
INTRODUCTION

This Deployment Fact Sheet Book highlights recent progress by DOE's Office of Environmental Management (EM) in deploying new technologies in the environmental cleanup of the DOE complex. To accelerate the use of new technology in the cleanup effort, EM's management of science and technology investments has evolved from a focus primarily on technology development prior to FY 1996 to the more recent thrust toward deployment. This shift was made during a period when EM's investments in science and technology (S&T) dropped by over 40%, making it imperative that EM make highly focused investments on higher priority S&T activities. Sites have identified specific science and technology needs that must be met to enable or improve cleanup, accelerate the schedule, or reduce cost. EM has established Focus Areas (teams) that address each of EM's major problem areas. Through a Focus Area-centered approach, EM is now integrating science, technology, and deployment activities and cleanup projects to meet the short- and long-term needs, including long-term stewardship needs, of the EM cleanup mission. The purpose of this book is to summarize EM's FY 1999 progress in deployment of innovative technologies across the complex. The book includes the following:

- **Preface**
- **Introduction**
- **Section 1:** Deployment Overview and Analysis – A text and graphical summary of EM deployment activities and progress from FY 1991 to present.
- **Section 2:** Tabulation of Deployments – Tabulation of FY 1999 Office of Science and Technology (OST) technology deployments by first-time or subsequent deployment and Field Office/location
- **Section 3:** Deployment Fact Sheets for FY 1999 – Brief summaries of deployment information for each OST technology deployed.
- **Section 4:** Glossary of Technical Terms
- **Addendum:** FY 1995 - FY 1998 Deployment Fact Sheets Prepared in FY 1999 – Updates the deployment information for FY 1995 - FY 1998.

Definition Used for Technology Deployment

EM defines technology deployment as “the use of a technology or technology system toward accomplishment of one or more site-specific DOE Environmental Management program cleanup objectives as applied to the actual waste requiring management at the site.” A deployment is counted as accomplished in the fiscal year in which it begins. This definition is consistent with contributing to the accomplishment of EM's performance measures and the application of technology to actual site wastes and cleanup activities.

Role of Performance Measures and Deployment

In September 1997, EM agreed to use technology deployments as a Corporate Performance Measure. EM has been making great strides in recent years toward meeting these goals and accelerating the pace of technology deployments to meet future cleanup goals.

Congressional support and a corporate culture that encourages aggressive deployment means EM can enable or improve cleanup, accelerate the schedule, and reduce cost.

Data Quality and Validation Efforts

EM continually works to improve the quality of deployment data. Starting in FY 1998, EM began constructing Deployment Fact Sheets for every technology deployment that occurred from FY 1995 on. These Deployment Fact Sheets reside in EM's Technology Management System (TMS). You can log onto the system at <http://ost.em.doe.gov/tms> and search technologies by their OST/TMS ID Numbers.¹

Of the Deployment Fact Sheets completed to date, highest priority has been placed on those prepared for FY 1998 and FY 1999. This is the second year that the Focus Areas were able to build the fact sheets directly in the TMS. The data fields in the TMS Deployment Fact Sheet Builder indicate what information is needed and in what form. This system greatly aids data collection, publication, and quality verifications.

The information for deployments occurring during the period FY 1995 through FY 1998 is updated as new information is identified. Good data are available for those technologies that are still being deployed and/or are commercially available.

Additional intensive data verification efforts have been applied to claimed deployments of OST technologies, particularly those in FY 1998 and FY 1999. OST has utilized its Technology Achievement Study for this verification, and continues to seek ways to improve the quality of deployment data and efficiently verify the accuracy and completeness of current and future deployment information. References in this document to "verified" OST deployments reflect this additional scrutiny.

New information provided after publication of the first Deployment Fact Sheet Book changes the number of deployments for FY 1995 - FY 1998. This 1999 Deployment Fact Sheet Book reports the latest totals. The Addendum provides FY 1995 - FY 1998 Deployment Fact Sheet verified in FY 1999 and relates the new information with analyses provided in the first Deployment Fact Sheet Book.

The source data for this Deployment Fact Sheet Book is based on information in TMS. A copy of the live TMS database was extracted and archived on February 10, 2000 and reflects the OST deployment status as of that date.

¹In FY 2000, EM will take a new approach for collecting and verifying technology deployments. The Integrated Planning, Accountability and Budgeting System - Information System (IPABS-IS), the EM management information system, will collect deployment data. The verification process will follow EM's verification process for corporate performance measures.