

**MEMORANDUM OF UNDERSTANDING (MOU)**  
**BETWEEN**  
**THE UNITED STATES POSTAL SERVICE (USPS),**  
**THE DEPARTMENT OF DEFENSE (DoD),**  
**THE DEPARTMENT OF ENERGY (DOE),**  
**THE DEPARTMENT OF INTERIOR (DOI),**  
**AND**  
**THE ENVIRONMENTAL PROTECTION AGENCY (EPA)**

**TITLE:** Improving Environmental Management of Electronic Assets

**PURPOSE:**

The USPS, DoD, DOE, DOI, and EPA (the Parties) enter into this MOU to develop a common strategy for using environmentally preferable and energy efficient technologies and practices to improve the quality, performance, and environmental management of electronic assets throughout their life cycle. Electronic assets covered by this MOU include, but are not limited to, equipment used in communications, information systems, military, and scientific applications. The Parties define the life cycle of electronic equipment broadly to include acquisition, design, manufacture, assembly, distribution, use, reuse, demanufacture,<sup>1</sup> and recycling. The Parties intend to capitalize on other applicable efforts, including work already accomplished by the Federal Electronic Asset Management Task Force.

**BACKGROUND:**

Use of electronic equipment has skyrocketed in the past decade, and this trend promises to continue as new equipment is introduced daily. While our growing national dependence on electronics is vastly improving efficiency and communication, it is also spawning a new and potentially troublesome waste stream. Electronic, and especially computer, technology tends to have a short life span; on average, computer technology evolves every 6-18 months, with units being replaced every 3-5 years. A recent report by the National Safety Council (NSC) estimates

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<sup>1</sup>Demanufacturing involves manually breaking down equipment into its separate components, to either recover components for resale or reuse in other equipment or to sort components before recovering raw materials.

that over 20 million computers became obsolete in 1998 alone. Of these, less than 11% were recycled. The rest were landfilled or remain in storage awaiting final disposition. The NSC predicts that by 2007 there will be 500 million obsolete computers in the U.S.

Electronic equipment (especially equipment containing cathode ray tubes, printed wiring boards, mercury switches, capacitors, and batteries) often contains persistent, bioaccumulative, and toxic constituents such as mercury, lead, cadmium, and chromium. There is growing concern, especially at the state and local government level, that the glut of obsolete electronic equipment is creating a waste stream, which if not properly managed, will be hazardous to the environment. In response, some states have enacted laws banning the disposal of certain kinds of electronic equipment in municipal landfills or incinerators.<sup>2</sup> Sound economic and environmental policy would encourage increased recovery of the valuable materials contained in this equipment and recycling of the remainder.

More companies are applying approaches and technologies which improve environmental stewardship while ensuring or even enhancing product quality or performance. Printed wiring board manufacturers, for instance, have eliminated formaldehyde and other toxic chemicals, cut water and energy requirements -- and consequently, reduced operating costs and liability -- in their component production. Manufacturers of cathode ray tubes (CRTs) and flat panel liquid crystal displays (LCDs) are working to improve product performance and reduce overall environmental impacts.

The US government is the nation's, if not the world's, largest single consumer of electronic equipment. Federal agencies spent approximately \$5 billion on computers alone in FY 1996, and have undoubtedly spent much more in recent years. By law, executive order, and regulation, the federal government is obligated to consider the environmental impacts of its purchasing decisions.<sup>3</sup> In particular, Federal Agencies must favor the acquisition of environmentally preferable and energy-efficient equipment and services, and reduce or eliminate the generation of hazardous waste. In addition, pursuant to Executive Order,<sup>4</sup> Federal Agencies must offer to donate excess computers and related equipment to needy schools.

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<sup>2</sup> For example, Massachusetts recently banned disposal of cathode ray tubes in municipal landfills.

