



military and industrial-type activities, are excluded from the provisions of this Directive.

III. DEFINITIONS

For the purposes of this Directive, the definitions contained in enclosure 2 apply.

IV. OBJECTIVES

- A. The preservation and protection of the environment.
- B. The conservation of natural resources through:
 - 1. Judicious collecting and disposing of solid waste;
 - 2. Reducing the amount of material wasted; and
 - 3. Recovering and recycling materials and/or energy from solid waste products as an alternative to burial in landfills, incineration or environment-menacing dispositions.

V. POLICIES

- A. The criteria listed in the "requirement" section(s) of published EPA Solid Waste Management Guidelines (references (b), (c), (d) and (e)) are mandatory for minimum acceptable levels of performance and shall be implemented by the DoD Components. The "recommended" section(s) of the Guidelines, representing current techniques and practices, shall be implemented when feasible and contributory to the effectiveness of the program. Waste disposal on Federal property will be in accordance with appropriate material criteria. Local permits may not be mandatory for Defense installations; however, State and local criteria, if more stringent than EPA Guidelines and/or Defense practices, shall be applied when feasible. Resource recovery facilities established in accordance with the provisions of this Directive will be compatible with appropriate State and local plans.
- B. All solid waste generated on a DoD installation shall be considered Government property for purposes of disposal under the provisions of this Directive except in those instances

where Military Exchanges and Commissary Stores salvage and dispose of their recoverable resources.

- C. Commercial, residential, and institutional solid and other waste materials shall be recovered and recycled to reduce environmental pollution and conserve resources, consistent with guidelines prescribed herein.
- D. The quantities of solid waste materials shall be reduced at the source, whenever possible.
- E. Contracts for solid waste material disposal services shall include provisions for recycling, whenever feasible.
- F. A DoD facility that generates 100 tons or more per day of residential, commercial and institutional solid waste after complying with waste reduction and source separation policies, shall establish and/or utilize resource recovery facilities to separate and recover materials or energy, or both, from solid waste.
- G. DoD facilities located within a Standard Metropolitan Statistical Area (SMSA) are required to participate with other DoD Components and Federal facilities in the establishment and/or utilization of a single resource recovery facility if: (1) any one Federal facility generate 50 tons or more of residential, commercial, and institutional solid waste per day after complying with waste reduction and source separation policies; and (2) the combined total of this solid waste for all Federal facilities within the SMSA is 100 tons per day. The Federal Agency having jurisdiction over a Federal facility that generates the largest quantity of residential, commercial and institutional solid waste in the SMSA will be designated the lead agency in the planning, programing and budgeting for the resource recovery facility in accordance with EPA Guidelines (reference (b)).
- H. Joint or regional civilian community resource recovery facilities/systems shall be utilized whenever possible, in lieu of establishing separate DoD facilities/systems.
- I. DoD Components shall not compete with a locally available commercial recycling industry which offers a total resource recovery system. Every effort shall be made to use the established commercial industry in accordance with DoD Directive 4100.15 (reference (j)).

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- J. The separation of used newspapers at the source of residential generation, in conjunction with separate collections, shall be carried out at all DoD installations in which more than 500 families reside. The newspapers shall be recycled or, alternatively, used as an energy resource.
- K. Any installation generating 10 or more tons of waste corrugated containers per month shall segregate and separately collect for purposes of recycling or, alternately, used as an energy resource.
- I. High grade paper generated in office buildings of over 100 workers shall be separated at the source of generation and collected for the purpose of recycling.
- M. At facilities where resource recovery is not mandatory as required by this Directive, optional programs are encouraged. In these instances, the annual cost to the Government should be less when compared to the normal solid waste procedure or disposal.
- N. All actions to implement the requirements of this Directive will first be assessed to determine the necessity for preparing an environmental impact statement in accordance with DoD Directive 6050.1 (reference (k)).

VI. PROCEDURES

A. General

1. Solid waste collection, disposal and resource recovery programs will be implemented in the most cost effective manner and periodically reviewed to assure continuing cost effective operation (DoD Instruction 7041.3 (reference (l))). The programs, proposed or ongoing, shall be evaluated under the provisions of DoD Instruction 4100.33 (reference (m)).
2. Alternative methods to processing solid waste through Federally established resource recovery facilities shall be considered in the establishment of local programs and implemented, singly or in combination, if beneficial.

