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Annual Report for Fiscal Year 1989

Office of Solid Waste and Emergency Response
U.S. Environmental Protection Agency

FOREWORD

I am pleased to provide a summary of the many accomplishments of the Office of Solid Waste and Emergency Response of the U.S. Environmental Protection Agency for Fiscal Year 1989. Across the board, 1989 was a year of significant strengthening in overall program management. For example, OSWER put in place a national, integrated matrix for establishing program priorities and developed a national system for setting priorities for site cleanup based explicitly on health and environmental risk. Building on a solid record of achievement in 1988, OSWER made impressive gains over the past year in both the Superfund and RCRA programs.

FY 1989 is also noted for the completion of the 90-day Superfund Management Review. With the bulk of the study's fifty recommendations assigned to OSWER and our Regional counterparts, implementation of the ensuing tasks began immediately over and above an already abundant workload.

EPA Headquarters and Regional staff, as well as our State partners, are commended for their efforts and dedication to the Solid and Hazardous Waste Management programs. While the workload in front of us will certainly be challenging, we have in place a solid infrastructure to build upon.

The following pages are not an exhaustive review of the past year; however, they do provide a good summary of some of the more significant accomplishments for FY 1989.

Don R. Clay
Assistant Administrator

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SIGNIFICANT ACCOMPLISHMENTS

THE 90-DAY STUDY ARTICULATED A NEW STRATEGY FOR SUPERFUND

During FY 1989, EPA issued A Management Review of the Superfund Program, generally referred to as the 90-Day Study, which lays out a strategy for implementing the Superfund program and procedures for improving program performance. Key components of the strategy are listed below:

- Integrate Superfund priorities to achieve a "one Superfund Program" approach that emphasizes enforcement first but that also enables the Agency to initiate clean-up actions to induce PRPs to undertake more cleanups;

- Use permanent remedies where possible and aggressively seek innovative treatment technologies that reduce the toxicity, mobility, or volume of wastes at Superfund sites;

- Accelerate response activities by developing prototypes for operable units to narrow the range of remedial alternatives more quickly; and

- Promote greater community participation by broadening public outreach programs and allowing the public to be more involved in remedy selection.

Key Superfund managers and staff in EPA Headquarters and the Regional Offices have developed a comprehensive implementation plan to move forward with the recommendations made in the 90-Day Study. EPA expects to complete 90 percent of the tasks outlined in the implementation plan during FY 1990.

ACHIEVEMENT OF SARA GOALS

The Superfund program met the SARA goal of starting RI/FSs at 275 new sites by October 1989 three months ahead of schedule. By the end of the fiscal year, the program had initiated over 358 RI/FSs since the enactment of SARA in 1986. The SARA goal of completing preliminary assessments on all sites in CERCLIS prior to passage of SARA was also met by January 1988. In addition, the program was on track to meet the SARA requirement to start remedial action (RA) at 175 new sites and actually surpassed the goal with 178 RA starts by mid-October. By the end of the year, there was a backlog of projects waiting to enter the remedial construction phase. As a result, the Agency for the first time has had to prioritize construction projects for the funding available.

VALUE OF SUPERFUND SETTLEMENTS EXCEEDED $1 BILLION

FY 1989 was a most successful year for Superfund enforcement. The total estimated dollar value of all settlements in FY 1989 exceeded $1 billion. The total number of settlements reached was 218, covering removals, RI/FS, remedial design, and remedial actions. Superfund

enforcement numbers reflect increased PRP participation through the use of de minimis and mixed funding settlements as well as conventional settlements. Consequently, the Agency is on target with the President's goal for responsible parties to undertake remedial projects at 50 percent of the sites by September 1990.

IMPLEMENTATION OF THE ENVIRONMENTAL PRIORITIES INITIATIVE

The RCRA program put the Environmental Priorities Initiative (EPI) into practice in FY 1989. Under the EPI, over 550 high priority RCRA facilities received CERCLA preliminary assessments (PAs) during FY 1989. This number is expected to increase in FY 1990.

CONTINUED FOCUS ON SOLID WASTE MANAGEMENT

OSW made substantial progress in implementing its Agenda for Action for solid waste management. EPA has entered into a partnership with the States to promote integrated waste management planning at the State and local levels and to disseminate technical and educational materials to encourage recycling and improved waste management practices.

NEW EMPHASIS PLACED ON MEDICAL WASTE

OSW and OWPE began implementing the new Medical Waste Tracking Act (MWTA), Subpart J of RCRA, which was enacted on November 1, 1988. OSW promulgated an interim final rule on March 24, 1989 and prepared several booklets to explain the MWTA and educate the public that medical waste washups are attributable to individual actions as well as to large organizations, such as hospitals. OWPE developed an enforcement strategy and an inspector training program.

SIGNIFICANT FEDERAL FACILITIES ACCOMPLISHMENTS

The Federal Facilities Hazardous Waste Compliance Office (FFHWCO) worked with the EPA Regional Offices to complete 28 IAGs covering 35 sites in FY 1989. Ten other Federal facility cleanup and/or compliance agreements were also completed in FY 1989. Several of the agreements were landmarks for the Agency and contributed significantly to the formulation of Agency policy issues such as State and Federal roles at Federal facilities, the applicability and integration of RCRA and CERCLA authorities at these facilities, and the development of workable enforcement strategies. Two of the most notable agreements included those for the Letterkenny Army Depot in Pennsylvania and the Hanford facility in Washington.

CHEMICAL EMERGENCY PREPAREDNESS AND PREVENTION PROGRAM

The CEPP prevention program initiated the Chemical Safety Audit Program, which is designed to make facilities aware of the need for improved chemical safety practices. The program offered three training courses for Regional and State personnel on how to conduct chemical safety audits.

The CEPP program continued to build Regional, State and local emergency preparedness capability by assisting States and localities to plan for and respond to chemical emergencies. The program provided assistance in the form of guidance, training, and technical

assistance to the 56 State emergency response commissions (SERCs) and over 3,800 local emergency planning committees (LEPCs) in FY 1989.

In the International arena, the CEPP Office has been working with the Organization for Economic Cooperation and Development (OECD) in developing programs to define long-term policies for chemical accident prevention and emergency response, with an emphasis on international exchange of information on measures designed to improve industrial safety practices and emergency plans throughout the world. The office has also been working with the United Nations Environment Programme (UNEP) in its effort to implement Awareness and Preparedness for Emergencies at the Local Level (APELL), which is a program designed to improve awareness of hazardous installations and prepare emergency response plans in developing countries.

CONTINUED PROGRESS IN IMPLEMENTING AN EFFECTIVE UNDERGROUND STORAGE TANK PROGRAM

The UST program completed putting its national regulatory framework in place in FY 1989. OUST supported publication of the final rules with major outreach campaigns to explain the program requirements in simple language. For example, it distributed over 200,000 copies of a booklet entitled "Musts for USTs" when the final technical standards rule was published; 200,000 copies of the booklet "Dollars and Sense" were distributed to explain the financial responsibility requirements; and OUST prepared a State Program Approval Handbook to assist State officials to develop State UST programs in accordance with the State Program Approval rule.

By the end of FY 1989, The Regions had negotiated LUST Trust Fund cooperative agreements with 54 out of 56 States and Territories. During the fiscal year, the Regions awarded approximately $52.5 million from the LUST trust fund. To date, States have begun more than 220 corrective actions using trust fund monies. Over 16,000 cleanups have been initiated by responsible parties, and nearly 5,700 have been completed.

OUST undertook a number of innovative approaches to support Regional and State implementation activities in FY 1989. For example, it conducted pilot projects to assist several States and counties in establishing "expedited" enforcement programs, designed a major outreach campaign to promote compliance with the leak detection requirements, served as a clearinghouse for transferring technologies and ideas developed by other organizations, developed a health and safety training program for UST inspectors broadcast via satellite, and funded several State projects through its Targeted Improvement Projects (TIPs). FY 1989 TIPs included supporting Connecticut in analyzing its UST workload and projecting future resource needs; assisting New Jersey to develop and implement its UST permitting system; and providing an UST inspector training course for fire marshals and building inspectors in Alaska.

CHAPTER 1
SUPERFUND PROGRAM

RESPONSE ACTIVITIES

During FY 1989, the Superfund program made substantial progress in expanding the amount of clean-up activity underway. More sites entered and progressed through the incremental stages of the Superfund "pipeline" than in any previous fiscal year. In July, three months ahead of schedule, EPA met the Superfund Amendments and Reauthorization Act of 1986 (SARA) deadline to start remedial investigations/feasibility studies (RI/FSs) at 275 new sites. Additionally, at the close of the fiscal year, the Agency was on schedule to meet the SARA requirement to start remedial action (RA) at 175 new sites and actually surpassed the goal with 178 RA starts by mid-October. By year end, there was, in fact, a backlog of projects waiting to enter the remedial construction phase. As a result, the Agency for the first time has had to prioritize construction projects for the funding available.

The Superfund program also made substantial progress during the fiscal year in terms of regulatory and guidance efforts. In FY 1989, EPA issued proposed revisions to the National Oil and Hazardous Substances Contingency Plan (NCP) and the Hazard Ranking System (HRS), the core regulatory documents of the Superfund program. As a result, the Agency was then able to issue the supporting guidance materials necessary to round out the implementation framework for the program. The Agency is in the process of issuing final guidance pending the final promulgation of these rules.

Also during FY 1989, EPA Administrator William Reilly issued the report promised at his confirmation hearing, A Management Review of the Superfund Program. This report (generally referred to as the 90-Day Study), is intended to provide realistic strategic direction for the Superfund program. As the year drew to a close, the Agency issued a comprehensive plan to implement the recommendations of the 90-Day Study. The Agency also pursued other management initiatives to improve the effectiveness and efficiency of the program and worked toward a greater Regional role in implementing the program's management systems.

The program is now poised, as funding permits, to increase the rate of program clean-up activity and demonstrate significant progress in addressing the problem of uncontrolled hazardous waste sites.

Overview of Response Actions

Under the authority of the Superfund program, two types of response activity may be taken – removal and remedial actions. Removal actions are short-term actions taken to address acute or imminent dangers from the release, or threat of release, of hazardous substances, pollutants, or contaminants into the environment. Remedial actions are longer-term measures taken alone or in addition to removal actions, to prevent, minimize, or remediate the release of hazardous substances, pollutants, or contaminants. These response actions are

carried out as either Fund-lead or enforcement-lead activities, depending upon the availability of responsible parties and other considerations.[1/]

Once a site is recorded in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) information system (CERCLIS), it goes through "pre-remedial" steps that determine if the likelihood of a risk to human health or the environment exists. As the first phase of pre-remedial activity, EPA conducts a preliminary assessment (PA) of existing site information. The PA provides a site profile used to determine whether the site requires a site inspection (SI), which includes site sampling. Following the SI, a site is scored using the HRS. If the HRS score the site receives is above 28.50, the site moves to the National Priorities List (NPL) listing stage and into the remedial "pipeline."

Sites listed on the NPL are candidates for remedial actions. Remedial actions require extensive study to select the most effective remedial alternative, and may cost millions of dollars to implement. Remedial actions consist of several steps. After a site is listed on the NPL, a remedial investigation/feasibility study (RI/FS) is conducted on the site. Alternative approaches for long-term site remediation are developed and evaluated, and a recommended approach is identified. A Record of Decision (ROD) is signed, and the site then passes to the remedial design (RD) stage. Once the RD is completed, the remedial action (RA) begins at the site. Upon completion of the RA, but before the site is deleted from the NPL, EPA monitors the site to ensure that the clean-up standards remain in effect.

The Agency will generally determine at the PA phase whether a removal action should be performed, however, the Agency may also conduct a removal action on a site at any stage in the remedial pipeline. Further, removal actions are not limited to sites listed on the NPL; they may be taken at sites that are not listed on the NPL, as well. SARA Section 104(e) imposes limits of one year and $2 million upon removal actions, although exemptions may be granted in some cases. Removals may be undertaken to temporarily stabilize or clean up an incident or site until longer-term response actions can be implemented. In some cases, no further response action is necessary. Removal actions are an integral part of the Superfund clean-up program.

In the past, the success of the Superfund program has generally been determined by the number of sites that have been deleted from the NPL. However, given the complexity and resulting long-term nature of the problems at most NPL sites, it takes many years before a site can be deleted from the NPL. Therefore, the success of the Superfund program is better measured by the rate at which sites pass through the incremental stages in the Superfund remedial pipeline.

