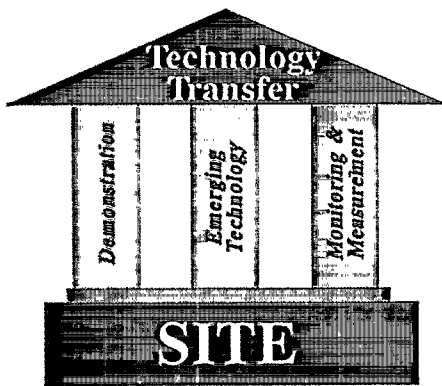




*Superfund  
Innovative  
Technology  
Evaluation  
Program*



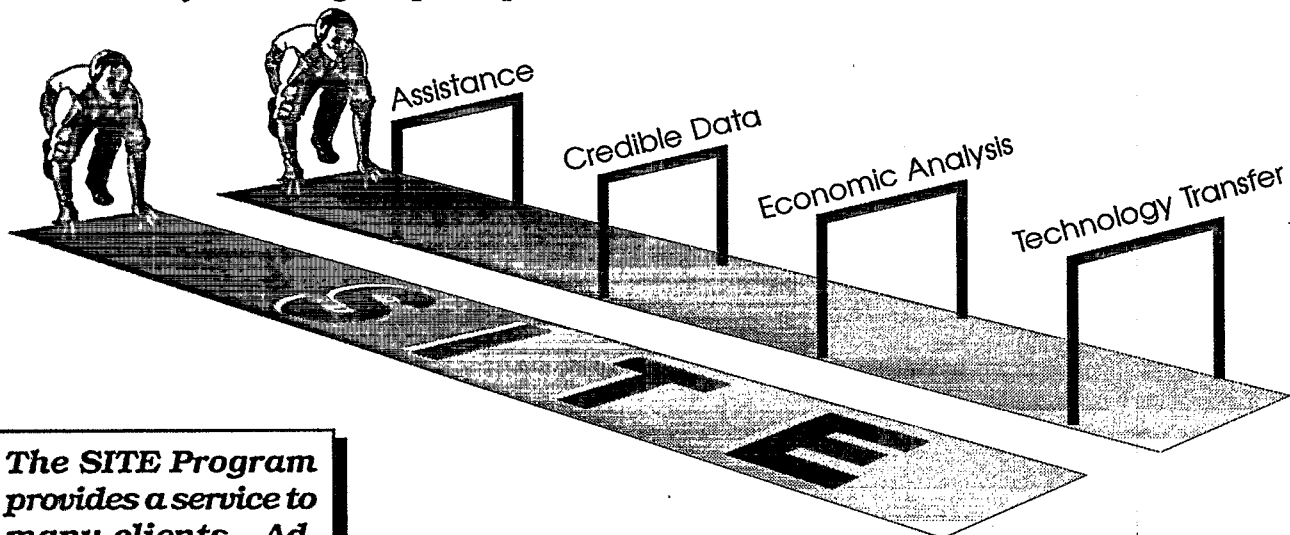
*Innovation making a  
Difference*



**T**he Superfund Innovative Technology Evaluation (SITE) Program encourages commercialization of innovative technologies for characterizing and remediating hazardous waste site contamination through four components: Demonstration, Emerging Technology, and Monitoring & Measurement Programs and Technology Transfer Activities.

The information presented in this brochure addresses the Demonstration segment of the program. This component evaluates promising innovative remedial technologies on-site and provides reliable performance, cost and applicability information for making cleanup decisions.

**M**any of the barriers associated with commercialization of innovative treatment technologies are removed by SITE Program participation.



*The SITE Program provides a service to many clients. Advantages of this program include:*

SITE Program Client Advantages

	Expert Technical Assistance	Objective Credible Data	Reliable Economic Analysis	Quality Assured Site-Specific Data	Information & Technology Transfer
Technology Developers	✓	✓	✓		✓
Consultants		✓	✓		✓
Site Owners (PRP's)		✓	✓	✓	✓
Decision Makers	✓	✓	✓	✓	✓
Investment Community		✓	✓		✓
Permit Writers	✓	✓		✓	✓
Public Groups		✓	✓	✓	✓

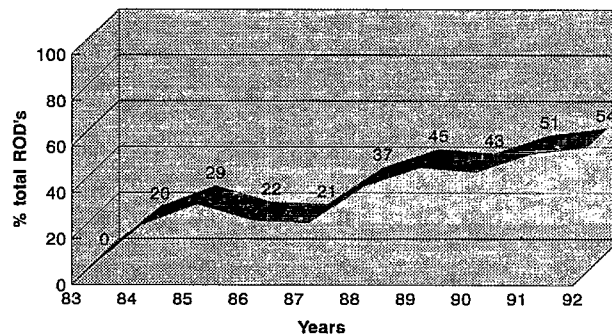
# Program Impacts

## Increased Credibility in Innovative Treatment Technologies

The program has made considerable progress in stimulating the commercialization and use of innovative treatment technologies for hazardous waste remediation in both domestic & international markets. Innovative treatment technologies have become increasingly accepted since the advent of the SITE Program. During the early 1980's innovative treatment technologies were rarely used.

