POST OFFICE Stamford, Connecticut	Converted from coal to gas. Project completed.
CENTRAL HEATING PLANT 13th & C Sts., N.W. Washington, D. C.	Conversion of boilers from coal to gas-oil heat now under design.
NEW POST OFFICE Washington, D. C.	Contract has been issued to replace old incinerator with new incinerator.
TEMPO 8 Washington, D. C.	Secondary fuel and an additional chamber has been added to classified waste incinerator.
WEST HEATING PLANT 29th & K Sts., N.W. Washington, D. C.	Conversion of boilers from coal to gas-oil heat now under design.
U.S. POST OFFICE Blackfoot, Idaho	Conversion from coal to natural gas completed in 1969.
U.S. POST OFFICE Orofino, Idaho	Conversion from coal to diesel oil completed in 1969.
U.S. POST OFFICE Kellogg, Idaho	Design underway to convert from coal to natural gas.
Post Office and Court House Benton, Illinois	Conversion from coal to gas completed in 1970.
U.S. POST OFFICE Blue Island, Illinois	Converted from coal to gas. Project completed in 1969.
CHESTNUT ST. P.O. STATION Chicago, Illinois	Converted from coal to gas. Project completed in 1969.

INSTALLATION	ACTION
U.S. POST OFFICE (BACK BAY ANNEX) Boston, Massachusetts	Converted from coal to purchased steam. Project completed.
U. S. POST OFFICE Brockton, Massachusetts	Converted from coal to gas. Project completed in March 1970.
U. S. POST OFFICE Fitchburg, Massachusetts	Converted from coal to gas heat. Project completed in December 1969.
U. S. POST OFFICE Lowell, Massachusetts	Converted from coal to oil heat. Project completed.
FEDERAL CENTER Battle Creek, Michigan	Design for installation of 3 new gas fired boilers was 90% complete as of 5/4/70. Contract awarded in August 1970.
U. S. POST OFFICE Anoka, Minnesota	Conversion of coal fired boiler to natural gas is underway.
POST OFFICE & CUSTOM HOUSE St. Paul, Minnesota	Design underway for gas burner in incinerator and screen over top of smoke stack.
FEDERAL BUILDING Twin Cities, Minnesota	Burner changes under design to use #2 fuel oil.
U. S. POST OFFICE Ardmore, New Jersey	Converted to gas with #2 oil standby. Project completed in 1969.
POST OFFICE East Orange, New Jersey	Conversion to gas and #2 oil as standby underway.
U.S. POST OFFICE Dover, New Jersey	Conversion to gas with #2 oil standby. Project completed in 1969.
U. S. POST OFFICE Glen Ridge, New Jersey	Converted to gas with #2 oil standby. Project completed in 1969.
U. S. POST OFFICE Princeton, New Jersey	DO
U. S. POST OFFICE Riverton, New Jersey	DO
SCOTIA DEPOT Scotia, New York	Conversion to gas and #2 oil as standby underway.