Response Accomplishments

Pre-Remedial Actions. Overall, Superfund's pre-remedial program substantially increased its productivity in FY 1989. A total of 2,755 PAs were conducted in FY 1989. There are now 29,714 sites listed in CERCLIS that have completed PAs. Exhibit 1 illustrates the cumulative

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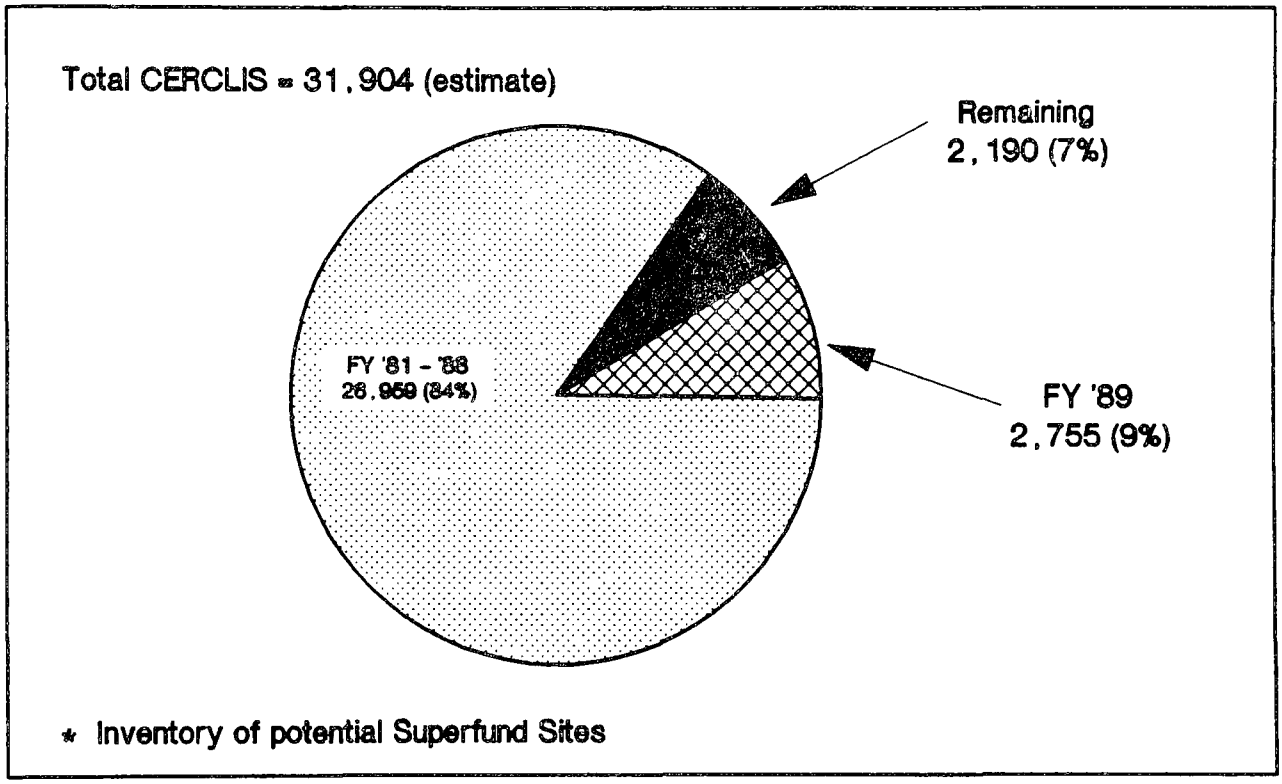
[1/] For purposes of this Report, enforcement-lead activities are those carried out by potentially responsible parties (PRPs). All federally-financed Superfund activities are referred to as "Fund-lead."

Exhibit 1

Percent of CERCLIS* Sites With Preliminary Assessments Completed Through FY '89 (Cumulative)



SOURCE: Superfund Progress Report

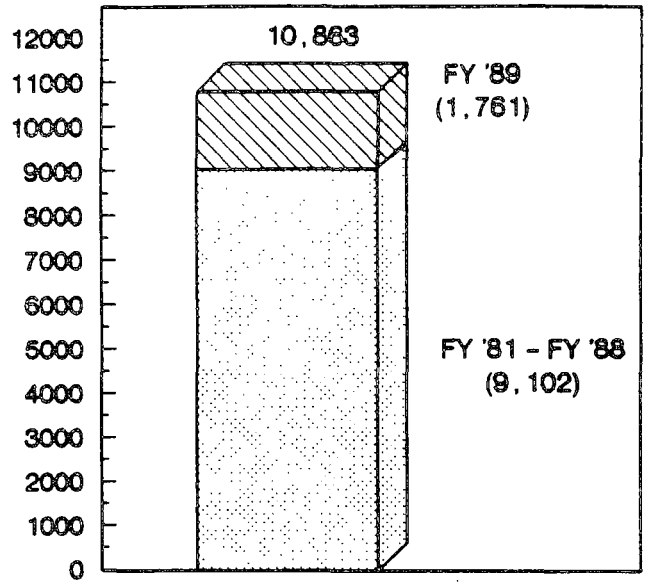
percentage of PAs completed through FY 1989. The FY 1989 SI target of 1,250 was exceeded by 39 percent for a total of 1,732 completions. Approximately 34 percent or 10,863 of the sites entered in CERCLIS through FY 1989 now have completed SIs. Exhibit 2 compares the number of SIs conducted in FY 1989 with the number completed in previous years.

An additional 64 sites were proposed for listing on the NPL during FY 1989, and 109 were promulgated, bringing the total number of sites on the NPL to 1,226.

Remedial Actions. As described earlier, selection of a long-term remedy for a Superfund site is a multi-step process involving many factors. Remedial alternatives are developed by carefully examining site conditions and screening all potentially applicable technologies and process options (including innovative technologies) on the basis of effectiveness, implementability, and cost. Technologies and process options are screened out using site characterization data from the RI. The RI and FS often are conducted concurrently.

Exhibit 2

Number of Site Investigations Completed



SOURCE: Superfund Progress Report

The following SARA-mandated schedule governs RI/FSs at facilities placed on the NPL prior to October 1986:

- RI/FSs must be commenced for at least 275 sites by October 1989; or
- RI/FSs must be commenced for at least 450 sites by October 1990 and for an additional 200 sites by October 1991 for a total of 650 sites by October 1991.

By year-end FY 1989, EPA had commenced 358 RI/FSs since SARA and exceeded the SARA prescribed goal of initiating RI/FSs at 275 sites by October 1989. Exhibit 3 illustrates the RI/FS accomplishments in FY 1989. These included 114 "first start" RI/FSs and 43 subsequent RI/FSs. A national goal of completing most RI/FSs within 18 months continues to be a high priority.

Each remedial alternative is evaluated with respect to nine criteria developed by EPA to address the statutory requirements of CERCLA Section 121. The criteria include: (1) overall protection of human health and the environment; (2) compliance with applicable or relevant and appropriate requirements; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume through treatment; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance.

Based on the results of the evaluation, the Regional Administrator or Assistant Administrator, in consultation with appropriate State personnel, selects the remedy for the site. EPA's proposed plan for remediating the contamination is then announced to the affected

community at a public meeting. After the public has had a chance to comment on the plan, a ROD is prepared. The ROD formalizes the selection of a remedy from the alternatives analyzed in the FS. The ROD also describes the ways in which the selected remedy satisfies the statutory requirements of CERCLA Section 121. As shown in Exhibit 3, a total of 140 RODs (100 initial RODs and 40 subsequent RODs) were signed in FY 1989.

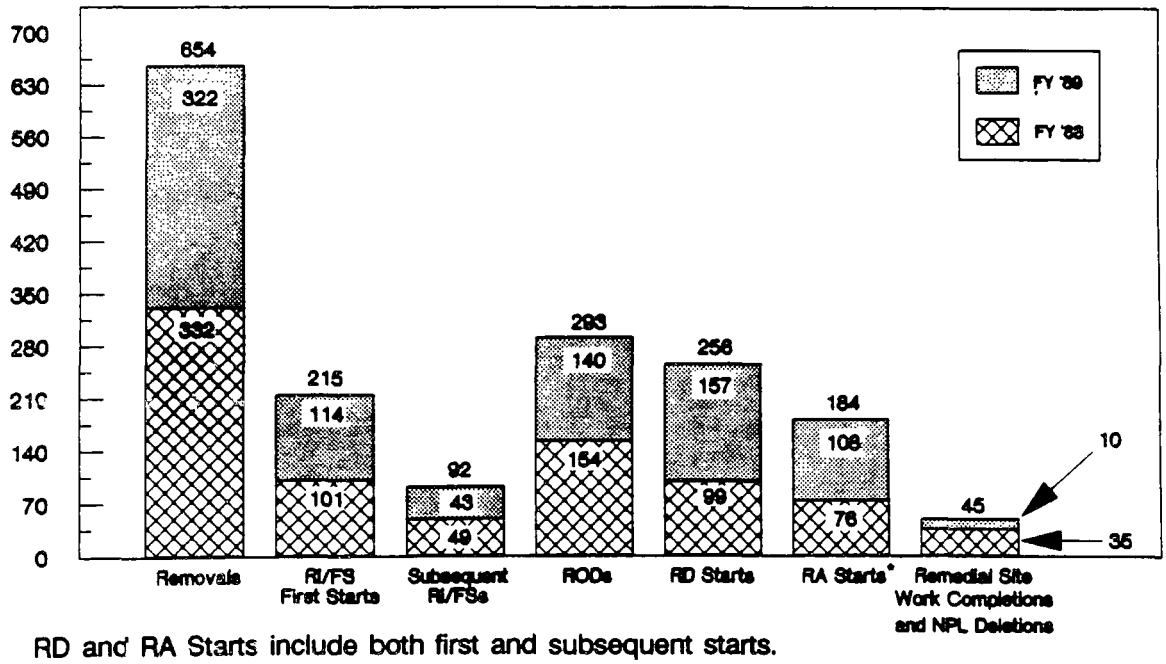
The types of remedies selected in FY 1989 are summarized in Exhibit 4, which illustrates the types of treatment technologies selected and the number of RODs that required pump and treat or other non-source control remediation techniques. Many RODs required a combination of remediation techniques.

SARA Section 116(e) required EPA to start remedial actions at 175 NPL sites by October 1989 and to initiate such activities at an additional 200 sites within the following two years. By year end, the program had initiated a total of 182 remedial actions (178 of these were "first starts," which count against the goal of 175). Exhibit 3 shows that 108 RA starts were achieved in 1989. In addition, 157 remedial designs were initiated during FY 1989. NPL deletions were accomplished at 10 sites in FY 1989 (see Exhibit 3).

Removal Actions. Since the inception of the Superfund program, the removal program has been highly successful. As Exhibit 3 illustrates, 322 removal actions were initiated in FY 1989. About 236 actions were completed using CERCLA funds or enforcement authorities.

Exhibit 3

Major Superfund Program Accomplishments



* RD and RA Starts include both first and subsequent starts.
(NOTE: Only "first starts" count towards statutory goal of 175 by October 1989.)

SOURCE: Superfund Progress Report

Exhibit 4

FY 1989 ROD Technology Summary
As of January 18, 1990[1/]

	Total Number of Occurrences
Source Control Remediation[2/]	
Treatment Technology	90
Incineration/Thermal Destruction[3/]	30
Solidification/Stabilization	17
Vacuum/Vapor Extraction	14
Volatilization/Soil Aeration	6
Soil Washing/Flushing	6
Biodegradation/Land Application	9
Solvent Extraction	6
Other Treatment Technologies	2
Containment Only	26
Onsite	20
Offsite	6
Other Source Control Remedies	5
Temporary Storage	1
Non-Source Control Remediation Technology Selections[2/]	
Pump and Treatment	58
Alternate Water Supply	8
Other	2
Leachate Treatment	3

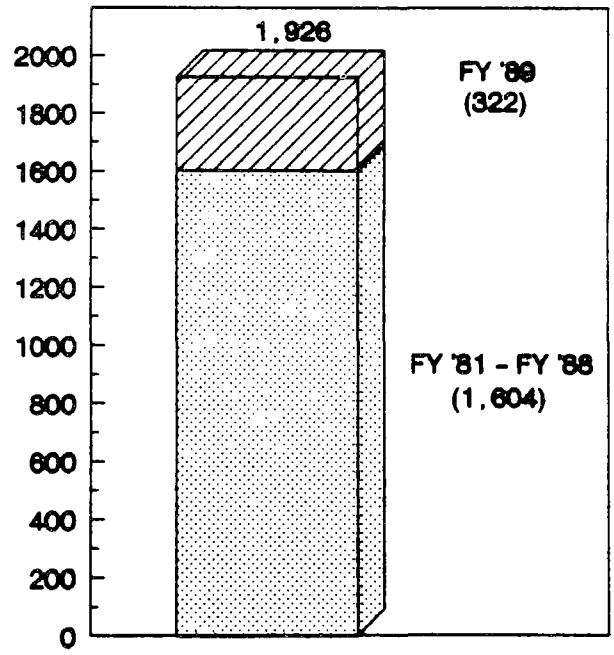
1/ Numbers represent 133 signed RODs out of a total of 140 RODs signed during FY 1989.
2/ More than one remedy may be associated with a site.
3/ Incineration includes an amended ROD which replaces Outboard Marine, IL 5/15/84 ROD.