Between 1986 and 1987, the number of innovative remedies comprised approximately one-quarter of the total number of technologies selected for Superfund projects. In the period from 1987 to 1991, this figure had risen dramatically. While SITE was only one contributing factor in increasing technology selection, the program played a significant role. The number continued to rise in 1992 indicating increased credibility for a variety of innovative treatment technologies.

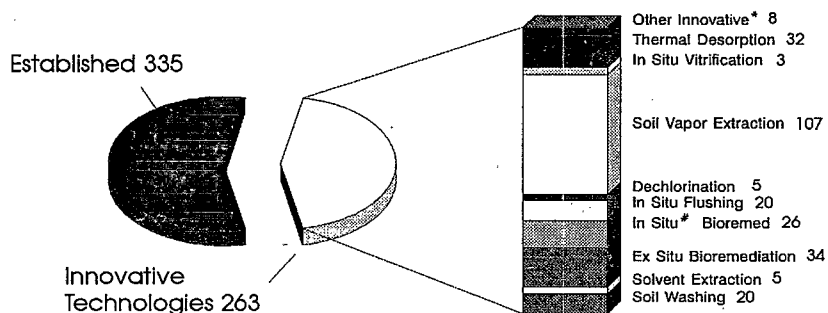
## % of ROD's using Innovative Technologies



Source: Adapted from OSWER Innovative Treatment Technologies: Annual Status Report (fifth edition)

## Innovative Technologies Selected from 1982 - 1992

(Total Number of Technologies = 598)



\* Other innovative technologies are air sparging, contained recovery of oily wastes.

\* Includes 11 in situ groundwater treatment remedies.

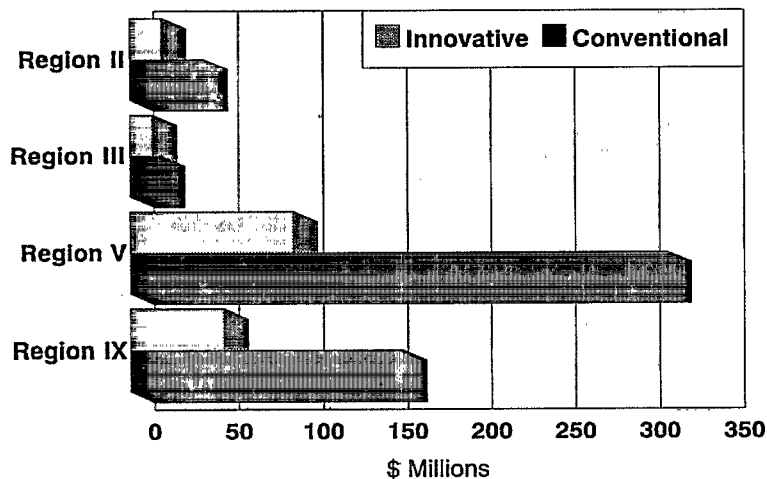
Source: OSWER Innovative Treatment Technologies: Annual Status Report (fifth edition) 1993

A wide range of technologies demonstrated under SITE are now being selected as Superfund remedies. Innovative treatment technologies are defined as those technologies for which cost and performance data is inadequate for their routine use in the remediation of Superfund sites.

**SITE is contributing to significant cost savings.**

In a sample of 17 Records of Decision (RODs) using remedial technology types tested under the SITE Program, the average cost savings for innovative treatment technology use versus standard treatment per site was 21 million dollars or 62%. An evaluation of the cost information for each Region revealed the following savings: 57% for Region II, 26% for Region III, 70% for Region V, and 66% for Region IX. The total cost savings for the 17 RODs was 358 million dollars.