INSTALLATION	ACTION
POST OFFICE & COURTHOUSE Charlotte, North Carolina	New gas fired boiler installed in January 1968, but project was not previously reported. Eliminates coal fired boiler.
POST OFFICE & COURT HOUSE Raleigh, North Carolina	Contract for fuel conversion awarded in June 1970. From coal to unnamed fuel.
LAKEWOOD POSTAL STATION Cleveland, Ohio	Conversion of boiler to gas fuel under design.
U.S. POST OFFICE & COURT HOUSE Columbus, Ohio	Three coal/gas boilers to be converted to all gas firing. Project under design.
U.S. POST OFFICE Findlay, Ohio	Boiler being converted to gas fuel.
U.S. POST OFFICE Hamilton, Ohio	Conversion of boiler to gas/oil underway.
SPRING GARDEN STATION P.O. Philadelphia, Pennsylvania	Converted to gas with #2 oil standby. Project completed in 1969.
U.S. POST OFFICE Phoenixville, Pennsylvania	DO
FEDERAL CENTER Denton, Texas	New paper pulper under design to replac incinerator.
U.S. POST OFFICE & COURTHOUSE Brattleboro, Vermont	Design completed for conversion fro coal to oil heat.
U.S. POST OFFICE AND COURTHOUSE Rutland, Vermont	Converted from coal to oil. Project completed.
FEDERAL BUILDING NO. 2 Arlington, Virginia	Transfer of incinerator from Navy Bldg. (No. 080027) to FOB 2 under design.
VIRGINIA HEATING PLANT (Pentagon Power Plant) Arlington, Virginia	Conversion of coal boilers to gas-oil heat now under design.
POST OFFICE AND COURT HOUSE Charlottesville, Virginia	Design underway for replacement of coal boilers with gas/oil boilers.
FRANCONIA B BUILDING Fairfax, Virginia	A scrubber has been installed on existing incinerator in 1969.

INSTALLATION	ACTION
POST OFFICE Hampton, Virginia	Scrubber and afterburner for incinerator now under design.
CUSTOMHOUSE Norfolk, Virginia	DO
POST OFFICE AND COURT HOUSE Norfolk Virginia	DO
POST OFFICE Petersburg, Virginia	DO
FEDERAL BUILDING Portsmouth, Virginia	DO
MAIN POST OFFICE Richmond, Virginia	Replacement of coal boilers with gas/oil boilers now under construction.
U.S. POST OFFICE Chehalis, Washington	Conversion from coal to gas completed in 1969.
U.S. POST OFFICE Pasco, Washington	DO
U.S. POST OFFICE Pullman, Washington	Design underway for conversion from coal to either natural gas or diesel oil.
POST OFFICE Charleston, West Virginia	Scrubber and afterburner for incinerator now under design.
FEDERAL BUILDING LaCrosse, Wisconsin	One boiler being converted to gas fuel; other boiler discontinued.
U.S. POST OFFICE Racine, Wisconsin	Conversion to gas completed in 1969.
U.S. POST OFFICE Sheboygan, Wisconsin	Converted from coal to gas. Completed in 1970.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

INSTALLATION	ACTION
GALLAUDET COLLEGE Washington, D. C.	Incinerators discontinued, trash now being removed by contract hauling.
ST. ELIZABETHS HOSPITAL Washington, D. C.	Design complete for replacement of four coal-fired boilers with gas fired units.
NATIONAL CENTER FOR DISEASE CONTROL Lawrenceville, Georgia	Design completed for incinerator exhaust gas scrubber.
NATIONAL INSTITUTE OF MENTAL HEALTH Lexington, Kentucky	Contract hauling of trash replaces open burning. Coal-fired boilers replaced by gas fired units.
NATIONAL INSTITUTES OF HEALTH Bethesda, Maryland	Design for incinerator completed and bids out for construction.
NORTHEAST RADIOLOGICAL HEALTH LABORATORY Winchester, Massachusetts	Design completed to convert burners to use fuel containing less than 1% sulfur. Shortage of this fuel is holding up completion of conversion.
PUBLIC HEALTH SERVICE HOSPITAL Boston, Massachusetts	New incinerator being installed.
U.S. PUBLIC HEALTH SERVICE HOSPITAL Staten Island, New York	Conversion to gas with #2 oil standby has been completed.
OUTPATIENT CLINIC Philadelphia, Pennsylvania	Multiple chamber incinerator installed. Project complete.
NATIONAL INSTITUTE OF MENTAL HEALTH CLINICAL RESEARCH CENTER Fort Worth, Texas	Incinerator discontinued. Trash hauled to county landfill.

