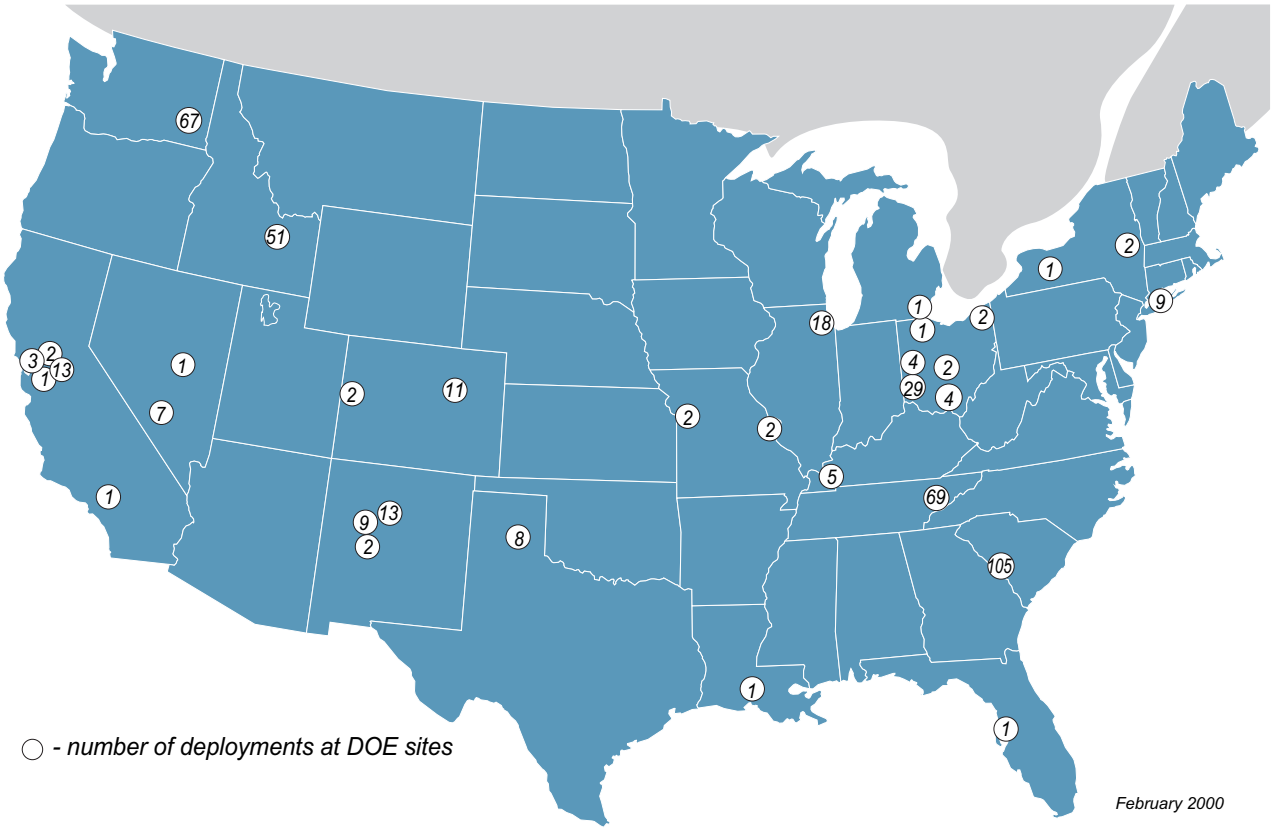
SECTION 1.0

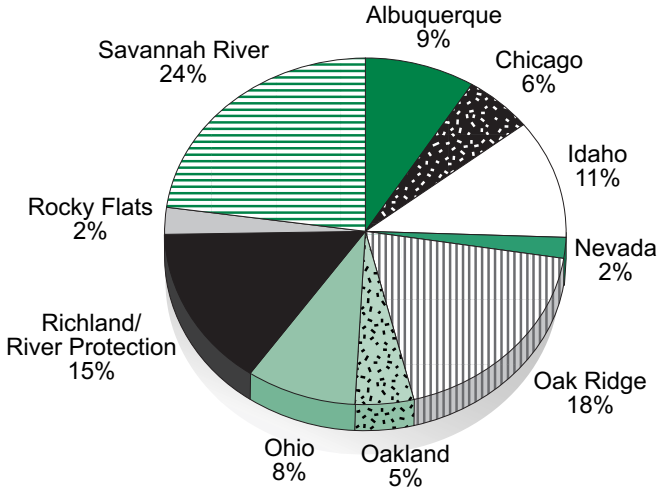
DEPLOYMENT OVERVIEW AND ANALYSIS

1.1 EM's R&D Investments are Paying Off in Cleanup as Technologies are Deployed at DOE Sites

EM's Office of Science and Technology (OST) manages and directs programs for the development of new and improved environmental technologies in support of the EM cleanup mission. OST technologies are being used to clean up DOE sites across the country. From FY 1991 through FY 1999, 449 deployments of OST technologies were reported at 35 DOE sites across the country.



Deployments by DOE Field Office
FY 1991 - FY 1999



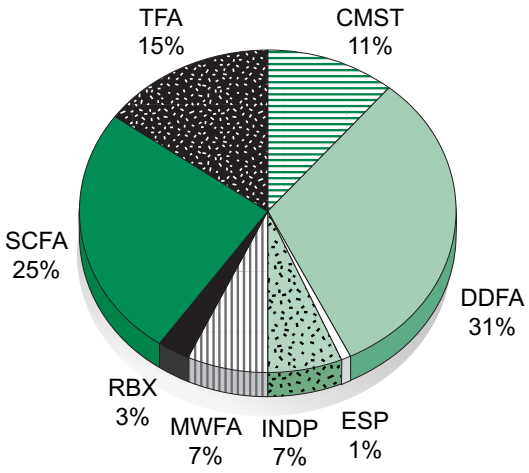
OST technologies are being deployed across the DOE complex by all Field Offices. These deployments provide one indication that OST's efforts toward supporting EM's cleanup mission are paying off.

Deployments by Focus Area/Crosscutting Program
FY 1991 - FY 1999

The Focus Areas address the diversity of problems facing EM:

- mixed/low level/TRU waste (Mixed Waste Focus Area);