Exhibit 5 shows that over 1,900 removal actions have been initiated since the enactment of CERCLA. Fiscal year 1989 accomplishments contributed to the program's good record.

Removal actions are characterized according to the urgency of the response required. Incidents or sites requiring immediate attention are considered emergencies. Those that require attention within six months are time-critical, and those that can be postponed for more than six months are non-time-critical. Classic emergencies, such as fires and explosions, and time-critical situations that cannot be addressed by other authorities are the removal program's highest priorities. Approximately one-third of the removal actions carried out each year are classic emergencies. Of the remaining removals, time-critical removals comprise the vast majority.

Exhibit 5

Number of Removal Actions Initiated*



* Includes PRP and fund-lead removals at both NPL and non-NPL sites

ENFORCEMENT ACTIVITIES

The Superfund program consists of integrated enforcement and fund-financed activities to achieve clean-up at hazardous waste sites. The enforcement program is responsible for identifying potentially responsible parties (PRPs) that may be liable for response actions and attempting to negotiate agreements with the PRPs to perform studies or response actions. If negotiations are successful, the enforcement program is then responsible for entering into settlements with the PRPs. If negotiations are unsuccessful, the enforcement program has lead responsibility for any follow up action, such as issuing Unilateral Administrative Orders or pursuing litigation.

Overview of Enforcement Activities

CERCLA provides a broad range of enforcement authorities that EPA can use to enlist PRP involvement in cleaning up sites. These authorities include the ability to order PRPs to perform response activities if negotiations fail and to secure injunctive relief and receive treble damages for non-compliance if the PRPs refuse to perform and/or pay for response actions.

Negotiations are used to reach agreements with PRPs so that the PRPs will perform or finance the work and pay for any past and future costs. The outcome of successful negotiations is a settlement. Settlements are either administrative or judicial. Judicial settlements must be filed in Federal District court and approved by a judge before they are considered final. Administrative settlements are final when they are signed by proper EPA personnel and consenting PRPs. Both types of settlements are signed by the PRP and enforceable by the Federal District Court. If negotiations are unsuccessful, EPA may issue a unilateral order to compel the PRP to perform response activities and/or recover EPA's cost. If PRPs do not comply with a unilateral order, EPA may initiate litigation to compel PRPs to comply with the order or use Superfund monies to begin response activities and then pursue litigation to compel the PRPs to take over the work and/or recover EPA costs.

EPA can compel PRPs to perform the work under the authority of Section 106 of CERCLA and the settlement provisions of Section 122. Section 107 of CERCLA allows EPA to assess penalties and treble damages if a PRP is not in compliance with a unilateral administrative order. Section 107 also allows EPA to recover from PRPs government costs incurred while performing response work and costs incurred while overseeing PRP response actions.

Enforcement Accomplishments

Settlements. FY 1989 was an excellent year for Superfund enforcement. The total estimated dollar value of all response settlements in FY 1989 exceeded $1 billion, as illustrated by Exhibit 6. Exhibit 7 demonstrates the increase in the number of response settlements during the past three fiscal years. During FY 1989, EPA reached 218 settlements for PRP response activities (removal, RI/FS, remedial design, and remedial action). This includes 67 unilateral administrative orders that are in compliance with a value of approximately $211.7 million. Forty-nine Consent Decrees were lodged in FY 1989, with an estimated response value of approximately $620 million.

Superfund enforcement increased PRP participation during FY 1989 through the use of conventional settlements as well as de minimis and mixed funding settlements. In FY 1989, there were a total of 13 de minimis settlements in the form of a consent decree or administrative order on consent. This represents a 160 percent increase in the number of de minimis settlements from FY 1988. During FY 1989 there were 4 mixed funding consent decrees worth $69 million.

Exhibit 6

Value of PRP Response Settlements (All Activities) (FY '87 - FY '89)

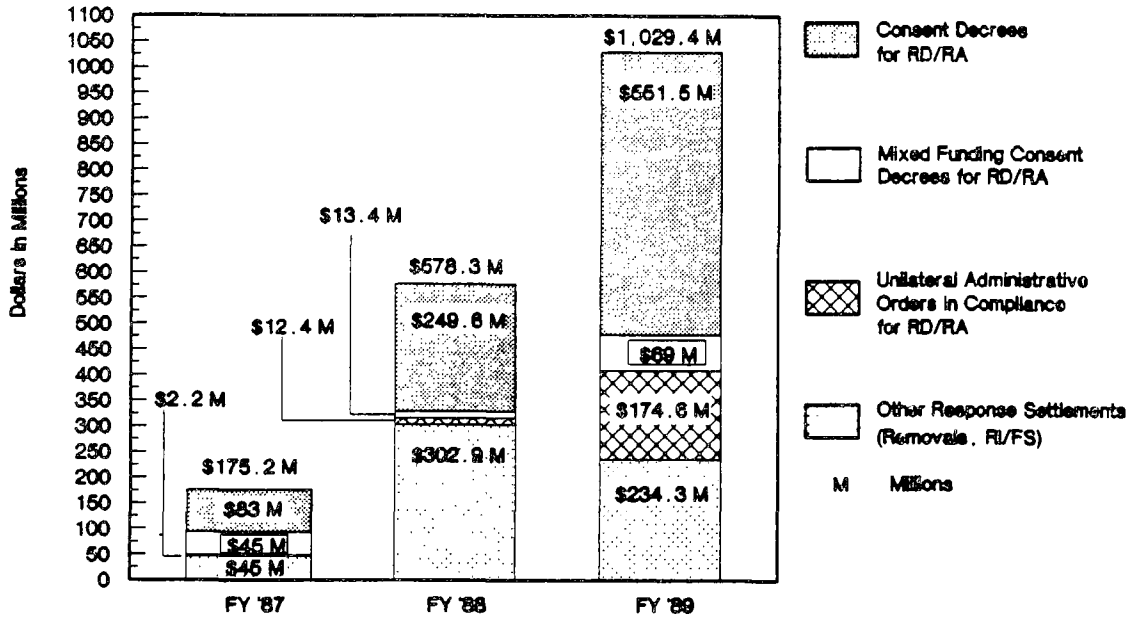
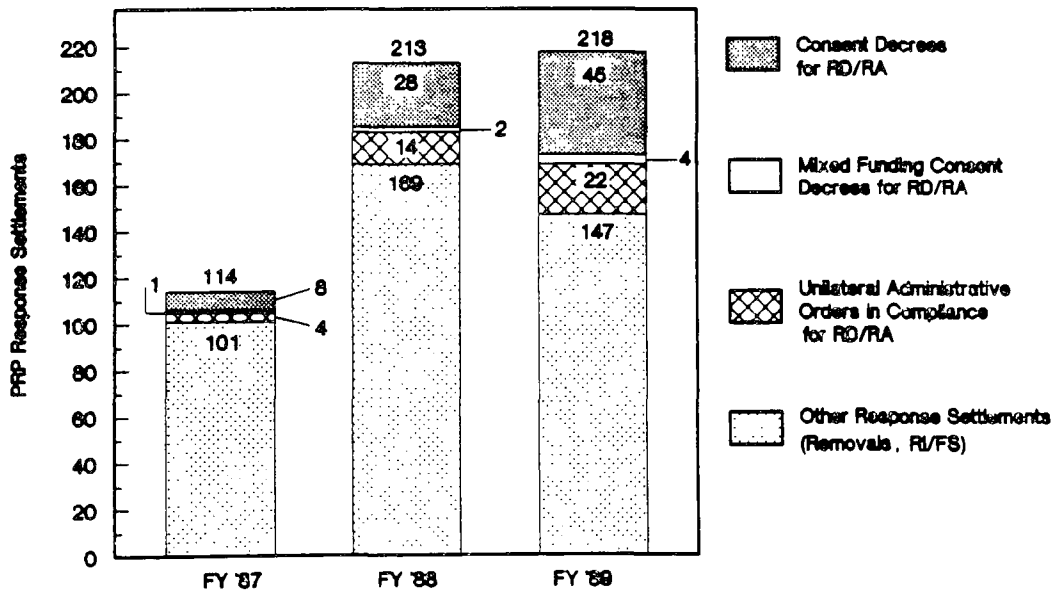


Exhibit 7

Number of PRP Response Settlements by Activity (FY '87 - FY '89)



Three of the significant settlements in FY 1989 are described below:

- **French Limited, TX.** EPA and 85 PRPs entered into a consent decree whereby the PRPs will implement and finance 100 percent of the selected remedy (bio-remediation) for an estimated value of $50 million. The settlement included the reimbursement of EPA's recoverable costs, which total $1.28 million and included a de minimis agreement. Major and de minimis parties agreed to establish a $55 million trust fund to finance the remedial activity and provide funds for the reimbursement of oversight costs. The settlement also provides for the PRP to conduct additional remedial measures should the selected remedy fail. This is the first site where bio-remediation will be used on a large scale.

- **Operating Industries, Inc., CA.** EPA reached a partial settlement with approximately 113 of the estimated 4,000 PRPs at this site to conduct the remedial activities and reimburse the Trust Fund for costs associated with the two discrete stages of response activity covered by this settlement. Response activities include installation of site control and monitoring systems and construction and operation of an on-site treatment facility to treat the leachate and other hazardous liquids collected at the site. The estimated cost for this project is $34 million. The group of settling PRPs is divided into two groups: a group to perform the work and a "cash out" group. The "cash out" group of PRPs has agreed to provide funds for the remedy in this settlement based on the total waste contributed by this group. This value is estimated to be $25 million. This money will be used to pay for past costs and additional site work. Under the consent decree, EPA has the ability to allocate the monies received between past costs, oversight costs, and the "cost overrun fund".

- **Re-Solve Inc., MA.** EPA and 224 PRPs reached an agreement for the remedial activity at this waste chemical reclamation facility. The remedy involves excavation of contaminated soils and ground water treatment. EPA has reached a preauthorization agreement with settling PRPs for reimbursement of up to $7.2 million or 31.2 percent of the estimated $22 million in remedy costs. The consent decree contains a de minimis settlement that allows de minimis parties to cash out for their Nonbinding Preliminary Allocation of Responsibility (NBAR) share plus a premium. This was the first site where an NBAR was prepared by EPA to facilitate the settlement process. The settling PRPs will establish a trust fund to provide funds for the response work. In addition, EPA will be reimbursed for $7.8 million in past costs. The Commonwealth of Massachusetts will be reimbursed $500,000, which represents all of the Commonwealth's past costs.

  EPA and the State entered into a Memorandum of Agreement (MOA) that establishes formal procedures for resolving conflicts that may arise between EPA and the State. In addition, the MOA asserts that EPA must consult with the State prior to approving work plans and other deliverables.

Unilateral Enforcement. Section 106 of CERCLA authorizes the Agency to issue unilateral administrative orders (UAOs) to compel PRP response. EPA views the timely, routine and predictable use of UAOs as an integral part of the CERCLA enforcement process, both to

help bring settlement negotiations to a successful conclusion and to compel PRP response or set the stage for further enforcement, such as collection of statutory penalties and/or treble damages. UAOs are used primarily for removals and RD/RA, although some UAOs are issued for RI/FS.