- a. Sale through the Defense Supply Agency (DSA).
 - b. Use as fuel or fuel supplement.
 - c. Local reuse of recovered waste materials.
 - d. Joint or separate efforts by contractors handling solid and other waste material to recover recyclable materials.
 - e. Participation in a joint or regional resource recovery program operated by the civilian community.
3. Prior to implementing procedures for segregating or processing specific waste material for sale, it shall be determined that adequate markets do exist and will continue to exist for a reasonable length of time. Such determination shall include sufficient detailed market analyses and economics to ensure that an economical analysis can be made by the DoD Components.
 4. Exceptions to the requirements prescribed by this Directive may be made after appropriate analysis has determined that markets for recovered products are not available or that costs are so high as to be economically impracticable. Analysis in accordance with VI.E.2., below, must be made and will serve as the basis for required reporting which concern actions taken by the DoD Component pursuant to the EPA Guidelines. Such analyses will be reviewed at least every 3 years.
 5. Waste and debris not otherwise utilized in accordance with these procedures are to be disposed of by prescribed EPA Guideline procedures (reference (d)) in authorized landfills and/or incinerators.

B. Organization

1. The DoD Components shall develop the organization for the management and operation of their resource recovery programs. Management of these programs at the installation level will generally be accomplished by the element which is already functionally responsible for refuse collection and disposal (DoD Directive 4165.2 (reference (n)) Recyclable/ marketable materials shall be referred to DSA for sale.

2. Duplication of effort shall be avoided in the collecting, sorting, and transporting of recoverable waste by combining new and existing efforts. However, Military Exchanges and Commissary Stores which purchase or lease processing equipment may salvage and dispose of their recoverable resources.
3. The managing activities shall be provided market information for the studies or the sale of recoverable waste material within a reasonable time period.

C. Financial Management

1. Sale of marketable items from solid waste materials shall be administered through DSA under the provisions of DoD Directive 4160.21 (reference (i)). This procedure does not apply to waste materials turned over to voluntary organizations or civilian communities for recycling. The procedure also does not apply to Military Exchanges and Commissary Stores where the activity owns or leases its own processing equipment.
2. Net proceeds from the sale of solid waste materials shall be deposited to the account designated by the managing activity to reimburse the following expenses incurred in operating the solid waste resource recovery programs:
 - a. The acquisition of replacement equipment for recycling purposes. The provisions of DoD Instruction 4160.1 (reference (o)) apply in the financing of replacement equipment.
 - b. The acquisition and identification of containers and container stands for proper segregation of solid waste material.
 - c. The collection of waste materials from the containers.
 - d. The separating, baling, compacting, shredding, pulping, or otherwise altering the size, shape or form of the waste materials.
 - e. The transfer of marketable items to the accountability of the property disposal office. Transfer of physical

custody is not required; such property shall be moved only when it is most economical and effective to do so.

- f. The installation-level administration and support of the above functions by the managing activity.
3. Elements of expense as charged to all activities by the installation-level accounting system are included, but military personnel expense may not be reimbursed from the net proceeds. Any net proceeds after expenses and replacement equipment costs have been reimbursed may be made available by the managing activity to finance special projects for environmental improvement and energy conservation. The amount of such financing for such projects shall not exceed \$50,000 per DoD installation. Should any balance be left in the designated account, after the environmental and energy conservation projects are financed, it will be transferred to Budget Account 97-F 3860.5191, "Proceeds from the Sale of Scrap, Salvage, or Surplus Materials, Defense Supply Agency."
4. Solid waste material recycling expenses that are not offset from net proceeds are eligible for reimbursement from any net proceeds remaining in Budget Clearing Account 97-F 3860.5191, "Proceeds from Sale of Scrap, Salvage or Surplus Materials, Defense Supply Agency," after reimbursement of all other categories of disposal expense.
5. Expenses incurred by DSA that are related to the sale of recovered materials shall be deducted from gross sales proceeds. Accounting and reporting procedures for property disposal expenses shall be in accordance with DoD Instruction 7310.1 (reference (p)).