- high level waste (Tanks Focus Area);
- environmental restoration (Subsurface Contaminants Focus Area); and
- deactivation/decommissioning of facilities (Deactivation and Decommissioning Focus Area)

All Focus Areas have contributed technologies deployed to address EM problem areas. The Subsurface Contaminants and the Deactivation and Decommissioning Focus Areas have a proportionately higher number of deployments, largely due to the widespread nature and the magnitude of those problem areas across the complex. In addition, the Deactivation and Decommissioning Focus Area has concentrated primarily on more mature technologies.

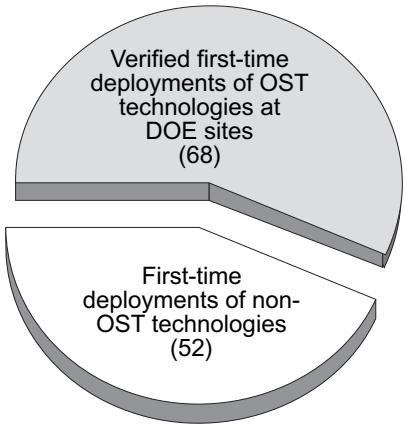


Legend:

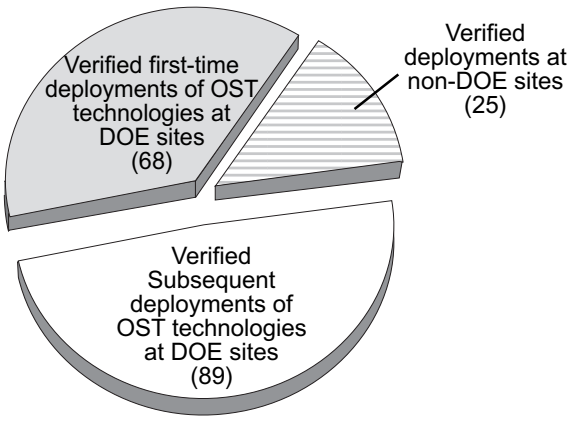
CMST - Characterization, Monitoring, and Sensor Technology Crosscutting Program
DDFA - Deactivation and Decommissioning Focus Area
ESP - Efficient Separations and Processing Crosscutting Program
INDP - Industry Programs
MWFA - Mixed Waste Focus Area
RBX - Robotics Crosscutting Program
SCFA - Subsurface Contaminants Focus Area
TFA - Tanks Focus Area