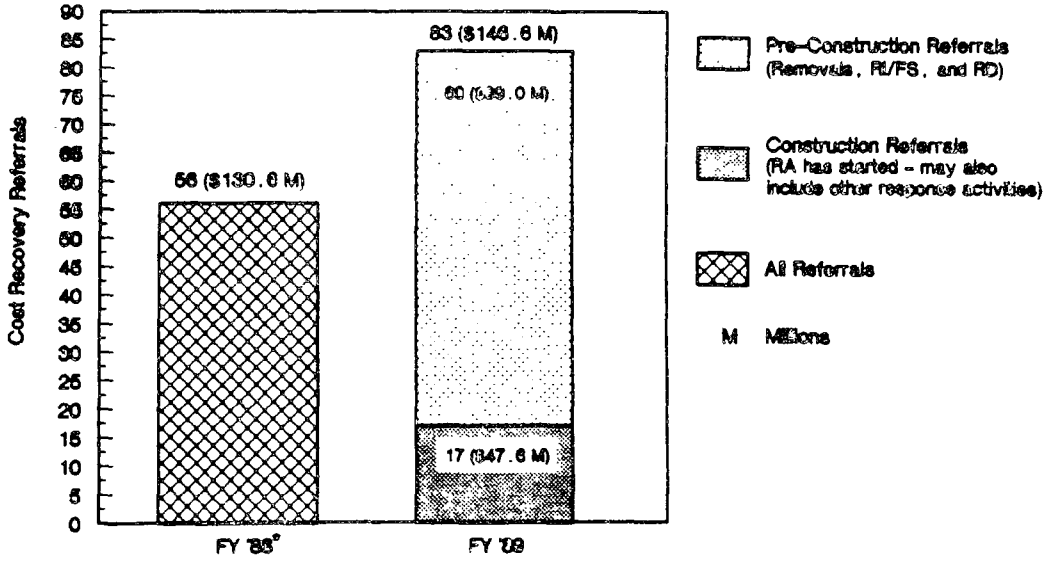
The 102 UAOs issued in FY 1989 represent a 57 percent increase over the number issued in FY 1988. Likewise, the number of UAOs in compliance rose to 67 in FY 1989, representing a 64 percent increase from FY 1988. Twenty-two of the UAOs in compliance are for RD/RA and have an estimated work value of $175 million. In addition to these numerical accomplishments, the Agency prepared an FY 1990 strategy for enhancing the use of CERCLA Section 106 enforcement authorities, focusing on UAOs for RD/RA. This strategy will help ensure the continued successful use of UAOs in the Superfund enforcement program.

Cost Recovery. Cost recovery actions occur when the Fund finances response activities at a site where there are financially viable PRPs. Cost recovery can be pursued for removals, remedial investigation/feasibility studies, remedial designs, remedial construction, and oversight of PRP responses. Enforcement actions used to recover government costs include negotiations, settlements, and litigation.

Exhibit 8 highlights the key accomplishments of the cost recovery program during FY 1989 as compared to accomplishments during FY 1988. In FY 1989, EPA Regional offices prepared a total of 83 Section 107 referrals greater than $200,000, representing a total value of $146.6 million for past costs plus any future Fund financed expenditures. Of these 83 referrals, 66 represent pre-construction (i.e., removal, RI/FS, and RD) costs, totalling $99 million, and 17 represent construction (i.e., RA costs, which may include removals, RI/FSs, and RD) costs totalling $47.6 million. The number of Section 107 referrals to recover costs increased by 48 percent from FY 1988 to FY 1989.

Exhibit 8

Section 107 Cost Recovery Referrals Greater Than $200,000
(FY '88 and FY '89)



* During FY '88 there was no distinction between pre-construction and construction costs.

SUPERFUND MANAGEMENT INITIATIVES

During FY 1989, in an attempt to define a clear cut strategy for the Superfund program and to assist managers in increasing the effectiveness and efficiency of program activities, the Agency pursued a number of Superfund management initiatives. The most significant of these Superfund management initiatives are described below.

90-Day Study

In FY 1989, the Agency undertook A Management Review of the Superfund Program (known as the 90-Day Study) to establish a strategy for the Superfund program and identify procedures to improve program performance. The 90-Day Study, completed in May of 1989, articulates a clear, straightforward vision for the Superfund program that has received broad acceptance both within and outside the Agency. It places greater emphasis on ensuring that the Superfund remedial pipeline is filled to capacity at all times and that the sites in the pipeline are flowing from one stage to another as quickly as possible. The strategy set forth in the Study directs the Superfund program to attack the worst sites first, removing the sources of immediate threat and then, on a priority basis, dealing with the sources of long-term risk. In addition, the Study encourages the Agency to take several actions, which are listed below:

- Emphasize enforcement to induce PRPs to undertake more cleanups under EPA direction;

- Integrate Superfund priorities of expediting site cleanup and maximizing PRP-lead field work, resulting in a "One Superfund Program" approach that emphasizes enforcement first, but that also enables the Agency to initiate clean-up actions quickly;

- Use permanent remedies where possible and aggressively seek innovative treatment technologies that reduce the toxicity, mobility, or volume of wastes at Superfund sites;

- Accelerate response activities by developing prototypes for operable units to narrow the range of remedial alternatives more quickly;

- Promote greater community participation by broadening public outreach programs and allowing the public more involvement in remedy selection; and

- Build solid relationships with States, Natural Resource Trustees, and the Agency for Toxic Substance and Disease Registry (ATSDR) to ensure that the Superfund process is working as efficiently and cooperatively as possible.

Since the publication of the 90-Day Study, key managers and staff in EPA Headquarters and the Regional offices have developed a comprehensive implementation plan to move forward with the recommendations made by the 90-Day Study. In particular, the Agency has begun implementing actions to control acute threats immediately, clean up the worst sites first, and emphasize enforcement in the Superfund program.

Strategic Planning Initiative

During FY 1989, the Office of Emergency and Remedial Response (OERR) continued its use of a strategic planning process to establish and articulate its mission, goals, objectives, and tasks. The overall purpose of the OERR Strategic Planning Initiative (OSPI) is to lay the ground work for future Agency action under the Superfund program in FY 1990 and beyond. OSPI was particularly important during FY 1989 because the current three-year budget cycle includes preparation for Superfund reauthorization in 1991.

In August of 1989, key OERR managers and staff met to discuss and develop the goals and objectives for Superfund implementation in the next fiscal year and beyond. Several major goals for the Superfund program were developed during this OSPI meeting:

- Address high priority sites and releases first;
- Implement effective remedies at Superfund sites;
- Increase the role of others; and
- Achieve a well-managed, efficient Superfund program.

These Superfund program goals and objectives are consistent with the recommendations contained in the 90-Day Study.

Consistent with a greater emphasis on strategic planning during FY 1989, the Agency began a series of strategic analyses of Superfund program experience. These analyses are intended to assist managers in making mid-course[2/] corrections (if necessary), and provide an opportunity to evaluate and revise the strategic directions for the program.

Worst-Sites-First Strategy

Projects are entering the Superfund remediation process at an increasing rate and, as the numbers suggest, the Superfund pipeline is essentially full. This trend is expected to continue and will place increasing pressure on the existing resources of the Superfund program. The 90-Day Study recognized the growing demands on the Superfund pipeline and consequently recommended that the program attack the worst sites first, removing the sources of immediate threat and then, on a priority basis, deal with the sources of long-term risk.

In response to this recommendation, the Superfund program expanded and formalized its "worst-sites-first" strategy to include the Superfund remedial program during FY 1989. Under this strategy, EPA is emphasizing treatment and innovative technology transfer to clean up sites, while focusing its resources on those sites at each stage of the pipeline where conditions pose the greatest risks to human health and the environment. This strategy is comprised of three major steps:

2/ FY '89 marked the midpoint between the enactment of SARA and the 1991 reauthorization.

- Immediately control acute threats to human health and the environment at all NPL sites;

- After abating immediate threats, address worst sites first; and

- Carefully monitor the long-term effectiveness of selected remedies to ensure the protection of human health and the environment.

During the fiscal year, the Agency ranked 83 projects in terms of their environmental priority, and earmarked $1 billion to fund these projects in 1990.

Environmental Indicators

The primary goal of the Superfund program is the protection of public health, welfare, and the environment by reducing exposure to hazardous substances and reducing the hazards posed by the toxicity of these substances. EPA's assessments of Superfund program progress to date have been concerned primarily with administrative milestones, such as the number of RI/FSs begun, the number of RODs signed, or the number of operable units completed. This type of evaluation of program progress, however, does not account for the progress made toward human and ecological risk reduction during the clean-up process, but before the entire task is complete.

In response to this perceived problem, EPA developed the Superfund Environmental Indicators project. The purpose of this project is to develop a flexible system of performance-based environmental indicators of progress for all Superfund sites, making use of existing data to reduce cost and burden to the program. In fulfilling the purpose of this project, the Agency has been mindful of the need to have a system of indicators that is scientifically credible, understandable by Congress and the public, and applicable to the wide range of sites and approaches to cleanup that characterize the Superfund program.

During FY 1989, the Agency continued to collect Superfund site data from the Regional offices in order to evaluate environmental indicators. OERR and the Office of Management Systems and Evaluation (OMSE) used this site data to complete a study on the feasibility of implementing an environmental indicators system for the Superfund program. This study evaluated eight different environmental indicators. Based on the results of the study and other factors, the Agency reduced the overall number of environmental indicators being considered from eight to three, with each new indicator comprising elements from the old environmental indicators. The three new indicators being evaluated are:

- Achievement of reduction in concentration of environmental contaminants, with comparison to public health standards and/or ecological standards;

- Achievement of reduction of immediate human exposure to contaminants and/or control of contaminant exposure and migration through interim measures; and

- Volume of waste/contaminated material treated or contained compared to percentage risk reduction.

In FY 1990, each of the ten Regions will be visited by a data collection team. This collection of data will enable OERR and OMSE to analyze and summarize the environmental results of Superfund clean-up actions completed to date, with the first full report on Superfund program progress measured by environmental indicators available in FY 1990. The Agency will also continue to develop and evaluate additional environmental indicators of Superfund program progress in the coming fiscal year.

REGULATIONS, GUIDANCE, AND OTHER ACTIVITIES

Concurrent with a significant amount of site activity, there was substantial regulatory and guidance development in the Superfund program during FY 1989. Some of these activities were mandated by SARA, while other efforts stemmed from the need to improve the pace of the Superfund program. Proposed revisions to the NCP and the HRS were published in FY 1989. Guidance for preparing RODs and proposed plans was also issued in FY 1989. The following sections outline these and other regulatory and guidance activities undertaken by the Superfund program staff during the past fiscal year.

National Contingency Plan

In December of 1988, EPA published proposed revisions to the National Oil and Hazardous Substances Pollution Contingency Plan (53 FR 51394, December 21, 1988). The NCP contains the regulatory blueprint for Superfund response actions. In addition to incorporating the changes mandated by SARA, the NCP was revised to:

- More accurately reflect the sequence of response actions taken pursuant to the NCP;
- Clarify existing language on roles, responsibilities, and activities of affected parties; and
- Incorporate changes indicated by program experience.

The proposal also reflects the Agency's bias toward active remedies for Superfund cleanups.

The publication of the proposed revised NCP commenced a 60-day public comment period, which was extended an additional 30 days. During this public comment period, the Agency also held several public meetings throughout the country on the proposal. EPA received more than 150 comment letters, which contained more than 2,800 individual comments from State and local governments, other Federal agencies, industry, environmental groups, and the general public. During the fiscal year, the Agency undertook and completed the considerable task of analyzing and responding to these comments. Responses to comments will appear in the preamble to the final revised NCP or an accompanying background document.

Based on analysis of these comments and other considerations, EPA made a number of revisions to the proposed NCP. The final revised NCP began Agency Red Border Review in September 1989. The revised NCP is expected to be published as final early in calendar year 1990.

Hazard Ranking System

EPA published the proposed revisions to the HRS in FY 1989 (53 FR 51962, December 23, 1988). The HRS is the scoring system Superfund uses to identify sites that warrant listing on the NPL. The proposed revisions to the HRS make it a more comprehensive ranking system that is more accurate in assessing contaminant concentration, contaminant toxicity, and the potential for exposure. The revised HRS takes into consideration new exposure pathways -- the human food chain and direct exposure -- and makes the definition of "sensitive environments" more inclusive. In addition, the revised HRS considers both acute and chronic health effects.

The Agency also completed Phase I of a two-stage field testing project to test the implementability of the HRS provisions. The results of this field testing project were made available to the public for review and comment.

EPA received over 150 comment letters on both the proposed revisions to the HRS and the results of the field testing project. During FY 1989, EPA began the task of analyzing and responding to these comments. The Agency expects to complete the process of responding to comments and publish the revisions to the HRS as final by early calendar year 1990.

Reportable Quantity Adjustments for Hazardous Substances

On August 14, 1989 in two final rules (54 FR 33418 and 54 FR 33426), EPA promulgated reportable quantity (RQ) adjustments for 264 hazardous substances. Of the 264 hazardous substances, 260 had RQs proposed for adjustment by EPA in a proposed rule published on March 16, 1987 (52 FR 8140). The remaining four hazardous substances are waste streams that were listed as hazardous under Section 3001 of the Resource Conservation and Recovery Act (RCRA) and, therefore, were designated as CERCLA hazardous substances (51 FR 37725, October 24, 1986). By making these adjustments, EPA relieved the regulated community of the burden of reporting releases that are unlikely to pose public health threats.