D. Construction Projects and Equipment Procurement

1. Construction projects for resource recovery programs shall be planned and programmed in accordance with DoD Instruction 7040.4 (reference (q)); such projects shall be included in the reports submitted pursuant to OMB Circular A-106 (reference (r)). (See section VIII., this Directive.) Proceeds of sale shall not be used to finance these projects.
2. Each resource recovery facility will be designed with sufficient capacity to process (a) all of the residential,

commercial and institutional solid waste generated by the DoD facilities that will utilize the resource recovery facility, and (b) at least 65 percent by wet weight of the input solid waste into recycled material, fuel or energy. If inability to meet the 65 percent criteria is based on costs so high as to be economically impracticable or lack of market circumstances, then the processing percentage shall be as great as practicable within those circumstances.

3. Use of existing facilities and equipment shall be considered in planning and establishing recycling programs. Equipment, such as balers, available at a Defense installation or activity shall be shared whenever possible to reduce costs.
4. Equipment items for the establishment of recycling programs will be procured through the appropriations normally available for equipment acquisition. The acquisition of replacement equipment, related solely to recycling of solid and other waste materials, is eligible for financing from net proceeds generated by the sale of waste materials. Annual programs for the acquisition of such equipment will be coordinated with the Assistant Secretary of Defense (I&L). The provisions of DoD Directive 5126.15 (reference (s)) shall apply to the acquisition of equipment.
5. The financing of equipment that is jointly used or shared with such activities as the Defense Property Disposal Office or a Commissary store, shall be governed by the procedures applicable to the activity that owns or is accountable for the equipment or facility.

E. EPA Guidelines Implementation

1. Within 1 year from the respective dates of promulgation of the EPA Guidelines (references (b), (c), (d) and (e)), DoD Components shall make a final determination as to what actions shall be taken to comply with them and with the requirements of this Directive and submit to the ASD(I&L) a schedule of said actions. Where prescribed by the individual Guidelines, DoD Components shall submit a report to the ASD(I&L) annually thereafter outlining the actions taken pursuant to the applicable Guidelines.
2. Where the determination is made not to adopt the mandatory

requirements prescribed by the applicable EPA Guidelines (references (b), (c), (d) and (e)), the complete analysis and rationale used by the DoD Component in reaching that determination shall be included in the initial submission to the ASD(I&L). The required analysis shall be conducted at least every 3 years thereafter as appropriate and forwarded to the ASD(I&L) in accordance with section VIII, below. The following points will be addressed in the analysis:

- a. A description of ongoing actions, and actions taken or proposed, not in compliance with this Directive. Include a brief description of how specific DoD facilities will be affected.
 - b. A description of the alternative actions considered. Emphasize those alternatives which, if taken, would be in compliance with this Directive.
 - c. An analysis in support of the action chosen by the DoD Component. Include technical data, market studies, and policy considerations utilized in arriving at the determination.
4. Following a technical review of the DoD Component's schedule/analysis, the ASD(I&L) shall submit the determination and/or schedule for required interagency coordination.

VII. RESPONSIBILITIES

- A. The Assistant Secretary of Defense (Installations and Logistics) shall have primary staff responsibility for this Directive and shall be responsible for:
1. Formulating, developing and monitoring policy for the DoD solid waste management program.
 2. Developing implementing policy and monitoring the storage and disposal of recovered materials generated from solid waste materials.
 3. Programing, planning, approving design criteria, and

conducting technical reviews of facilities for resource recovery and recycling.

4. Establishing a Joint Service Committee to act in an advisory capacity on solid waste management, resource recovery and recycling matters.
5. Providing necessary interagency coordination with EPA and other Federal Agencies involved in resource recovery and recycling.
6. Providing technical guidance to the other DoD Components concerning the environmental consequences of their solid waste activities that (a) significantly affect the quality of human environment or (b) are environmentally controversial.