<sup>3</sup> Resource Conservation and Recovery Act (P.L. 94-580, as amended), Energy Policy Act of 1992 (P.L. 102-486, as amended), Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (P.L. 96-510, as amended), Emergency Planning and Community Right-To-Know Act of 1986 (Title III of the Superfund Amendments and Reauthorization Act, P.L. 99-499, as amended), Pollution Prevention Act of 1990 (P.L. 101-508, as amended), Executive Order 13101, "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition," Executive Order 13123, "Greening the Government Through Efficient Energy Management," Executive Order 13148, "Greening the Government Through Leadership in Environmental Management," and Federal Acquisition Regulation.

<sup>4</sup> Executive Order 12999, "Educational Technology: Ensuring Opportunity for All Children in the Next Century."

The Federal government's size and buying power uniquely position Federal Agencies to drive the design of environmentally preferable electronic equipment and the development of a cost-effective national reuse and recycling infrastructure for surplus electronic equipment. "Greener" Federal government electronics purchasing and management practices will help reduce toxics and solid waste, and set a good example for the private sector. It will save the Federal government millions of dollars annually through reduced and avoided waste management costs and recovery of investment in valuable assets.

Extremely important work has been accomplished in industry, academia, Federal and State government agencies and the Parties to this MOU in the development, reuse, demanufacturing, and recycling of electronic equipment. The scope of this problem, however, now dictates a more collaborative effort focused on common objectives.

### **GOAL AND OBJECTIVES:**

The Parties to this MOU collaboratively seek to reduce environmental impact of their electronic equipment use and disposal through continuous improvements to the acquisition, design, specifications, material choices, manufacturing processes, assembly technologies, distribution, and use of new electronic equipment, and the reuse, demanufacturing, and recycling of surplus electronic equipment. In support of this goal, the Parties agree to work together on the following six objectives:

1. Increase demand for "Greener" electronic equipment while maintaining or improving equipment quality and performance. (This could include procuring equipment with reduced toxics content, greater energy efficiency, and increased reused and recycled content, as well as equipment that is designed to be more readily disassembled and recovered at end of life);
2. Promote the implementation of best life cycle management practices for electronic equipment and share identified best practices with those outside of the Federal government;
3. Reduce the economic and environmental life cycle costs of Government electronic equipment;
4. Encourage growth of the infrastructure for the reuse, demanufacturing, recycling of obsolete equipment;
5. Strive for "zero waste" in the disposition of electronic equipment and associated packaging material; and,
6. Coordinate and cooperate on other public and private sector efforts aimed at achieving similar objectives.

## **BENEFITS:**

This MOU provides the Federal government an excellent opportunity to demonstrate its commitment to environmental leadership. The parties anticipate substantial benefits from better environmental management of electronic equipment throughout the life cycle, including:

- Reduced use and disposal of hazardous materials and reduced solid waste from the manufacture and disposition of electronic equipment;
- Electronic equipment that is easier and less costly to demanufacture and recycle;
- Increased recovery and use of reusable components and recyclable materials from electronic equipment;
- Reduced use of virgin materials in the manufacture of new electronic equipment;
- Greater energy efficiency in the manufacture and use of electronic equipment;
- Reduced environmental liability from the handling and disposal of electronic equipment; and,
- Reduced government electronic equipment life cycle costs.

## **AGREEMENTS/RESPONSIBILITIES:**

This MOU's focus is continuous interaction of the parties with a free flow of information on joint and individual activities aimed at improving the life cycle management of electronic equipment. Providing information proactively to assure the Parties are fully aware of each other's activities, is essential. To achieve MOU goal and objectives, the Parties agree to coordinate plans and programs concerning the management of electronic equipment through collaborative activities, which may include:

- Providing a forum for understanding pertinent technological and scientific issues, and for understanding existing and proposed policies, regulations, and legislation, and for suggesting improvements thereto;
- Developing principles for the life cycle management of electronic equipment;
- Identifying and disseminating information;
- Using best life cycle management practices;
- Promoting processes and procedures which enhance both the environmental preferability and the general quality and performance of electronic equipment;
- Identifying and promoting "green" equipment and processes;
- Cataloging materials contained in equipment;
- Developing contract language promoting the acquisition of environmentally preferable equipment;
- Improving standards and specifications;
- Identifying hazardous materials substitutes;
- Increasing the reused/recycled content of equipment;
- Improving demanufacturing processes;

- Identifying surplus equipment reuse and recycling applications;
- Developing language for demanufacturing contracts;
- Participating in industry meetings and programs to promote MOU goal and objectives;
- Coordinating with applicable non-governmental projects and initiatives;
- Organizing seminars and meetings;
- Participating in demonstration and pilot projects; and,
- Documenting the success of individual projects and initiatives and the overall success of the partnership.