Extremely Hazardous Substance Designation and Reportable Quantity Adjustments

Pursuant to Title III of SARA, EPA published a list of extremely hazardous substances (EHSs) for the purposes of emergency planning activities. Although 134 of the 366 substances listed as EHSs are already CERCLA hazardous substances, the remaining 232 EHSs are not. In FY 1989, the Agency published a proposed rule that would designate these remaining 232 EHSs as CERCLA hazardous substances (54 FR 3388, January 23, 1989). The designation as a CERCLA hazardous substance indicates a level of concern about a given substance sufficient to require a report to the National Response Center (NRC) in the event of a release in an amount equal to or greater than the reportable quantity (RQ) for that substance.

Also in FY 1989, the Agency published a proposed rule that would adjust the RQs of the 232 EHSs discussed above (54 FR 35988, August 30, 1989). Under Section 102 of CERCLA, an RQ of one pound is established for releases of CERCLA hazardous substances. By adjusting the one-pound reporting triggers for these 232 substances, EPA will reduce the reporting and response burdens on the regulated community and on Federal, State, and local governments. The RQ adjustments proposed rule also proposed to adjust the RQs of 19

EHSs that are already listed as CERCLA hazardous substances. To adjust the RQs of these 251 substances, EPA proposed to apply the methodology used to establish threshold planning quantities for EHSs as part of the RQ adjustment methodology for those CERCLA hazardous substances meeting the EHS screening criteria.

The publication of these proposed rules commenced a 60-day public comment period for each. During the fiscal year, the Agency worked on responding to the comments received on these two proposals. EPA expects to respond to all comments and to finalize and publish both the EHS designation rule and the RQ adjustment rule in late 1990.

ROD Guidance

In FY 1989, EPA completed revisions to its guidance on preparing RODs and proposed plans. These revisions reflect the proposed revisions that were made to the NCP. Among other changes, the interim final ROD guidance provides more specific direction in three areas:

- Implementing remedies organized into several operable units;
- Proposing sites for deletion from the NPL; and
- Selecting a "no action" alternative.

The interim final ROD guidance was distributed to the EPA Regional Offices for use by Regional staff to prepare RODs and proposed plans beginning late in FY 1989.

Removal Program Guidance

In order to promote the most efficient use of limited removal program funds and resources, the Emergency Response Division (ERD) issued several guidance documents in FY 1989. These guidance documents assist the Regions in setting priorities so that the most serious threats to human health and the environment can be addressed. In FY 1989, ERD drafted revisions to the Superfund Removal Procedures Manual. This manual describes all of the procedural and administrative requirements for removal actions, and provides step-by-step directions for preparation and approval of documentation. ERD revised the conceptual approach of the manual, making it easier to read and use. When completed, the Superfund Removal Procedures Manual will consist of 12 separate volumes and a field guide.

ERD also issued Final Guidance on the Implementation of the Consistency Exemption to the Statutory Limits on Removal Actions. SARA contains an exemption that allows removal actions to exceed the statutory time and money limits of one year and $2 million where necessary to achieve consistency with the remedial action to be taken. This final guidance discusses the procedures for using the consistency exemption and elaborates on the approach adopted in the proposed revised NCP.

Prior to the initiation of removal actions taken at non-NPL sites where the proposed action is of national significance or precedent-setting, the concurrence of EPA Headquarters (i.e., AA for OSWER or OERR Office Director) must be obtained. The purpose of this concurrence requirement is to promote national consistency in the implementation of the

Superfund removal program. In FY 1989, ERD issued Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent-Setting Issues. This guidance identifies non-NPL removal actions that may be nationally significant or precedent-setting and establishes procedures for requesting Headquarters concurrence.

Enforcement Guidance

Superfund enforcement's FY 1989 accomplishments included the issuance of guidance to help Agency staff implement key areas of the enforcement program. Three of these documents are of particular importance to the program and are described below.

The Interim Guidance on Administrative Records for Selection of CERCLA Response Actions covers the purpose and scope of the administrative record, the policy and procedures governing the compilation and maintenance of the administrative record, and the involvement of those outside EPA in establishing the record. Adherence to this guidance will ensure the Administrative Record meets the necessary legal standards to document the Agency's remedy selection process.

EPA issued guidance on conducting Potentially Responsible Party (PRP) searches for sites in the Superfund remedial program to supplement the PRP Search Manual published in FY 1987. The supplementary guidance provides assistance in conducting complex PRP searches and preparing PRP search reports for sites in the Superfund remedial program.

In addition to the previously mentioned guidances, the Agency also developed a model Statement of Work for a Remedial Investigation and Feasibility Study (RI/FS) conducted by PRPs. Generally, a statement of work is attached to the settlement document for the RI/FS and describes the tasks and deliverables required of the PRPs. The model also provides PRPs direction in performing the tasks required for completing an RI/FS.

Technical Assistance Grants

Section 117(e) of SARA authorizes EPA to provide technical assistance grants (TAGs) of up to $50,000 to groups of individuals to obtain assistance in interpreting information related to activities at Superfund sites. In March 1988, EPA issued an interim final rule that discussed the requirements of the TAG program. During FY 1989, the Agency reviewed and made a number of changes to the interim final rule. At the close of FY 1989, EPA prepared to issue amendments to the interim final rule.

During FY 1989, EPA awarded 26 grants to 23 different citizen groups associated with sites listed on the NPL. Many more grant awards are in progress. Exhibit 9 lists the 26 grants awarded in FY 1989 by Region. Both the citizen groups and EPA have benefited from the independent advisors' input -- the citizen groups have a greater understanding of the Superfund process, and there is enhanced communication between EPA and the citizens.

Exhibit 9

NPL Sites Where TAGs Were Awarded in FY '89

Region	Name of Site	Grant Recipient
I	New Bedford Harbor, MA	Greater New Bedford Environmental Community Work Group
	Central Landfill Site, RI	W.A.T.E.R.
	Winthrop Landfill, Winthrop, ME	Winthrop Landfill Citizens Action Group
II	Marathon Battery Site, NY	Citizens Concerned About Removing Toxins
	Clothier Disposal Site, Granby, NY	Fulton Safe Drinking Water Action Committee
	St. Regis Mohawk Reservation, G.M. Massena Site, Hogansburg, NY	Akwesone Task Force on the Environment
	Vega Alta Site, Puerto Rico	Committee for the Rescue of the Health and Environment
	Ciba Geigy, Toms River, NJ	Ocean County Citizens for Clean Water
III	C&D Recycling Site, Foster Township, PA	Concerned Citizens for Foster Township
IV	Maxey Flats, KY	Concerned Citizens for Maxey Flats, Inc.
	Munisport Dump, N. Miami, FL	Munisport Dump Coalition
V	Butterworth Landfill Site, MI	John Ball Park Community Association
	Powell Road Landfill Site, Huber Heights, OH	Miami Valley Landfill Coalition
VI	Vertac, Rogers Road, and Jacksonville Landfill Sites, Jacksonville, AR	Jacksonville People with Pride Cleanup Coalition (3 grants)
VII	Weldon Springs Site, MO	St. Charles Countians Against Hazardous Wastes
VIII	Cotter Corporation Site, CO	Lincoln Park Area Concerned Citizens
	Burlington Northern Somers Tie Plan, MT	Flathead Lake Protection Association
	Rocky Flats, CO	Citizens Against Lowry Landfill
IX	Lawrence Livermore National Labs Site, CA	Tri Valley Care
	IBM San Jose, San Jose, CA	Silicon Valley Toxics Coalition
	Hewlett-Packard, Palo Alto, CA	Barron Park Association Foundation
	Stringfellow Site, Riverside, CA	Glen Avon Residents Technical Assistance Committee
X	Wycoff Eagle Harbor Site, WA	Association of Bainbridge Communities

Superfund Innovative Technology Evaluation Program

The purpose of the Superfund Innovative Technology Evaluation (SITE) Program, which was established pursuant to SARA, is to: (1) accelerate the development, demonstration, and use of new or innovative technologies; and (2) demonstrate and evaluate new, innovative measurement and monitoring technologies. The overall goal of the SITE program is to develop technologies that provide permanent remedies.

In January 1989, the Agency issued its fourth solicitation for innovative technologies under the SITE Demonstration Program. To qualify for the demonstration program, a new technology must be at the pilot or full scale stage of development and offer some advantage over existing technologies. Also in FY 1989, field demonstrations were completed for two new treatment technologies:

- A technology that destroys organic compounds in water using ultraviolet radiation combined with ozone and/or hydrogen peroxide for photo-oxidation of organics; and

- A process that stabilizes high molecular weight organic and inorganic constituents in waste slurries.

The SITE Emerging Technologies Program (ETP) encourages the investigation and development of technologies that may be useful for remediation at Superfund sites, but that are not yet ready for full-scale demonstration. The goal of ETP is to validate such innovative, alternative remediation technologies and prepare them for demonstration.

ETP is interested in developing cutting-edge technologies for recycling, separation, detoxification, destruction, and stabilization of hazardous wastes. Two year funding is available to technology developers through competitive cooperative agreements. An individual developer may receive up to $150,000 per year for a maximum of $300,000 over two years to bring a promising technology from laboratory scale to the pilot stage.

In FY 1989, seven ETP projects were underway, examining technologies ranging from freeze crystallization to laser-stimulated photochemical oxidation. In July 1989, EPA issued a request for proposals. Forty-seven preproposals were submitted to the Agency by September 7, 1989 and are currently under review.

Chapter 2

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA) Program made substantial progress in addressing the priorities outlined for FY 1989. Consistent with national policy and direction, EPA and the States focused on achieving environmental results by issuing high quality permits, enforcing to return handlers to compliance, and initiating corrective action at facilities which pose significant threats to human health or the environment. Specifically, the Regions and States issued 63 incineration permits and denied another 19 in an effort to meet the November 1989 incinerator deadline established in the 1984 Hazardous and Solid Waste Amendments to RCRA. Correspondingly, during FY 1989, EPA and the States initiated corrective action at 199 facilities.

Complementing the Agency's accomplishments in the Subtitle C hazardous waste program, is EPA's progress in implementing the "Agenda for Action" for solid waste management under Subtitle D of RCRA. The Agency has made great strides over the past year to facilitate resource recovery and source reduction activities by all sectors of society. In particular, the Agency has joined in partnership with the States to improve solid waste management planning and disseminate technical and educational materials. Of special importance, is EPA's progress in implementing the new Subpart J of RCRA by promulgating regulations that establish a demonstration tracking system for medical waste. Summaries of key activities are provided below.

SUBTITLE C HAZARDOUS WASTE PROGRAM

Permitting

Exhibit 10 compares RCRA permitting activity in FY 1989 with activity in FY 1988. The exhibit illustrates the change in emphasis away from land disposal permits towards incinerator permits as the Agency worked to meet the November 1989 deadline for issuing all incinerator permits. EPA and the States issued 63 permits for incinerators and denied another 19 such permits. In addition, EPA and the States completed 63 final permit determinations for land disposal facilities, and 95 final permit determinations for storage and treatment facilities. The Agency and States have also increased their efforts in issuing post-closure permits for land disposal facilities. During FY 1989, EPA and the States issued 47 post-closure permits. Exhibit 11 shows closure plan approvals for both FY 1988 and FY 1989. The exhibit shows that EPA approved 158 closure plans for land disposal facilities, 23 closure plans for incinerators and 315 closure plans for storage and treatment facilities.