B. The Director of Defense Research and Engineering shall be responsible for:

1. Establishing a Defense research, development, test and evaluation (RDT&E) plan to identify interim and long range programs in the resource recovery and conservation areas.
2. Coordinating the RDT&E efforts of the DoD Components in developing systems, equipment and techniques for solid waste management, recycling and resource recovery.
3. Coordinating DoD resource recovery and recycling research with the work of other Federal Agencies.
4. Assuring that consideration is given to resource recovery and recycling in other RDT&E projects and programs.

C. The Secretaries of the Military Departments and the Directors of Defense Agencies shall be responsible for:

1. Identifying those installations which should establish resource recovery programs in accordance with the policies and procedures set forth in this Directive.
2. Budgeting and financial planning for approved programs which provide for solid waste management, collection, disposal, recycling and resource recovery, consistent with the provisions of this Directive and with mission requirements.

- D. The Director of the Defense Supply Agency, in addition to VII.C., above, shall be responsible for:
1. Determining market availability for recoverable resources, as well as estimated length of market availability, and furnishing this information to DoD Components within a reasonable time period prior to the establishment of recycling programs.
 2. Negotiating sales contracts for marketable materials recovered from the solid waste as well as contracts for sale of solid waste to public or commercial resource recovery operations.

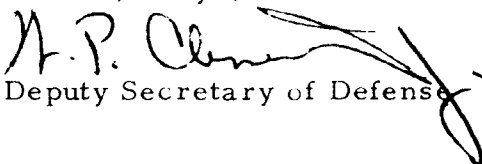
VIII. REPORTS

- A. The reporting requirements prescribed by OMB Circular A-106 (reference (r)) and further outlined in VI.D.1., have been determined to be exempt from interagency approval pursuant to subparagraph 7.d.(2)(a), OMB Circular A-40 (reference (t)). Construction projects prescribed for resource recovery programs under the provisions of this Directive shall be included with the OMB Circular A-106 (reference (r)) projects reported under RCS DD-I&L(SA)1383.
- B. Requirements concerning the solid waste management program implementation and operation reporting are summarized in VI.E. above. For DoD management and control, the assigned Report Control Symbol is LD - I&L (A&AR) 1435 for submission of the required reports to ASD(I&L).
- C. The statutory language of Section 612 of Public Law 93-552 (reference (u)) has been interpreted to mean the proceeds from the sale of recyclable material recovered from solid wastes as encompassed within the provisions of the Directive. Accordingly, the Secretary of each Military Department shall report to Congress annually concerning, as a minimum, the proceeds received from sales of the recovered materials, expenses incurred in this program, the number and costs of projects for environmental improvement and energy conservation, and any remaining proceeds transferred to the prescribed

Budget Account 97-F 3860.5191. A copy of this report shall be provided ASD(I&L) concurrently with its formal transmission to Congress. For DoD management and control, the assigned Report Control Symbol is DD - I&L (A) 1436 for submission of the required reports to Congress.

IX. EFFECTIVE DATE AND IMPLEMENTATION

This Directive is effective immediately. Three copies of implementing instructions shall be forwarded to the Assistant Secretary of Defense (I&L) within 90 days.