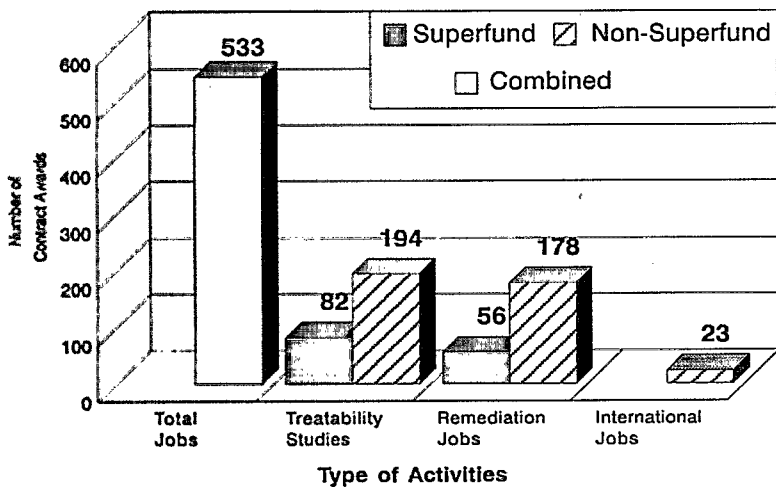
### Cost Savings with Innovative Technologies for 17 Sites



\* 1990-1992 ROD information; Not including administrative costs

### Market Activities

Reported by SITE Vendors\*



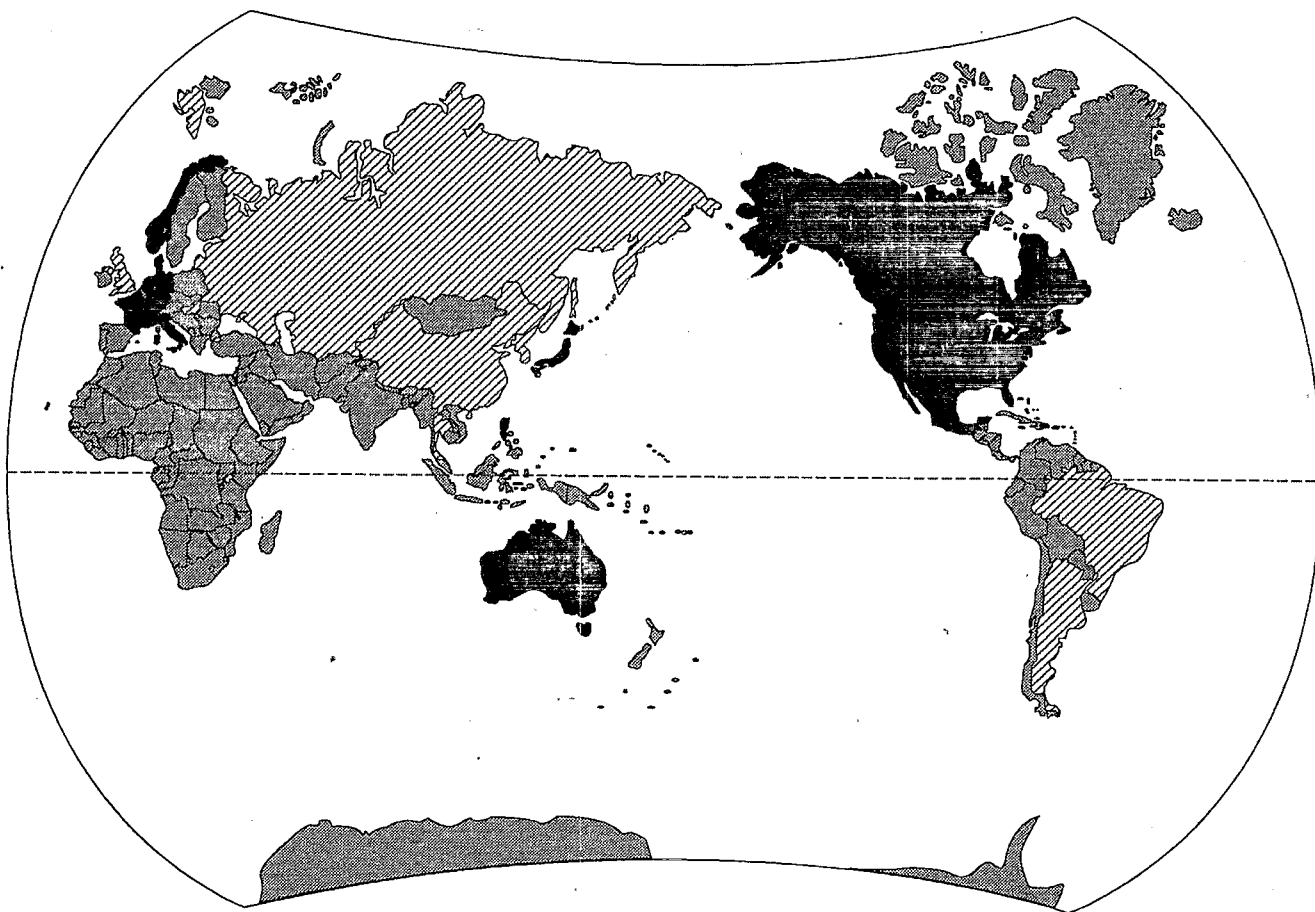
\*Based on 1994 vendor survey

### Increased Market Activities

Vendors who have completed site demonstrations reported 533 contract awards comprised of 395 non-Superfund and 138 Superfund jobs. Many vendors reported activities in a number of areas. Those reporting remediation jobs may also have reported treatability contracts, international jobs and/or international inquiries.

