

## DEPARTMENT OF DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

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### ABSTRACT

The Department of Defense (DOD) program to clean up hazardous and toxic waste sites and progress made in implementing the program are discussed. The authorities and responsibilities of the Secretary of Defense under the Superfund Amendments and Reauthorization Act of 1986, PL 99-499 (SARA) are defined and relationship with Military Services and Defense Agencies is reviewed. The paper describes the elements, current status, and expenditures of the program.

### INTRODUCTION

Like private industry, DOD conducts a number of industrial processing and manufacturing operations which use large amounts of industrial chemicals. In the past, wastes from these operations were disposed of by the commonly accepted practices of the times. As technology and environmental compliance standards evolved, the Department subsequently found that such practices may have resulted in significant risks to public health and the environment. In response to this situation, the Military Services and Defense Agencies developed programs in the late 1970's to identify and assess the problems on military installations.

In 1984 the Congress centralized and expanded DOD programs for cleanup of waste into a separate program entitled the Defense Environmental Restoration Program (DERP). This provided increased emphasis and visibility for environmental restoration. The DOD program was expanded by the Defense Appropriations Act of 1984 to include properties formerly owned or used by the Department and to include removal of structures or debris which are unsafe or constitute a hazard. An Environmental Policy Office was established in the office of the Secretary of Defense to ensure a consistent approach to environmental restoration efforts and to manage the allocation of resources.

### RELATIONSHIP TO CERCLA/SARA

The SARA provided continuing authority for the Secretary of Defense to carry out the Environmental Restoration Program in consultation with the Administrator of the Environmental Protection Agency (EPA). Executive Order 12580 on the SARA implementation, signed by President Reagan on January 23, 1987, delegated authority to the Secretary of Defense for carrying out the Department's Environmental Restoration Program within the overall framework of the SARA and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Defense Appropriations Act provides funding for the DERP since Superfund revenue is not authorized for use by Federal agencies. Like the EPA's Superfund Program, the DOD Environmental Restoration Program follows the National Contingency Plan (NCP). The NCP investigation and cleanup procedures are used, in conjunction with EPA approval, when a site is placed on the National Priorities List (NPL). If a site is not placed on the NPL, the Services follow NCP procedures and comply with state laws concerning removal and remedial actions.

### DOD/SERVICES ROLES

The DERP is managed centrally in the Office of the Secretary of Defense and is carried out by the Military Services and Defense Agencies. The Deputy Assistant Secretary of Defense for Environment (DASD(E)) provides overall policy direction and oversight for the program. Each Service is responsible for restoration activities at its own installations. Any installation requiring support requests it from its major command, which in turn reviews the requests and provides management oversight. The Military Services have each established their own in-house management and technical expertise responsible for implementing the program. This includes responsibility for conducting various phases of the program by contracting for studies and remedial actions.

### DOD/DOE RELATIONSHIP

At several current DOE facilities, the Military Services and Defense Agencies have in the past conducted industrial operations that caused chemical contamination of soil, ground water, and surface water. Site specific negotiations and agreements are used to allocate responsibility and funding. The DOD portion of the work for the cleanup of chemical contamination is conducted with DERP resources. The DOE has an environmental restoration program with Congressional funding to cover its areas of responsibility.

### PROGRAM ELEMENTS

The Defense Environmental Restoration Program consists of three major sub-elements: installation restoration program, other hazardous waste operations, and building demolition and debris removal. Removal actions for imminent threats are also included in the Environmental Restoration Program.

**Installation Restoration Program (IRP)** The IRP is focused on cleanup of contamination from past activities. It consists of activities to identify, investigate, and cleanup contamination from hazardous substances and wastes on installations and formerly used properties. Activities included are research, development, and demonstration of innovative and cost-effective site cleanup technologies.

**Other Hazardous Waste (OHW)** This element funds studies and the purchase of equipment to minimize the generation of hazardous wastes. This element also includes research, development, and demonstrations related to hazardous waste minimization.