Exhibit 10

Permit Determinations
(FY '88 and FY '89)

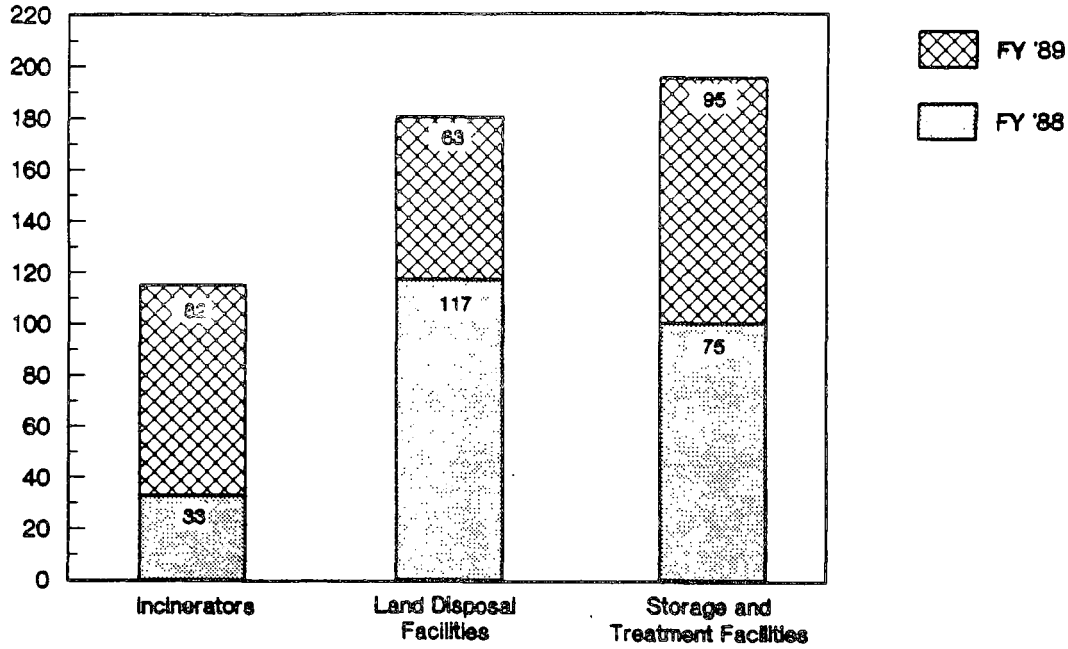
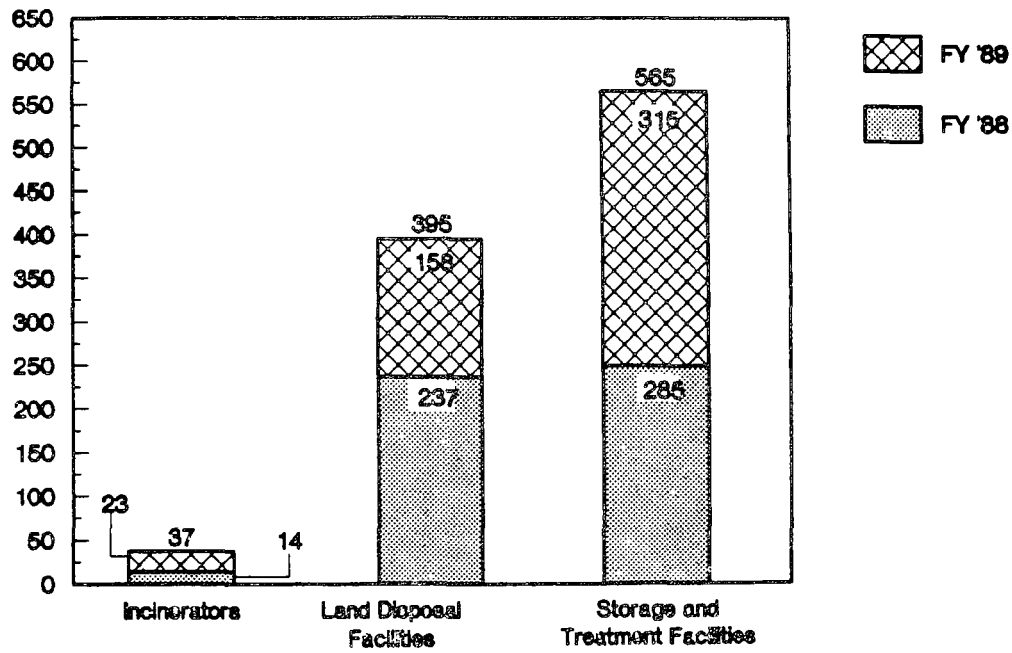


Exhibit 11

Closure Plan Approvals
(FY '88 and FY '89)



Corrective Action

During FY 1989, the Regions established corrective action priorities across the closing land disposal universe and storage/treatment universe by implementing the Environmental Priorities Initiative (EPI). FY 1989 was the first year of operation for EPI. Getting started required considerable coordination between the RCRA corrective action and the CERCLA preremedial programs. Over 550 EPI facilities received CERCLA preliminary assessments (PAs) in FY 1989. This number is expected to increase in FY 1990. Those facilities that appear to be more environmentally significant based on a preliminary HRS score will receive screening site investigations (SSIs) as well before they are reassigned to the RCRA program for corrective action. The PA/SI will provide the RCRA program with information about the relative environmental threat presented by these facilities so that corrective action can be imposed at the worst sites first.

In addition, RCRA Facility Assessments (RFAs) were conducted at 18 land disposal facilities, 16 incinerators, and 84 storage facilities. In addition, RCRA Facility Investigations (RFIs) were initiated or in progress at 50 land disposal facilities, 6 incinerators, and 13 storage facilities. In FY 1989, the Regions issued 119 permit schedules of compliance and 77 Section 3008(h) orders imposing corrective action requirements. In addition, three States were authorized for corrective action, and three States submitted their applications for corrective action in FY 1989.

A corrective action course for permit writers was offered in FY 1989 to Regional and State staff in Regions IX and X. The training consists of presentations and interactive case studies, and focuses on the technical and procedural aspects of the corrective action program. OSW will provide the training in the other eight Regions in FY 1990, and will also offer it upon request.

The OWPE Corrective Action Order Workshop was presented in five Regions in early FY 1989. The workshop includes a description of the Corrective Action process, a review of the scope and applicability of Corrective Action authorities, a discussion of the development of CA orders, and instruction in the use of the Corrective Action Plan (CAP).

Compliance Monitoring and Enforcement

In addition to corrective action orders, FY 1989 enforcement priorities included: conducting required high-priority inspections; enforcing land ban disposal restrictions, and ensuring the availability of appropriate Superfund treatment and disposal capacity through continued implementation of the CERCLA Off-site Policy.

In FY 1989, EPA proposed a rule, "Amendment to the NCP; Procedures for Planning and Implementing Off-site Response Actions, to codify the Off-site Policy. This rule will ensure that wastes from CERCLA sites are sent only to facilities capable of handling them in an environmentally sound manner. The rule also formalizes EPA's commitment to according due process to facilities that are potential recipients of CERCLA wastes.

EPA and the States conducted 1,330 inspections at land disposal facilities. These inspections were comprised of Comprehensive Monitoring Evaluations (CMEs), Operation and Maintenance Inspections (O&M), and Compliance Evaluation Inspections (CEIs). In addition, EPA and the States performed 1,196 inspections at treatment and storage facilities and 424 inspections at Federal, State, and local facilities, as required by HSWA.

Emphasis continued to be placed on assuring enforcement against SNCs (i.e., land disposal facilities that have Class I violations of groundwater monitoring, closure, or financial responsibility requirements). At the beginning of the year, there were 139 SNCs that required formal enforcement action. At the end of FY 1989, all but one facility had been addressed by EPA or the States with enforcement actions or had returned to compliance.

To enhance the quality of Regional and State inspections, the Office of Waste Programs Enforcement (OWPE) and the National Enforcement Investigation Center (NEIC) initiated the RCRA Inspector Institute. In FY 1989, three training sessions were conducted in February, May, and September 1989. Students included EPA Regional inspectors, State inspectors, and various Federal agency staff responsible for RCRA compliance at their facilities.

Beginning in September 1988, Headquarters developed and presented the Hazardous Waste Incinerator Inspection (HWII) training workshop in seven EPA Regions from May through August 1989. The workshops presented information on current regulations and the latest regulatory developments; provided a general overview of equipment designs, functions, and operational problems; provided step-by-step inspection procedures and preparation; and offered discussions on potential enforcement actions. The workshop was Headquarters' first effort to train inspectors on procedures for conducting hazardous waste incinerator inspections.

Other workshops, guidances, and training courses focused on enforcing the land disposal restrictions rule, and implementing the §3008(h) case development guidance.

Data Management

RCRIS, the Resource Conservation and Recovery Information System, is the new computerized management information system for providing information about major aspects of the hazardous waste program mandated by RCRA.

A pilot effort was conducted in March - June 1989 with Region IV and the States of Kentucky, Mississippi, Georgia, and Florida. The pilot effort tested the viability of the RCRIS software, documentation, and training efforts.

The RCRIS staff and Regional and State pilot participants communicated the successful results of the RCRIS pilot through panel discussions and live question/answer sessions in a national satellite teleconference. The teleconference was broadcast to Regions and States and shown in 44 sites nationally. As a result of the successful pilot efforts, RCRIS began a phased implementation of the production software in October 1989. Region VI, Region IV and the States of Arkansas, Louisiana, Kentucky, Mississippi, Georgia, and Florida began national implementation in 1989. By the end of Federal fiscal year 1991, RCRIS implementation will be completed in all Regions and States.

SOLID WASTE MANAGEMENT INITIATIVES

During FY 1989, the Agency's "Agenda for Action" became operational. EPA took concrete steps to meet each of the six specific objectives discussed in the Agenda. To increase available information to all segments of society, EPA awarded numerous grants to disseminate technical and educational materials. For example, in cooperation with the U.S. Conference of Mayors, EPA produced a television video for the Learning Channel on integrated waste management. Similarly, EPA awarded a grant to GRCDA to operate a municipal solid waste information clearinghouse. EPA also established a peer matching program, thereby enabling special skills and expertise to be shared nationwide.

In support of improved State and local solid waste management planning, EPA is working with the Council of State governments and the National Conference of State Legislatures to design workshops for State legislative and executive branches on integrated waste management planning. The Agency also undertook several initiatives to foster source reduction. In particular, EPA awarded a grant to the Conservation Foundation to convene a focus group for interaction with manufacturers on source reduction issues, with particular emphasis on reducing the amount of waste generated with the design of products and packaging.

Correspondingly, the Agency is actively trying to encourage recycling. An important component of this effort includes the stimulation of markets for secondary materials. During FY 1989, EPA prepared a series of market development studies on selected commodities in municipal solid waste, including paper, glass, aluminum, tires, and compost. EPA also instituted a procurement guidelines hotline. In addition, EPA conducted numerous public education and outreach activities designed to encourage recycling. Specifically, EPA funded EDF to work with the National Ad Council on a recycling media campaign. This program also established a recycling hotline, which provides a brochure on recycling and the name and address of the nearest recycling center.

The final objectives of the Agenda addressed the need to improve the design and operations of municipal solid waste combustors and landfills. In FY 1989, EPA worked with the Office of Air to upgrade combustor performance standards and is working with GRCDA to develop training materials for sanitary landfill owners and operators. Final rules governing the disposal of municipal solid waste are scheduled for publication in March 1990.

MEDICAL WASTES

The Medical Waste Tracking Act (MWTA) was signed into law on November 1, 1988, amending RCRA. The MWTA was enacted as a response to the public health and environmental concerns over the degradation of shoreline areas from washups of medical waste and sewage. This Act requires EPA to enact a two-year demonstration program to track medical waste from the point of generation to the point of disposal. New York, New Jersey, and Connecticut were required to participate; the Great Lake States were specifically requested to either opt out or petition in; and any other State could request to participate in the program. EPA promulgated the interim final rule and request for comment on March 24, 1989, in 54 FR 12326. The rule became effective on June 22, 1989 in New York, New Jersey, and Connecticut and effective July 24, 1989 in Rhode Island and Puerto Rico.

In addition, EPA developed several booklets on the medical waste washups for the general public. These booklets explain the Medical Waste Tracking Act and are designed to educate the public that medical waste is attributable to individual actions, as well as to large organizations, such as hospitals.

LARGE VOLUME WASTES

In FY 1989, EPA narrowed the universe of Bevill-exempt mineral processing wastes. The Agency published three proposed rules and one final rule. The final rule, which was published in the Federal Register on September 1, 1989, establishes a mineral processing waste definition, low hazard criteria, and high volume criteria, which are applied to specific processing waste streams to determine whether they remain subject to the Bevill Exclusion. The rule removed from the Bevill Exclusion most mineral processing wastes, except for 25 specific waste streams. Of these 25 waste streams, EPA made decisions to retain five wastes within the Bevill Exclusion and to conditionally retain the remaining 20 wastes within the Exclusion, pending collection of additional information. On September 25, 1989, EPA published a proposed rule on the status of the 20 conditionally-retained wastes. EPA proposed to remove seven of the wastes from the Bevill Exclusion and to retain the other 13 wastes within the Exclusion. As part of determining the status of the 20 proposed wastes, a sampling effort was conducted during the summer of 1989, the results of which indicated that some of the wastes failed the low hazard and/or high volume criteria. The final action on the rule proposed September 25 is scheduled for January 15, 1990.