DEPARTMENT OF INTERIOR

BONNEVILLE POWER ADMINISTRATION

INSTALLATION	ACTION
Substation at Alvey, Oregon	Under design.
Various locations (unspecified)	Purchasing chipping machines to supplant maintenance slash burning; contracting for garbage disposal services to eliminate open burning and incineration of garbage; discontinuing slash burning during construction right-of-way clearing.

BUREAU OF SPORT FISHERIES AND WILDLIFE

CRAB ORCHARD NATIONAL WILDLIFE REFUGE Carterville, Illinois	Three Federally owned heating units were converted from coal to gas by the lessees in FY 1970 at no cost to the Federal government. Industrial lessees of the six remaining heating units have been requested to convert to gas or #2 fuel oil by Dec. 31, 1972 at no cost to the Federal government.

BUREAU OF INDIAN AFFAIRS

HOPI INDIAN HEADQUARTERS Keams Canyon, Arizona	Conversion of boilers from #5 oil to #2 oil completed.
FORT DEFIANCE HEADQUARTERS N36-01 Fort Defiance, Arizona	Conversion of boilers from coal to gas under design
Kayenta Boarding School, N33-08 Kayenta, Arizona	Conversion of boilers from coal to #2 oil under design.
NAZLINE BOARDING SCHOOL, N35-09 Nazline, Arizona	Conversion of boilers from coal to gas under construction.
TUBA CITY AGENCY HEADQUARTERS, N33-01 Tuba City, Arizona	Conversion of boilers from #6 oil to #2 oil under design.
WINDOW ROCK HEADQUARTERS, NOO-02 Window Rock, Arizona	Conversion of boilers from coal to gas under design.
HASKELL INSTITUTE Lawrence, Kansas	Project discontinued. Re-evaluation of use of #5 oil indicates negligible pollution.

INSTALLATION	ACTION
OGLALA COMMUNITY SCHOOL Pine Ridge, South Dakota	Conversion of boilers from coal to #2 oil completed.
INTERMOUNTAIN SCHOOL, N10-01 Brigham City, Utah	Conversion of boilers from coal to gas and establishment of landfill completed.

NATIONAL PARK SERVICE

DEATH VALLEY NATIONAL MONUMENT Death Valley, California	Sanitary landfill scheduled for 1972 to replace open burning of waste.
GRAND CANYON NATIONAL PARK South Rim, Arizona	Established sanitary land-fills in place of original incinerator construction projects.
GRAND CANYON NATIONAL PARK North Rim, Arizona	Discontinued incinerator. Landfill in operation.
GRAND CANYON NATIONAL PARK Desert View, Arizona	DO
VARIOUS SITES (UNSPECIFIED)	Discontinued open burning at 27 NPS areas in 1968 - 1969. Refuse disposal converted to sanitary landfill at 22 NPS sites from 1968 to date. Contracted for commercial collection and disposal of solid waste at 4 NPS areas to date.

DEPARTMENT OF JUSTICE

BUREAU OF PRISONS

INSTALLATION	ACTION
FEDERAL CORRECTIONAL INSTITUTE Lompac, California	Design underway to upgrade waste handling equipment to improve landfill operations.
U. S. PENITENTIARY Atlanta, Georgia	Design underway to incinerate combustibles and haul non-combustibles to sanitary landfill operated by Atlanta.
U. S. PENITENTIARY Marion, Illinois	Design underway to improve sanitary landfill operations.
U. S. PENITENTIARY Terre Haute, Indiana	Conversion of four coal boilers to gas and #2 oil standby underway. Also designing three retort-type incinerators for combustible wastes.
U. S. PENITENTIARY Leavenworth, Kansas	Design underway to haul wastes to City of Leavenworth landfill.
FEDERAL YOUTH CENTER Ashland, Kentucky	Plans completed to obtain suitable equipment to haul dry wastes to commercial landfill.
MEDICAL CENTER FOR FEDERAL PRISONERS Springfield, Missouri	Design underway to provide compactors and waste storage containers and to contract for disposal of waste. Plan to incinerate pathological wastes.
U. S. PENITENTIARY Lewisburg, Pennsylvania	Design underway to provide controls on incinerator and to landfill non-combustibles.
FEDERAL CORRECTIONAL INSTITUTE LaTana (Anthony), Texas	Design underway to improve sanitary landfill operations.
FEDERAL CORRECTIONAL INSTITUTE Seagoville, Texas	Design underway to install retort type incinerator and develop landfill for non-combustibles.
U.S. PENITENTIARY McNeil Island Steilacoom, Washington	Design underway to improve sanitary landfill operations.
FEDERAL REFORMATORY FOR WOMEN Alderson, West Virginia	Single retort-type 600 lb./hr. incinerator under design.

