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ABSTRACT

The Integrated Data Base (IDB) Program provides official U.S. Department of Energy (DOE) data on spent fuel and radioactive waste inventories, projections, and characteristics. This information is provided through the cooperative efforts of the IDB Program and DOE lead offices, lead sites, major programs, and generator sites. The program is entering its fifth year, and major accomplishments are summarized in three broad areas: (1) the annual inventory report, including ORIGEN2 applications and a Quality Assurance (QA) plan; (2) the summary data file and direct user access; and (3) data processing methodology and support to other programs. Plans for future work in these areas are outlined briefly, including increased utilization of personal computers. Some examples of spent fuel data are given in terms of projected quantities for two growth scenarios, burnup and age profile of the existing inventory, and the approximate specific thermal power relative to high-level waste (HLW) from various sources.

spent fuel (PWR, BWR, other power reactors, special fuels);

high-level waste (liquid, sludge, salt cake, slurry, calcine, capsules, glass);

transuranic waste (buried, contact-handled, remotely handled);

low-level waste (buried, other disposal methods);

uranium mill tailings.

For all waste forms, inventories and projections are given in terms of waste volume, curies, and watts. Where appropriate, other units of measurement are shown such as mass transuranic (TRU) elements (in TRU waste) and metric tons of uranium (in spent fuel). Radionuclide compositions are given, and radioactive decay accounted for. The locations of storage or disposal sites are shown. Projections of both spent fuel and radioactive waste

NOTICE  
THIS REPORT IS ILLEGIBLE TO A DEGREE THAT PRECLUDES SATISFACTORY REPRODUCTION

INTRODUCTION

The U.S. DOE sponsors the IDB Program in order to provide official DOE data on spent fuel and radioactive waste inventories, projections, and characteristics. The program collects information from DOE lead sites, generator sites, and other sources and integrates the information to produce consistent inventories, tabulations of characteristics, and technically rational projections. The program is aided by a Steering Committee, which has members from all major DOE operating sites and DOE lead laboratories in spent fuel and radioactive waste programs. The information received is verified and reviewed to ensure accuracy. It is then collated and made available, as required to serve various needs. Because of the broad scope of the Program, DOE sponsorship has been shared by the Office for Nuclear Energy and the Office for Defense Programs; recently, the newly formed Office of Civilian Radioactive Waste Management has also become a sponsor.

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The IDB Program provides inventories, characteristics, and projections of all types of commercial and government spent fuel and radioactive wastes. Figure 1 illustrates the major source functions and broad categories of source classification. Physically, the materials are described in the following categories and subcategories:

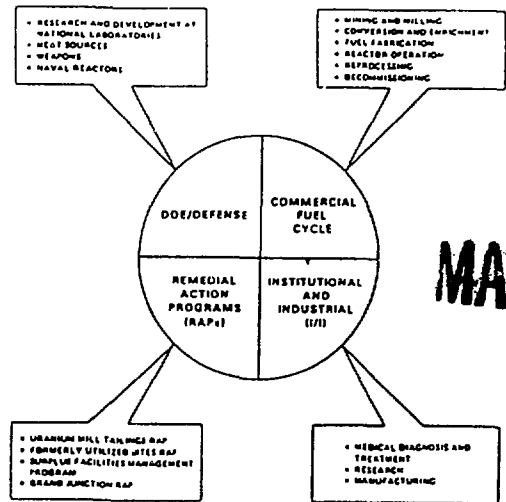


Fig. 1. The IDB Program includes data on all domestic sources of spent fuel and radioactive waste.

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