FY 1999 Technology Deployments

For FY 1999, EM committed to use an alternative technology in at least 60 cleanup activities. As of February 10, the field had reported 129 first-time deployments; 52 of non-OST technologies and 77 of OST-sponsored technologies. OST has conducted an intensive review of claims regarding its technologies. To date, OST has verified 68 first-time DOE-site deployments, which together with the 52 non-OST technology deployments makes a total of 120 first-time DOE-site deployments in FY 1999. Considering only OST technologies, in addition to the 68 first-time DOE-site deployments, OST has verified 89 subsequent uses at DOE sites and 25 non-DOE site deployments, for a total of 182 deployments of OST technologies in FY 1999.



120 First-Time Deployments of Technologies at DOE Sites in FY 1999 (vs. a target of 60)



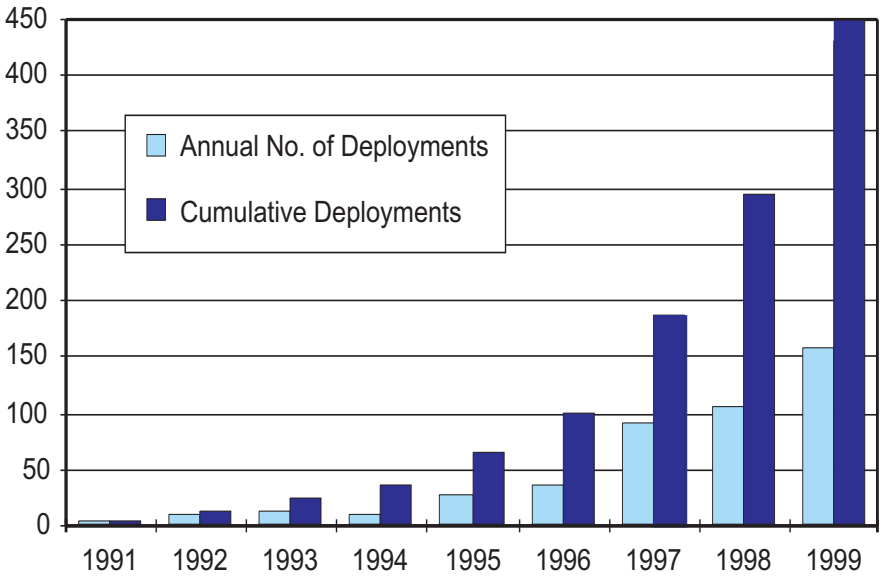
182 Verified Deployments of OST Technologies in FY 1999

1.2 The Rate of Technology Deployments is Accelerating as OST's Program Matures and EM Cleanup Progresses

Cumulative Totals of OST Technology Deployments at DOE Sites by Fiscal Year

EM is accelerating the use of new technology. OST technology deployments have increased from FY 1991 to FY 1999 as:

- New technologies move from R&D phases to field readiness
- Existing technologies are proven effective in waste cleanup
- Management tools are implemented to facilitate integration of site cleanup needs with technologies (Site Specific Deployment Plans, Technology Roadmaps, and Corporate Performance Measures for Deployment)
- Programmatic changes are implemented (increased funding to industry and expanded Focus Area role to include Technology Deployment Assistance)

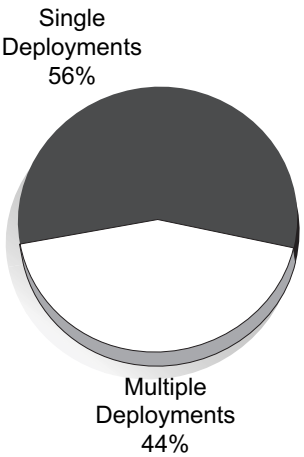


Note: See Addendum for explanation of differences in FY 1991 - FY 1998 deployments reported in previous Deployment Fact Sheet Book.

Frequency of Deployments for OST Technologies FY 1991 – FY 1999

Over the last five years, EM has accelerated the deployment of new technology. From FY 1991 to the end of FY 1999, 44% of OST's deployed technologies had been used more than once.