IMMIGRATION AND NATURALIZATION SERVICE

INSTALLATION	ACTION
VARIOUS LOCATIONS (UNSPECIFIED)	Discontinued open burning at seven locations. Arrangements made for trash disposal by public or private means.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

INSTALLATION	ACTION
MARSHALL SPACE FLIGHT CENTER Huntsville, Alabama	Smoke abatement project completed at the steam plant in August 1969, as an emergency project.
AMES RESEARCH CENTER Moffett Field, California	Projects to install centrifugal separator and scrubber in Bldg. 212 and for installation of a fume scrubber in Bldg. 211 have been discontinued. Activities contributing to air pollution have been relocated to other facilities capable of handling the vapor emissions.
NASA INDUSTRIAL PLANT Downey, California	Project to design new booth and equipment for paint solvent vapor control discontinued. Paint reformulation provides for compliance with air pollution regulations.
MICHOUD ASSEMBLY FACILITY New Orleans, Louisiana	Incinerator construction completed in November 1969. Other projects deferred by production shutdown.
GODDARD SPACE FLIGHT CENTER Greenbelt, Maryland	Change to low sulfur fuel completed in June 1970.
MANNED SPACECRAFT CENTER Houston, Texas	Installation of oxidizer vapor burners and scrubber is deferred pending re-examination of engine fuel composition.

POST OFFICE DEPARTMENT

INSTALLATION	ACTION
P. O. GARAGE Anaheim, California	Submerged fill pipe installed in gasoline storage tank. Completed in September 196
P. O. GARAGE Berkeley, California	DO
P. O. GARAGE Los Angeles, California	DO
P. O. CENTRAL GARAGE Los Angeles, California	DO
P. O. SOUTH AUXILIARY GARAGE Los Angeles, California	DO
P. O. GARAGE Pomona, California	DO
P. O. GARAGE San Fernando, California	DO
P. O. GARAGE San Francisco, California	DO
P. O. GARAGE San Mateo, California	DO
POST OFFICE Casey, Illinois	Project discontinued. Trash now disposed of by landfill.
POST OFFICE Crete, Illinois	Contract trash removal to eliminate open burning on site.
POST OFFICE Ottawa, Illinois	DO
POST OFFICE River Grove, Illinois	Project discontinued. Trash now burned in incinerator available in nearby building.
POST OFFICE Beltsville, Maryland	Contract trash removal to eliminate open burning at site. Project completed.
FENKELL STATION P. O. Detroit, Michigan	Project discontinued. Building to be remodeled and gas heat provided.
POST OFFICE Freeland, Michigan	Contract trash removal to eliminate open burning on site.