Deputy Secretary of Defense

Enclosures - 2

1. References
2. Definitions

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REFERENCES, Continued

- (b) U.S. Environmental Protection Agency, "Solid Waste Management Guidelines - Resource Recovery Facilities," 40 CFR 245, September 21, 1976
- (c) U.S. Environmental Protection Agency, "Solid Waste Management Guidelines - Solid Waste Storage and Collection," 40 CFR 243, March 15, 1976
- (d) U.S. Environmental Protection Agency, "Solid Waste Management Guidelines - Thermal Processing and Land Disposal," 40 CFR 240 and 241, August 14, 1974
- (e) U.S. Environmental Protection Agency (EPA), "Solid Waste Management Guidelines-Source Separation for Materials Recovery," 40 CFR 246, May 24, 1976
- (f) National Environmental Policy Act of 1969, 42 U.S.C. 4321 et seq.
- (g) Solid Waste Disposal Act, as amended, 42 U.S.C. 3251 et seq. (1970)
- (h) DoD Directive 5100.50, "Protection and Enhancement of Environmental Quality," May 24, 1973
- (i) DoD Manual 4160.21-M, "Defense Disposal Manual," June 1973. Authorized by DoD Directive 4160.21, February 23, 1972
- (j) DoD Directive 4100.15, "Commercial or Industrial Activities," July 8, 1971
- (k) DoD Directive 6050.1, "Environmental Considerations in DoD Actions," March 19, 1974
- (l) DoD Instruction 7041.3, "Economic Analysis and Program Evaluation for Resource Management," October 18, 1972
- (m) DoD Instruction 4100.33, "Commercial or Industrial Activities - Operation of," July 16, 1971
- (n) DoD Directive 4165.2, "DoD Real Property Maintenance Activities Program," February 21, 1976
- (o) DoD Instruction 4160.1, "Nonexcess Personal Property to be Sold or Exchanged for Replacement Purposes," March 23, 1971
- (p) DoD Instruction 7310.1, "Accounting and Reporting for Property Disposal and Proceeds from Sale of Disposable Personal Property and Lumber or Timber Products," July 10, 1970
- (q) DoD Instruction 7040.4, "Military Construction Authorization and Appropriation," July 16, 1971

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- (r) OMB Circular A-106, "Reporting Requirements in Connection With the Prevention, Control, and Abatement of Environmental Pollution at Existing Federal Facilities," December 31, 1974
- (s) DoD Directive 5126.15, "Delegation of Authority with Respect to Facilities and Equipment for Metal Scrap Baling or Shearing, or for Melting or Sweating Aluminum Scrap," March 13, 1970
- (t) OMB Circular A-40, "Management of Federal Reporting Requirements," May 3, 1973
- (u) Public Law 93-552, "Military Construction Authorization Act, 1975," December 27, 1974

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DEFINITIONS

- A. Commercial Solid Waste. All types of solid waste generated by stores, offices, clubs, cafeterias, mess halls, warehouses and other such nonmanufacturing activities, and nonprocessing waste generated at industrial facilities such as office and packing wastes. Construction and demolition wastes are not included in this category.
- B. DoD Facility. Any building, installation, structure, land or public work owned by or leased to a DoD Component. Ships at sea, aircraft in the air or forces on maneuvers are not subject to this Directive.
- C. High grade Paper. Includes letterhead, dry copy papers, miscellaneous business forms, stationery, typing paper, tablet sheets and computer printout paper and cards, commonly sold as "white ledger," "computer printout," and "tab card" grade by the wastepaper industry. Consistent with EPA guidelines, high grade paper is included within commercial solid waste category.
- D. Institutional Solid Waste. Solid waste originating from educational, health care, correctional and other such facilities.
- E. Managing Activity. An administrative element assigned to manage the recycling program (including personnel, funds and equipment) for the purposes of carrying out the objectives of this Directive.
- F. Office Waste. Solid wastes generated in the buildings, room, or series of rooms in which the affairs of a business, professional person, branch of government, etc., are carried on; excludes waste generated in cafeterias, snack bars, or other food preparation and sales activities.
- G. Recycling. The process by which recovered materials are transformed into new/usable products.
- H. Resource Recovery. The process of obtaining materials or energy from solid waste.

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- I. Residential Solid Waste. Includes garbage, rubbish, trash and other solid waste resulting from the normal activities of households.
- J. Resource Recovery Facility. Any physical plant that processes residential, commercial or institutional solid waste, biologically, chemically or physically, and recovers useful products, such as shredded fuel, combustible oil or gas, steam, metal, glass, etc., for resale or reuse.
- K. Recoverable Resources. Materials that have useful physical or chemical properties after serving their original purpose and can be reused or recycled for the same or other purposes.
- L. Sludge. The accumulated semiliquid suspension of settled solids deposited from waste waters or other fluids in tanks or basins.
- M. Solid Waste. Includes garbage, refuse, and other discarded solid materials, including solid waste materials, resulting from residential, institutional, industrial, commercial, and agricultural operations, and from community activities. Mining and agricultural solid wastes, hazardous wastes, sludges construction and demolition wastes, and infectious wastes are not included in this category.
- N. Source Separation. The separation of recyclable materials at their point of generation by the generator.