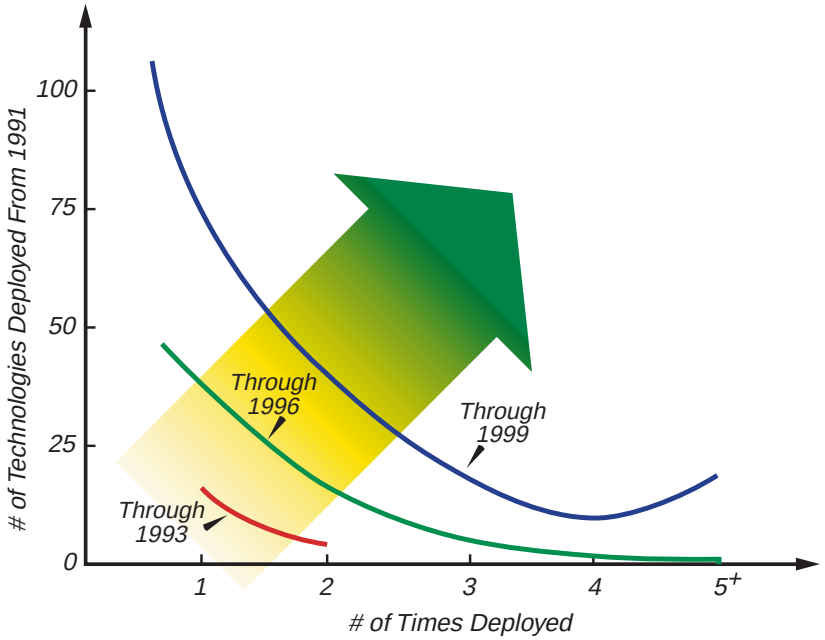
Of the technologies with multiple deployments, 59% have been deployed three or more times and 27% have been deployed five or more times.



The following OST technologies have achieved widespread use at DOE sites:

- Reactor Surface Contamination Stabilization (OST/TMS ID 1839)
- Oxy-Gasoline Torch (OST/TMS ID 1847)
- Stabilized Contaminants using Envirocare Polymer Macroencapsulation (OST/TMS ID 30)
- Segmented Gate System (OST/TMS ID 2158)
- Innovative DNAPL Characterization Toolbox (OST/TMS ID 237)
- Light Duty Utility Arm (OST/TMS ID 85)
- Pipe Explorer (TM) Surveying System (OST/TMS ID 74)
- Gamma Cam (TM) Radiation Imaging System (OST/TMS ID 1840)
- Position Sensitive Radiation Monitoring (OST/TMS ID 1942)
- Ribbon NAPL Sampler (OST/TMS ID 2238)

Accelerated Technology Deployment Will Achieve EM's Goals

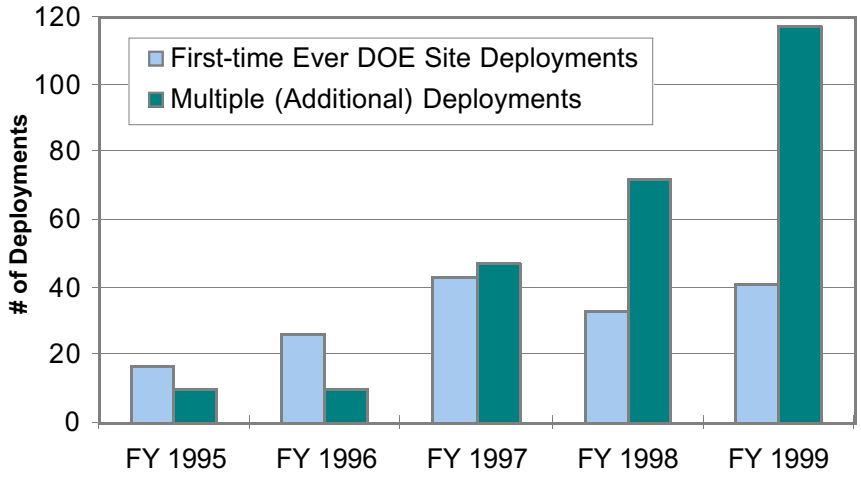


The technology deployment trend is positive for EM. More OST technologies are being deployed each year, and an increasing number of technologies are being deployed multiple times. This increase is contributing to schedule acceleration and cost reduction goals.