INSTALLATION	ACTION
POST OFFICE Livonia, Michigan	Project discontinued. Trash burned in incinerator in nearby building.
POST OFFICE Romulus, Michigan	Contract trash removal to eliminate open burning on site.
P. O. GARAGE Reno, Nevada	Submerged fill pipe installed in gasoline storage tank. Completed in September 1969.
RIVERSIDE DETACHED UNIT Reno, Nevada	Project discontinued. Heating plant for building found to be non-polluting.
BAYCHESTER STATION P. O. Bronx, New York	Contract to convert heating plant to #2 oil has been rescheduled from FY 1970 to FY 1971.
GERARD AVENUE GARAGE Bronx, New York	New bids being solicited to convert heating plant to #2 oil after first contractor defaulted.
THROGGS NECK STATION P. O. Bronx, New York	Contract to convert heating plant to #2 oil has been rescheduled from FY 1970 to FY 1971.
WESTCHESTER STATION P. O. Bronx, New York	DO
WILLIAMSBURG STATION P. O. Bronx, New York	DO
PARCEL POST ANNEX Brooklyn, New York	DO
RUGBY STATION P. O. Brooklyn, New York	DO
GRACIE STATION P. O. NEW YORK, New York	DO
MIDTOWN STATION P. O. New York, New York	Completed conversion of heating plant to #2 oil.

INSTALLATION	ACTION
PECK SHIPS STATION P. O. New York, New York	Contract to convert heating plant to #2 oil has been rescheduled from FY 19[illegible] to FY 1971.
36th ST. FACILITY New York, New York	Completed conversion of heating plant to #2 oil.
53rd ST. GARAGE New York, New York	Project discontinued. Building is to be demolished.
P. O. ANNEX Yonkers, New York	DO

SMITHSONIAN INSTITUTION

INSTALLATION	ACTION
NATIONAL ZOOLOGICAL PARK Washington, D. C.	Conversion to gas for heating is proceeding as scheduled and should be completed in the near future. Incinerator repair or replacement, although funded by Congress, has not yet been accomplished.

TENNESSEE VALLEY AUTHORITY

INSTALLATION	ACTION
COLBERT STEAM PLANT (5) Tuscumbia, Colbert Co., Alabama	Engineering studies underway to find best method of meeting fly ash emission standards considering recent technological development in SO_2 removal processes. Design underway for 97% efficient electrostatic precipitators in series with existing mechanical collectors.
NATIONAL FERTILIZER DEVELOPMENT CENTER Muscle Shoals, Alabama	Canopy hood and wet centrifugal collector under design to control taphole fume emissions from No. 5 and No. 6 phosphorus furnaces. Will control P_2O_5 and F. Dust collection equipment in grate-kiln system needs to be modified by either contractor or TVA to meet the original dust control specifications of contract under which equipment was installed. Operations resulting in discharge of ammonia from absorber in synthesis purge gas system are being modernized to provide better control. For the No. 3 nitric acid unit stack and storage tank vents, a refrigerated cooling water system is being designed to increase recovery of nitrogen oxides, thereby decreasing the emission of NO_x in the exhaust gases. System under design for the No. 3 nitric acid unit stack to react NO_x and O_2 in the gases with a fuel in the presence of a catalyst to reduce NO_x to N. System under design to permit some additional use of CO gas as fuel and decrease amount flared.

INSTALLATION	ACTION
Widows Creek Steam Plant (7-8) Stevenson, Jackson Co., Alabama	Engineering studies underway to find best method of meeting fly ash emission standards considering recent technological developments in SO_2 removal processes.
SHAWNEE STEAM PLANT (1-10) Paducah, McCracken Co., Kentucky	Mechanical collectors and electrostatic precipitators providing 99% overall collection efficiency installed. Project completed in June 1970.
GALLATIN STEAM PLANT (1-4) Gallatin, Tennessee	DO
ALLEN STEAM PLANT Memphis, Tennessee	Design underway to replace existing electrostatic precipitators (70% efficient) with new electrostatic precipitators (99% efficient).
JOHNSONVILLE STEAM PLANT New Johnsonville, Tennessee	Design underway for 97% efficient electrostatic precipitators in series with existing mechanical collectors.
JOHN SEVIER STEAM PLANT Rogersville, Tennessee	DO
VARIOUS LOCATIONS (Special procedures during periods of high air pollution potential)	At the Kingston Power Plant during the adverse atmospheric stagnation periods from August 15 to December 15 of each year, low-sulfur coal is to be used to reduce SO_x emissions. At the Paradise Power Plant an operational control program has been developed and implemented. Under this program, the plant's generating capacity is reduced when adverse SO_x dispersion conditions are expected. Reductions may occur about 25 days per year with the present program. An operational control program also is being developed for the Widow's Creek Power Plant. A contract has been awarded for the purchase of 1.35 million tons per year of approximately 0.7% sulfur coal with full contractural delivery being reached in 1971. Similar plans are being developed for operational control programs at the National Fertilizer Development Center.