Those wastes that remain within the Bevill exclusion as a result of the September 1, 1989, and January 15, 1990, rulemakings will be studied in a Report to Congress, currently underway. In FY 1989, ground work was laid for the Report. EPA conducted a survey of the industry, and the results of the survey provide a data base on the facilities that generate mineral processing wastes. EPA also collected samples during the summer of 1989 in support of the rulemaking, which will provide additional data for the Report. In FY 1990, the focus will shift from rulemaking to the Report to Congress, which is due July 31, 1990. By the end of January 1991, the Agency will make a final regulatory determination on those wastes studied in the Report to Congress.

CHAPTER 3

FEDERAL FACILITIES

The Federal facilities enforcement and compliance program built a solid foundation in FY 1989 for implementing an effective approach to managing and cleaning up solid and hazardous waste at Federal facilities. The Federal Facilities Hazardous Waste Compliance Office (FFHWCO) made significant progress in addressing policy issues, establishing enforcement and compliance programs in EPA Regional offices, negotiating cleanup agreements, and addressing legislative initiatives.

In August 1989, the Office of Solid Waste and Emergency Response (OSWER) issued the Federal Facilities Negotiations Policy to institute new principles and procedures for expediting the negotiation process for Federal facility RCRA compliance and CERCLA cleanup agreements. This policy was developed to strengthen EPA's role as a catalyst and facilitator for obtaining three-party agreements with the States and other Federal agencies. It incorporates the model provisions, negotiated in FY 1988 with both the Department of Energy (DOE) and the Department of Defense (DOD), and establishes procedures for negotiating time frames and elevating compliance disputes to assist the Agency in negotiating site-specific agreements with Federal facilities.

The policy encourages State participation in all phases of the clean-up process and promotes the integration of State concerns, as appropriate, into the final site-specific agreement. EPA anticipates that this policy will facilitate and expedite clean-up negotiations for CERCLA Interagency Agreements (IAGs), RCRA Federal Facility Compliance Agreements (FFCAs), and RCRA Section 3008(h) orders.

FFHWCO's CERCLA universe expanded as more Federal facilities were listed on the National Priorities List (NPL). By the end of FY 1989, a total of 115 Federal facility sites were listed or proposed for listing on the NPL. The Federal facilities enforcement program has established a goal to negotiate CERCLA Interagency Agreements with all of these sites by the end of FY 1991.

Twenty-eight IAGs covering 35 sites were completed in FY 1989. An additional 26 IAGs are currently being negotiated. Ten other Federal facility clean-up and/or compliance agreements were also completed in FY 1989. Negotiating these initial agreements assisted the Agency in resolving fundamental policy issues, including clarifying State and Federal roles at Federal facilities, the applicability and integration of RCRA and CERCLA authorities at these facilities, and development of workable enforcement strategies.

EPA negotiated several landmark clean-up agreements in FY 1989, including agreements at the Letterkenny Army Depot facility in Pennsylvania (Region III) and the Hanford facility in Washington (Region X). Both agreements cover RCRA and CERCLA units and clean-up actions. The Hanford facility is the first major weapons production complex to have a clean-up agreement. The DOE Hanford facility cleanup agreement is significant largely because of the size of the facility, the complexity and scope of the clean-up, and the complex

RCRA/CERCLA jurisdictional issues. Contamination at the 570 square mile site results from releases of high level radioactive waste as well as mixed radioactive and hazardous waste. The initial estimated cost of cleaning up the site ranges from $30 to $50 billion dollars. The Agreement splits responsibility for overseeing the cleanup between the State and EPA.

In addition, at five Federal facilities, FFHWCO supported RCRA enforcement actions against the companies (GOCO's) that operate these facilities. These facilities are: DOE Feed Materials Production Center (Fernald) in Ohio (Region V); Ravenna Army Ammunition Plant in Ohio (Region V); DOE Rocky Flats Plant in Colorado (Region VIII); the Lone Star Army Ammunitions Plant in Texas (Region VI); and the General Dynamics Ft. Worth Air Force Plant #4 in Texas (Region VI).

In FY 1990 and FY 1991, the Federal facilities enforcement program will continue to negotiate CERCLA and RCRA enforcement agreements and to ensure that these agreements work well. EPA Headquarters will focus more on assisting the Regions to address implementation issues as more agreements are executed and basic legal and policy issues are resolved. These implementation issues include:

- Obtaining the resources that the Regional offices need to negotiate and oversee agreements;
- Resolving disputes that are elevated to Headquarters;
- Facilitating discussions among Regional Offices and Headquarters to enhance consistency and promote innovative approaches to Federal facility compliance and cleanup;
- Addressing remaining policy issues;
- Working with DOE and DOD on the development of their priority systems;
- Developing training programs; and
- Continuing to address legislative initiatives.

The Regions are expected to assume more responsibility for implementation in FY 1990. Seven Regional Offices have established Federal facility enforcement and compliance units. The other three Regions manage their Federal facility programs as part of their CERCLA enforcement program.

CHAPTER 4

CHEMICAL EMERGENCY PREPAREDNESS AND PREVENTION PROGRAM

The principal objectives of the Chemical Emergency Preparedness and Prevention (CEPP) Office during FY 1989 were to build Regional, State, and local emergency preparedness capability, reduce chemical accidents by improving chemical process safety practices, and complete rulemakings in accordance with the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act (SARA)). FY 1989 was the third year of implementation for Title III.

BUILDING REGIONAL AND STATE EMERGENCY PREPAREDNESS CAPABILITY

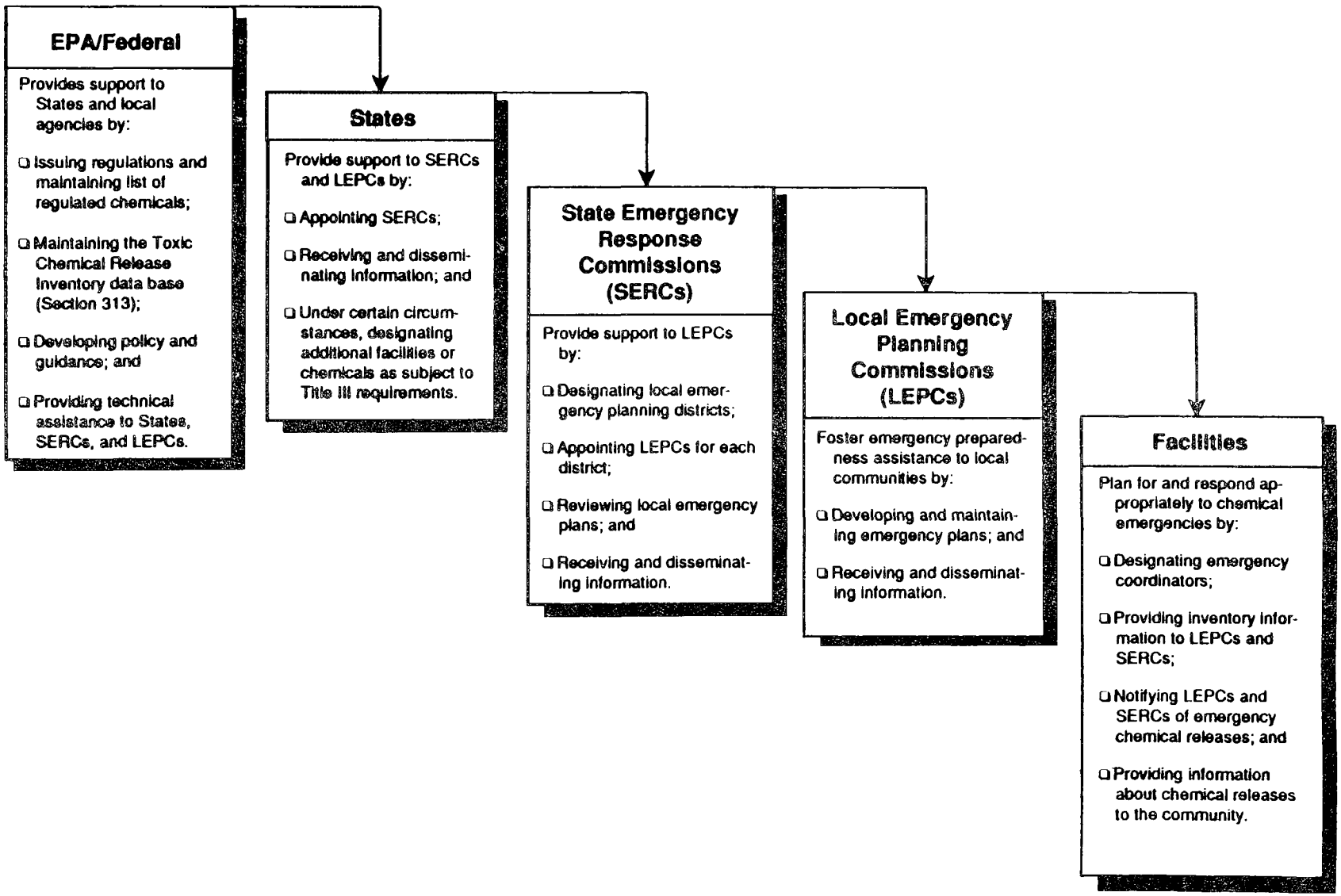
As Exhibit 12 illustrates, EPA continues to pursue a "cascading" approach to Title III and CEPP implementation. This approach assigns lead responsibility for implementation to State and local agencies and places EPA Headquarters and the Regions in a support role. In accordance with this approach, the CEPP Office focused its FY 1989 efforts on assisting States and localities to plan for and respond to chemical emergencies. The Office provided assistance to the 56 State emergency response commissions (SERCs) and over 3,800 local emergency planning committees (LEPCs) in the form of guidance, training, and technical assistance.

To assist the LEPCs in implementing Title III, a guidance document, Its Not Over in October, was developed and distributed widely. Technical guidance was developed, in cooperation with the Federal Emergency Management Agency and the Department of Transportation, including the Handbook for Chemical Hazards Analysis Procedures, which addresses hazardous substances, flammables, and explosives. In the training area, the CEPP Office sponsored hazards analysis training courses throughout the Regions. Another highlight was CEPP Office participation in a State hazardous materials training conference held in March 1989. The Regional Offices provided direct technical assistance to LEPCs and SERCs in conducting over 80 emergency exercises and numerous hazards analyses. Information on protective actions needed in responding to chemical accidents (including in-place protection procedures) was provided to State and local officials in a video teleconference co-sponsored by EPA, DOT, and FEMA.

As part of the CEPP Office's general preparedness activities, the Office participated in national simulation exercises involving a catastrophic earthquake and national security incident. In August 1989, the Response '89 exercise tested EPA's role in a major earthquake in the San Francisco Bay area. In June 1989, EPA played a major role in the Transbord III exercise, which addressed terrorists hijacking a barge containing hazardous chemicals and causing a release of the chemicals.

Exhibit 12

Major Responsibilities Under Title III



The National Incident Coordination Team (NICT) was established as a mechanism for coordinating Agency response to incidents and emergency situations of national significance. In FY 1989, the NICT provided technical assistance in the response to the Exxon Valdez oil spill and helped develop the Report to the President submitted by EPA and the US Coast Guard on recommended actions and lessons learned from the accident. Also, the NICT provided limited support in the aftermath of Hurricane Hugo, particularly with respect to water supply issues.

Because the Director of the CEPP Office is the chairman of the National Response Team (NRT), the Office provided ongoing support to the NRT during FY 1989. This support included coordinating the oil spills conference held in February 1989 and the CERCLA interagency budget. The Office provided assistance in developing the NRT annual report in January 1989.

PREVENTION PROGRAM ACTIVITIES

The CEPP Office complemented its preparedness efforts by seeking ways to foster industry efforts to prevent chemical accidents. In FY 1989, the prevention program focused on developing an understanding of the problem, encouraging facilities that manufacture, use, or store hazardous chemicals to improve their safety practices, and identifying the role of government in addressing prevention issues.

One highlight of the prevention program was the Chemical Safety Audit Program. The Office offered three training courses for Regional and State personnel on how to conduct chemical safety audits. Over 100 persons were trained, and 32 audits were conducted in FY 1989. The audits are intended to make facilities aware of the need for improved chemical safety practices, to supplement data being collected through other data-gathering efforts, and to continue the investigation of post-release activities. Work on a training course to provide LEPCs and SERCs with information on the audit program and its benefits was begun in FY 1989.