## **Expanding Markets**

The market for innovative environmental treatment technologies is continually expanding. New markets are also opening for many existing technologies. But the environmental community continues to search for more cost effective technologies that perform faster, safer and more effectively than those typically used. Markets are rapidly developing in Latin America and the Pacific rim. Increasing the availability of cost effective environmental technologies promotes sustainable development and enhances competition of U.S. firms within the global market place. In a 1994 Vendor Survey, 17% of commercial vendors who completed SITE Demonstration Projects reported international market achievements either through joint ventures or through independent commercial activities. An additional 20% have reported technology inquiries from international markets.



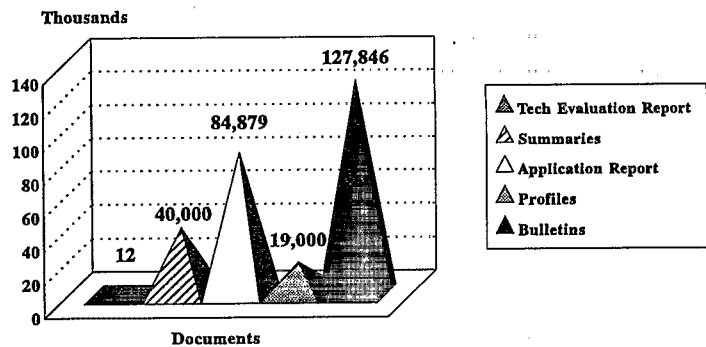
### **Expansion of SITE Program Technologies in Global Market**

- |   |   |
|---|---|
| ■ commercial work/joint venture; U.S., Mexico, Italy, Denmark, Belgium, Norway, Germany, Netherlands, France, Japan, Taiwan, Australia, Canada, Puerto Rico, Virgin Islands | ▨ inquiries; Argentina, Brazil, China, Russia, Hungary, England, S. Korea, Thailand |
|---|---|

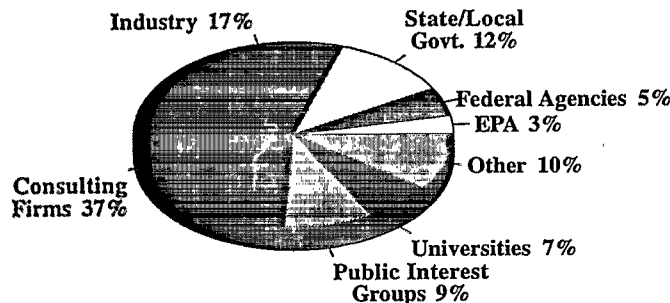
# Program Achievements and Outreach

As of March 31, 1994, the SITE Program had 100 participants and 59 completed projects. Through EPA's Center for Environmental Research Information (CERI), the SITE Program has published a total of 94 documents. During 1993 more than 84,000 copies of 28 full reports, and an additional 128,000 copies of 19 treatability and demonstration bulletins were distributed. Over 19,000 copies of the SITE Program Technology Profiles overview document are requested each year.

## SITE Reports Distributed during 1993



## SITE Mailing List Distribution by Occupation\*



Total number on mailing list 4510

June 1993

Distribution of these popular documents through an EPA mailing list is widespread. Since 1991 government agency requests for SITE publications have almost doubled. Requests from consulting firms have also risen significantly. This may indicate increasing value of the program to environmental decision makers.

The credibility and flexibility of the SITE Program has attracted new technology developers and new partnerships. The SITE Program promotes the advancement and commercialization of new environmental technologies by working cooperatively with private companies, universities, nonprofit organizations and other federal agencies. One-fifth of the completed SITE demonstrations have been conducted at federal facilities and additional projects are planned.

**"...forge a closer working partnership among industry, federal & state governments, workers, and universities."**

- President Clinton's statement on "Technology for America's Growth: A New Direction to Build Economic Strength" 1993

Participants may enter the Demonstration Program through the annual solicitation (announced in the Commerce Business Daily), or via site support of remedial activities where the focus is on implementation of innovative technologies. Participants also enter through advancement from the Emerging Technology Program component and from other EPA technology development projects.

**FOR MORE INFORMATION CONTACT:**

United States Environmental Protection Agency  
Risk Reduction Engineering Laboratory  
Superfund Technology Demonstration Division (MS-215)  
26 W. Martin Luther King Drive  
Cincinnati, Ohio 45268

phone: 513/569-7696

fax: 513/569-7620