DEPARTMENT OF TRANSPORTATION

U. S. COAST GUARD

INSTALLATION	ACTION
BOSTON BASE Boston, Massachusetts	Conversion of heating boilers to use low-sulfur fuel is under design.
ELIZABETH CITY AIR STATION Elizabeth City, North Carolina	Open trash burning discontinued. Containerized trash picked up by municipality. Project complete.
NEW YORK BASE Governors Island, New York	Conversion of heating plant to use low-sulfur fuel (#2 oil) ~~is under construction~~ has been completed.
ST. GEORGE BASE St. George, New York	Conversion of heating plant to low-sulfur fuel is completed.

VETERANS ADMINISTRATION

INSTALLATION	ACTION
VA Hospital West Haven, Connecticut	Boilers converted to gas.
VA Hospital Marion, Indiana	Boilers converted to gas.
VA Hospital Iowa City, Iowa	Project to convert one boiler to gas has been dropped. Full station load carried by gas-fired boilers.
VA Hospital Fort Thomas, Kentucky	Coal-fired boilers replaced with gas and #2 oil.
VA Hospital Battle Creek, Michigan	Boilers converted to gas.
VA Hospital St. Cloud, Minnesota	Conversion to gas and #2 oil.
VA Hospital East Orange, New Jersey	Conversion of boilers from #6 oil to gas under construction.
VA Hospital Batavia, New York	Replacement of coal-fired boilers under construction. Conversion to #2 oil.
VA Center Bath, New York	Replacement of coal fired boilers under construction. Conversion to gas and #2 oil.
VA Hospital Bronx, New York	Replacement of #6 oil-fired boilers under construction. Conversion to gas and #2 oil.
VA Hospital Montrose, New York	Boilers converted to gas.
VA Hospital Chillicothe, Ohio	Replacement of boiler plant under construction. Conversion to gas and #2 oil.

INSTALLATION	ACTION
VA Hospital Butler, Pennsylvania	Replacement of coal fired boilers under construction. Conversion to gas and #2 oil.
VA Hospital Pittsburgh, Pennsylvania (G.M.)	Conversion of boilers from coal to gas under construction.
VA Center Mt. Home, Tennessee	Replacement of boiler plant under construction.
VA Center Hampton, Virginia	Replacement of boiler plant under design. Conversion to gas and #2 oil.
VA Hospital Richmond, Virginia	Replacement of boiler plant under construction. Conversion to gas and #2 oil.
VA Hospital Salt Lake City, Utah	Boilers converted to gas.
VA Hospital Madison, Wisconsin	Boilers converted to gas.
VA Hospital Vancouver, Washington	Boilers converted to gas.

APPENDIX D

STATEMENT BY THE PRESIDENT

October 26, 1970

At my request, the Administrator of General Services today issued the attached regulation which requires that federally-owned vehicles use low-lead or unleaded gasoline whenever this is practical and feasible. The purposes of this regulation are two-fold: to reduce air pollution and to increase the market for low-lead and unleaded gasoline, in order to make such fuels more generally available.

I have also today written to the Governors of our fifty States suggesting that they take similar steps in their Administrations. If all government agencies -- Federal, State, and local -- were to adopt this policy, we could not only reduce pollution, but we could also provide a sizeable incentive for production and distribution of low or unleaded fuels and thus make them more readily available.