Number of Times Deployed	Number of Technologies
1	108
2	35
3	20
4	8
5	9
6	2
7	5
8	3
9	0
10+	4
Total	449	194

Frequency of OST Technology Deployments at DOE Sites, Cumulative for FY 1991 - FY 1999

Multiple Deployments of OST Technologies Continue to Increase at DOE Sites

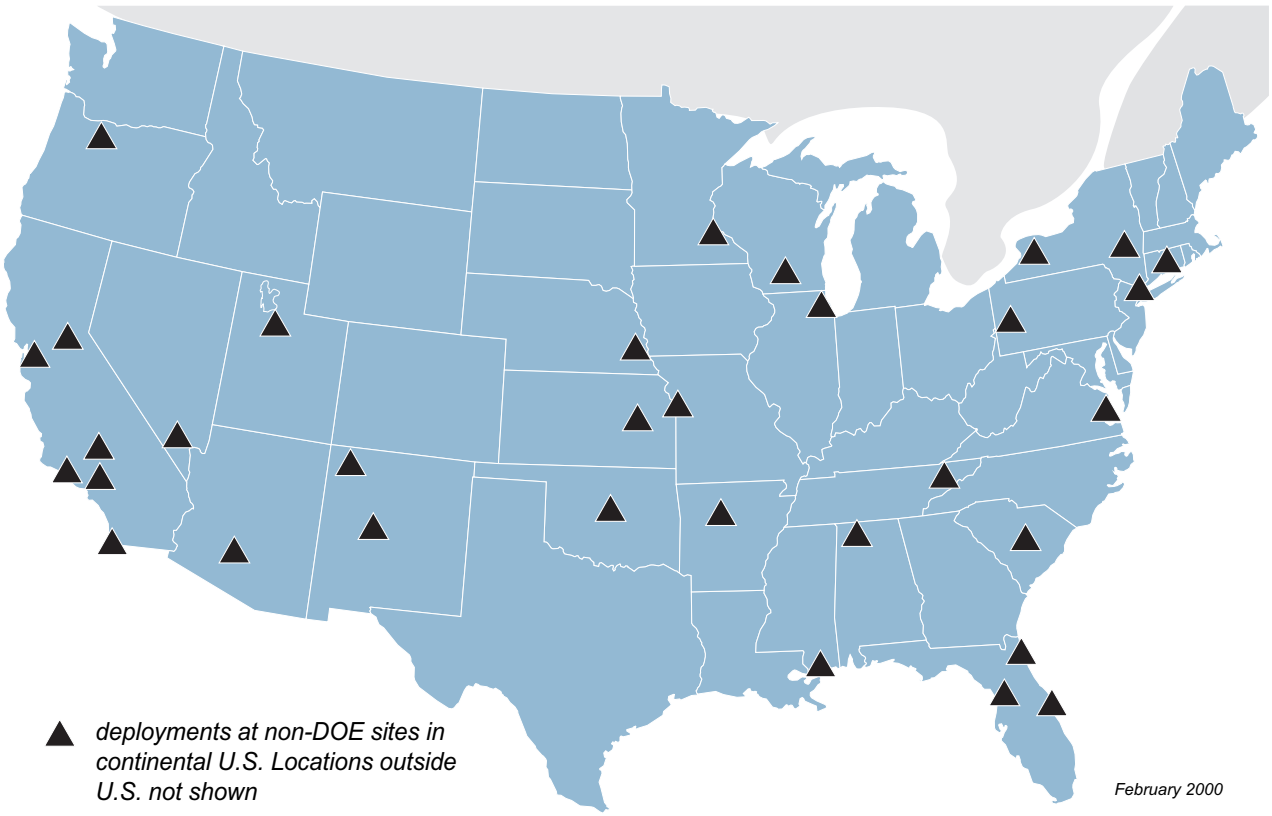


Comparison of first-time ever DOE and multiple deployments at DOE sites by fiscal year (FY 1995 - FY 1999). Note the steady increase in multiple deployments.

1.3 OST Technologies Are Also Contributing to Cleanup Efforts at Non-DOE Sites

While many of EM's cleanup issues are unique to DOE, there are some common problems shared with other federal agencies and organizations. Since the inception of the program in 1989, EM has had an active outreach to other federal agencies with research and development activities targeted toward environmental cleanup. In a number of cases, DOE has jointly funded the development and deployment of technologies with other federal agencies where both agencies benefit.

To date, 57 deployments of OST-sponsored technologies have occurred at 33 non-DOE sites across the country and abroad. These sites include numerous military installations, Superfund sites, nuclear reactors, and various industrial sites.



▲ *deployments at non-DOE sites in continental U.S. Locations outside U.S. not shown*

February 2000