#### **ACTIONS:**

The Parties agree they will share responsibility for fulfilling the goal and objectives of this MOU. In addition, the Parties agree to:

- Develop within 90, days of the signing of this MOU, an Action Plan detailing the steps the parties will take to achieve MOU goal and objectives;
- Designate a staff-level point of contact (POC) to participate in a working group to will coordinate MOU implementation efforts and provide a forum for information exchange concerning existing and planned initiatives to improve management of electronic equipment;
- Designate a Senior Executive(s) to an Executive Council to provide overall guidance and coordination of the Parties efforts;
- Use, as appropriate, existing or planned initiatives to achieve MOU goals; and,
- Seek public and public/private partnership opportunities to support MOU goals

#### **GENERAL:**

The Parties mutually recognize and acknowledge MOU implementation will be subject to resource availability. This sets forth mutual goals and approaches. It is not intended to create any rights, benefits, or trust responsibilities, substantive or procedural, enforceable at law by a party against the U.S., its agencies, its officers, or any other person. Details regarding commitment of agency resources will be developed in the separate Action Plan. News releases, media events, conferences, of other public events held to publicize achievements of this effort will be conducted with the prior content of the Parties.

Collaboration under this MOU will be in accordance with applicable statutes and regulations governing the respective Parties. Nothing in this MOU is intended to affect existing obligations or other agreements or arrangements of the Parties. Release of information developed under this MOU will be by prior agreement of the Parties. To ensure all Parties are aware of opportunities to maximize collaboration, advance notification of significant contracts or solicitations relating to the objectives of this MOU should be made to all Parties to the extent allowed by applicable statute and regulation.

The Parties envision that other Federal agencies may wish to join this MOU. The Parties encourage all Federal agencies that support the MOU goal and objectives to do so.

**EFFECTIVE PERIOD:**

This MOU will become effective upon the latest date of signature. Any party may withdraw upon 90 days written notification to the others. This MOU can be modified through mutual written agreement among the Parties

**ADMINISTRATION:**

The POCs of the Parties will meet monthly or as appropriate as a working group to coordinate efforts to implement this MOU and to exchange information concerning existing and planned initiatives to improve electronic equipment management. For the first year, the DoD POC will serve as chair of the working group. Thereafter, the chair of the working group may change as decided by the Executive Council. In addition, a representative from the Executive Office of the President will be invited to participate in the working group to assist in planning and to ensure other federal agencies are provided information and updates.

The Executive Council will meet periodically (at least biannually) to provide overall guidance to and coordination of the Parties.

**SIGNED BY:**

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United States Postal Service  
Mr. Dennis Baca

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Date

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Department of Defense  
Gary D. Vest  
Principal Assistant Deputy Under Secretary of Defense  
(Environmental Security)

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Date

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Department of Energy  
Gary K. King, Ph.D., J.D.  
Director, Office of Worker and Community Transition

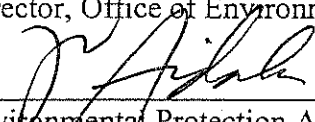
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Date

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Department of Interior  
Debra E. Sonderman  
Director, Office of Acquisition and Property  
Management

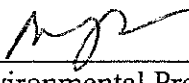
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Date

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Department of Interior  
Willie R. Taylor  
Director, Office of Environmental Policy and Compliance

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Date

  
\_\_\_\_\_  
Environmental Protection Agency  
Jim V. Aidala  
Associate Assistant Administrator  
Office of Prevention, Pesticides, and Toxic Substances

12/1/00  
Date

  
\_\_\_\_\_  
Environmental Protection Agency  
Romulo L. Diaz, Jr.  
Assistant Administrator  
Office of Administration and Resource Management

11/29/00  
Date