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TEXT OF A LETTER FROM THE
PRESIDENT TO THE GOVERNORS
OF THE FIFTY STATES

Dear Governor:

At my request, the Administrator of General Services today issued the attached regulation which requires that federally-owned vehicles use low-lead or unleaded gasoline whenever this is practical and feasible. The purposes of this regulation are two-fold: to reduce air pollution and to increase the market for low-lead and unleaded gasoline, in order to make such fuels more generally available.

If your State would undertake a similar program, our joint action would offer the gasoline refinery and marketing industries a sizeable incentive to produce and distribute low-lead and lead-free gasoline. As the production and distribution of such fuels become widespread, the motorist will be able to buy them and thus make a major contribution to the cleaning up of our air. I hope you can join in this effort.

Sincerely,

/s/ RICHARD NIXON

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FEDERAL PROPERTY MANAGEMENT REGULATIONS
TEMPORARY REGULATION E-12

TO : Heads of Federal Agencies

SUBJECT: Gasoline for use in motor vehicles

1. Purpose. This regulation establishes a revised standard for gasoline designed to further the use of unleaded and low-lead content gasoline in motor vehicles.

2. Effective date. This regulation is effective upon publication in the Federal Register, however existing contracts need not be revised or amended merely to conform to the provisions of this regulation.

3. Expiration date. This regulation expires July 31, 1971, unless sooner revised or superseded. Prior to this expiration date, this regulation will be codified in the permanent regulations of GSA appearing in Title 41, CFR, Public Contracts and Property Management.

4. Applicability. The provisions of this regulation apply to all executive agencies. Other Federal agencies are encouraged to conform so that maximum benefits may be realized.

5. Background. The phasing out of the use of leaded gasoline is an important step toward cleaner air. Lead in gasoline has two adverse effects: Lead emissions into the air can be harmful to health; and lead inhibits the use of other pollution control devices. In keeping with the President's goal of reducing pollution and improving the quality of the environment, it is appropriate that the Government take full advantage of the availability of recently developed unleaded and low-lead content gasolines by using such fuels in Federal vehicles, except when it is clearly impractical or unfeasible to do so. The objective of this regulation, therefore, is to promote and effect the utilization of unleaded and low-lead content gasolines by providing an assured market for such fuels in Federal vehicles. The existence of such an assured market will hasten the development of refinery and distribution capability that can also serve the general motorist.

6. Use standards for gasoline. Unleaded or low-lead content gasoline (low-lead content gasoline is defined as containing 0.5 gm./gal lead) shall be used in Government-operated vehicles within the 50 States except when it is clearly impractical or unfeasible to do so. The cost of gasoline shall not be used as a factor in determining the practicability or feasibility of using unleaded or low-lead content gasolines; however, manufacturers' recommendations on octane requirements shall be generally followed. Gasoline for use in overseas Government-operated vehicles shall be limited to unleaded or low-lead content gasoline unless; (1) such use would be in conflict with country-to-country or multinational logistics agreements and (2) such gasoline is not locally available at competitive prices.

7. Purchase of or contracts for gasoline. All contracts entered into after the effective date of this regulation shall provide for procurement

of unleaded or low-lead content gasoline in conformance with paragraph 6 above. Where intermediate activities perform a procurement function for other agencies, the type of gasoline procured will be dependent on the needs of the requiring or issuing activity, however, the latter activity shall also be guided by the provisions of paragraph 6.

8. Effect on other issuances. This regulation revises and supersedes the use standards for gasoline set forth in FPMR 101-25.303.

9. Comments or suggestions. Agency views concerning the effect or impact of this regulation on agency operations or programs should be submitted to General Services Administration (FF), Washington, D. C. 20406, no later than February 28, 1971, for consideration and possible incorporation into the permanent regulation.

/s/ ROBERT L. KUNZIG
Administrator of General Services