Building Demolition/Debris Removal (BD/DR) BD/DR consists of activities to demolish and remove unsafe buildings, structures, and debris at installations and at formerly owned or used properties.

### PROGRAM PROGRESS

The DOD has continued to make substantial progress during FY 1988 in investigating and cleaning up hazardous and toxic waste sites on its installations. As of September 30, 1988, 949 installations have completed preliminary assessment/site inspection (PA/SI) studies. This includes all major military installations in the United States. This is an increase from 739 at the end of FY 1987 as a result of a continuing effort to identify and include many smaller activities, such as National Guard sites and Reserve Centers. DOD facilities identified for inclusion on the Federal Agency Hazardous Waste Compliance Docket required by Section 120 of the SARA have completed PA/SIs. Any requirements for additional information to allow HRS scoring by EPA are being met. The total number of sites identified in the program has also grown to just over 6,350. Of these approximately 6,350 sites, PA/SIs have been completed at over 5,850 as of the end of FY 1988. Significant changes have occurred in the remedial investigation/feasibility study (RI/FS) phase with studies completed at almost 1600 sites, an increase of 500 sites above last year.

The remedial design/remedial action (RD/RA) work completed has increased from 126 to 185, and the number underway has grown from 800 to 1037. This RD/RA work includes site cleanups, removals, and long term monitoring. Further, an additional 985 new RD/RA sites have already been identified for future cleanup work. The Department expects this strong momentum in site cleanups to continue as the more than 2,600 sites with RI/FS work underway approach completion of this phase.

The U.S. Army Corps of Engineers (COE), as the executive agent for DOD, is responsible for the implementation of Environmental Restoration Program operations at formerly used properties. The investigation and cleanup procedures at formerly owned properties are similar to those at currently owned installations, except that more coordination is required since DOD is not the land owner. Determinations must be made as to the origin of the contamination, land transfer, and current ownership before a site is considered eligible for restoration by the DOD. There are over 7,150 formerly used properties with potential for inclusion in the IRP that have been identified through an inventory phase. Screening surveys at just over 3,150 of those properties have been initiated and almost 1,000 have been completed.

In the area of hazardous waste reduction, the operating principle is that prevention is far better than cure. Minimization projects funded in the OHW sub-element are a catalyst for additional effort by the services. Unique or new efforts, referred to as "seed" projects, are either basic to establishing a new program, have immediate benefit, or help decide long term strategy. The technology transfer effects of the OHW program are especially encouraging. Cross fertilization of ideas through formal information exchanges means that past "seed" projects are made known to more people which increases the potential for more future waste reductions through the OHW program and independent Military Service programs.

### PROGRAM FUNDING

Funding for FYs 1984-1988 totals \$1,605 million. More than 75% of these funds have been spent in the IRP. In FYs 1988 and 1989 over 93% of the money available (\$404 and \$500 million, respectively) was spent on IRP activities because of the growth in these high priority activities.

Projections for annual IRP funding needs are double the current level due to many projects entering the more costly RD/RA phase of activity. The DOD has estimated the total cost of installation restoration work at between \$11 and \$15 billion (FY 1987 dollars). The uncertainty of the total funding requirement is because there are still many remedial investigations to complete, cleanup levels are uncertain, and agreements have not been reached with EPA and state agencies.

### REPORTING REQUIREMENTS

SARA Section 120, applying to all Federal agencies, and Section 211, applying to only DOD, request an annual submittal of specific program activity to the Congress. DOD complies with these requirements by preparing and submitting an Annual Report To Congress in March.

### CONCLUSION

The DOD has made significant progress in cleaning up hazardous waste sites and correcting other environmental damage under its Environmental Restoration Program. Congressional appropriations are used for IRP activities at military installations and formerly used DOD properties, hazardous waste minimization activities, and limited building demolition/debris removal projects at formerly used properties. As of September 30, 1988, over 6,350 sites at 949 installations had been included in the program. PA/SIs had been completed at more than 5,850 sites, RI/FSs had been completed at almost 1,600 sites, and RD/RAs had been completed at 185 sites.