One of the prevention program's primary information gathering efforts during FY 1989 was the Accidental Release Information Program (ARIP), a national database on the causes of chemical accidents and actions taken to prevent recurrences. ARIP also encourages corporate attention to chemical hazards and provides information on prevention practices. A technical assistance bulletin summarizing ARIP was developed and distributed to State and local officials.

The Office organized a conference to discuss chemical accident prevention issues with smaller operations in July 1989. The goal of this conference was to improve the awareness of hazards and encourage prevention practices among smaller operations that handle hazardous substances.

ENFORCEMENT ACTIVITIES

In FY 1989, EPA developed an Interim Strategy for Enforcement of Title III and the CERCLA Section 103 Notification Requirements. This strategy sets EPA's focus on cases involving violations of the emergency notification provisions and violations concerning reporting of chemical hazards and inventories of hazardous chemicals stored at facilities. During FY

1989, eleven administrative cases were filed for violations of the reporting and emergency notification requirements. These cases carry potential penalties of over $600,000.

EPA also developed "A Guide to Chemical Use in Industry; Extremely Hazardous Substance/Standard Industrial Classification (SIC) Code Crosswalks for EPCRA." This document identifies chemicals used by various industries, as identified by their SIC codes. The information is used to identify companies that are likely to have notification and reporting obligations under Title III.

To help State and local governments ensure that facilities covered by Title III are complying with the law, EPA published a pamphlet entitled "Enforcement of the Emergency Planning and Community Right-to-Know Act." This pamphlet outlines the enforcement authorities granted to citizens, local governments, States, and EPA under Title III.

INTERNATIONAL ASSISTANCE AND LIAISON ACTIVITIES

The CEPP Office also coordinated in FY 1989 with emergency response, preparedness, and prevention organizations around the world. Together with the U.S./Mexico Joint Response Team (JRT), the Office assisted in developing a Sister City plan as well as a simulation exercise.

The Office has also been working with the Organization for Economic Cooperation and Development (OECD) in developing programs to define long-term policies for chemical accident prevention and emergency response, with an emphasis on international exchange of information on measures designed to improve industrial safety practices and emergency plans throughout the world. In May 1989, the Office participated in the OECD meeting in Berlin to discuss the role of industry management practices. The Office also participated in another OECD meeting in Stockholm, Sweden, in September 1989, on the role of labor and the public in chemical accident prevention. In addition, the office has been working with the United Nations Environment Programme (UNEP) in its effort to implement Awareness and Preparedness for Emergencies at the Local Level (APELL), which is a program designed to improve awareness of hazardous installations and prepare emergency response plans in developing countries.

In coordination with the International Programs for Chemical Safety, a joint effort of the World Health Organization (WHO), the United Nations Environmental Programme (UNEP), and the International Labour Organization (ILO), the Office has assisted in developing 25 international chemical safety cards (ICSCs). ICSCs provide standardized safety information on chemicals to all nations, particularly developing nations. CEPP Office staff participated in a peer review of the ICSCs in Bologna, Italy, in September 1989.

In September 1989, the CEPP Office participated in the Fourth International Training Course in "Preventive Toxicology: Industrial and Household Chemicals" held in Leningrad, USSR. The status of preparedness and prevention activities in the United States was discussed.

REGULATORY ACTIVITIES

The CEPP Office met all FY 1989 statutory deadlines under Title III. On March 29, 1989, the office published a proposed rule revising existing Sections 302-304 regulations and establishing permanent thresholds for reporting under Sections 311-312. In this rulemaking, EPA proposed to delete six extremely hazardous substances (EHSs). In another effort to coordinate and reduce confusion between the release reporting requirements under Title III (Section 304) and under CERCLA, EPA proposed rules in January 1989 and August 1989 to designate EHSs as CERCLA hazardous substances and to adjust their reportable quantities using the methodology established under CERCLA.

OUTREACH ACTIVITIES

The outreach subcommittee of the Title III Workgroup coordinated various publications in FY 1989 to assist in educating State and local officials, the public, and the regulated community concerning Title III provisions. The subcommittee coordinated development of the booklet, Chemicals in Your Community. Over 500,000 copies of this booklet have been distributed to the public. Two issues of the technical assistance bulletin series on successful State and local Title III implementation practices were published in FY 1989. Another bulletin was published that lists all computer software commercially available to assist in emergency planning and response.

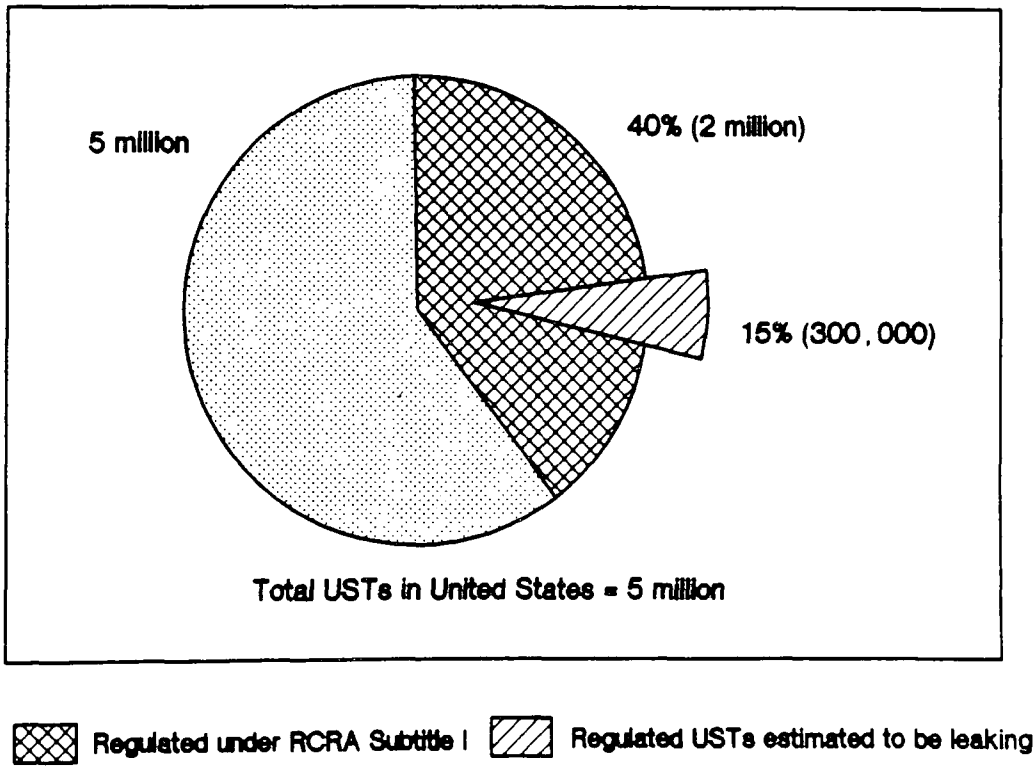
CHAPTER 5
UNDERGROUND STORAGE TANKS

Over five million underground storage tanks (USTs) containing petroleum products or hazardous chemicals are in use in the United States. Approximately two million of these tanks have come under RCRA Subtitle I regulations; about 15 percent of these regulated tanks (300,000) are estimated to be leaking (see Exhibit 13). The Office of Underground Storage Tanks (OUST) has worked with local and State governments to develop a national program to address this problem.

During FY 1989, the major regulatory framework for the national UST program was completed: technical standards, State program approval, and financial responsibility requirements went into effect. OUST's primary regulatory activities during FY 1989 consisted of developing a proposed rule that provides local governments with an assurance mechanism to comply with financial responsibility requirements. Also during 1989, OUST undertook a variety of activities to build and implement an effective UST program nationwide. This report describes OUST's major efforts this fiscal year in the areas of regulatory activity and program implementation. The description of these activities focuses on two underlying principles on which OUST believes that the UST program must be built -- "franchising" and "continuous improvement".

Exhibit 13

Number of Regulated and Leaking Underground Storage Tanks in U.S.



Franchising

OUST's application of franchising principles to the UST program is based on the belief that the work done by State and local governments is the key to improving tank management over the next decade. In the long run, State and local government regulation of UST systems will be more successful than Federal regulation. This is true for several reasons: the large number of facilities to be regulated; the special characteristics of the regulated community; and the nature of the regulatory work to be performed. Franchising works by using the strengths and knowledge of both the franchisees -- the State and local programs that "run the business" day-to-day -- and the franchiser -- in this case, EPA, who delivers national advertising, policy, and crucial support services. The franchising approach differs from most other EPA regulatory program approaches in that it emphasizes the States' role in enforcing regulations and developing innovative ways to further improve the national program, while placing EPA in a role that emphasizes support of the State programs.

Continuous Improvement

The other cornerstone on which the OUST program is being built is "Continuous Improvement," or, "Total Quality Management" (TQM). Continuous Improvement is based on several key concepts that OUST believes will contribute significantly to improving UST management. These include focusing on the customer -- those for whom EPA or a State or local agency is providing a service or product; relying on the experts -- those in the office or in the field who actually do the work; analyzing work processes -- understanding how the real work of tank regulation and management gets done; and continuously improving those work processes to eliminate wasteful activities and thereby reduce time spent on the process.

REGULATORY ACTIVITIES

Technical Standards

The Federal technical standards rule for UST systems went into effect on December 23, 1988. This rule establishes standards for design, construction and installation; general operating requirements; release detection standards; release reporting, investigation, and confirmation; release response and corrective action requirements, and out-of-service UST systems and closure requirements. The release detection requirements for tanks installed before 1965 took effect December 23, 1989; those for tanks installed between 1965 and 1969 become effective in December 1990. Publication of the new requirements was accompanied by a major outreach campaign that included numerous slide presentations and the distribution of over 200,000 copies of a booklet entitled "Musts for USTs," which summarized the requirements in simple language.

State Program Approval Standards

The State Program Approval rule also went into effect December 23, 1988. This rule establishes requirements for the approval of State UST programs to operate in lieu of the Federal requirements. The criteria for approval of State programs are designed to result in as little unnecessary disruption to ongoing State initiatives as possible. To meet program approval requirements under the rule, States must have in place requirements that meet

Federal objectives for each of seven program elements. The regulation provides flexibility for evaluating the stringency of State regulations and the adequacy of enforcement under State programs. Through this approach, OUST is seeking to maintain its flexibility to approve a variety of State programs and to encourage States to use innovative as well as traditional approaches in achieving compliance.

Financial Responsibility Standards

The final financial responsibility rule was published in the Federal Register on October 26, 1988, and went into effect in January 1989. This rule requires owners and operators to have sufficient resources to pay for the clean up of leaks and spills. In addition, the rule requires that funds be available to pay for the costs of third-party damages associated with petroleum releases. In January 1989, the requirements were in effect for all petroleum marketing firms owning 1000 or more USTs, and all large ($20 million or more net worth) non-petroleum-marketing firms. In October 1989, the requirements became effective for all petroleum marketing firms owning 100-999 USTs; in April 1990, firms owning from 13 to 99 USTs will be included, and in October 1990, all remaining facilities. Publication of these requirements was accompanied by a major outreach campaign that included, among other activities, the distribution of over 200,000 copies of the booklet "Dollars and Sense," which summarized the requirements in easy to understand language.

Financial Assurance for Municipalities

Under the schedule for phased compliance published in the October 1988 financial responsibility rule, local government entities were given 24 months from the promulgation date to comply. In the rule, the Agency stated its intention to develop a financial test in the interim that would allow local governments to demonstrate that they have the requisite financial strength and ability to pay for the costs associated with UST releases. The main regulatory work this past fiscal year has been the development of such a financial test for municipalities. The Agency recognized that there were important differences between governmental and private entities: unlike private entities, municipalities have taxing authority as an assured source of revenue; municipalities are geographically fixed -- they cannot leave the State to avoid an obligation; and furthermore, municipalities have a very low incidence of bankruptcy. In developing the rule, the Agency sought to keep the rule as flexible as possible to allow local governments a variety of choices in demonstrating financial responsibility, and to keep the mechanisms as simple as possible to reduce the administrative burden on local governments as well as the State or local agency responsible for implementing the regulation. OUST anticipates that the rule will be proposed this winter and hopes to promulgate the final rule before the end of FY 1990.

Report to Congress on Exempt Tanks

A large number of heating oil and motor fuel tank systems are exempt from regulation under Subtitle I of RCRA. OUST completed a background document containing information about heating oil and motor fuel tanks that are exempt from regulation under Subtitle I of RCRA. This report presents information on the technical characteristics of exempt tanks and the risks these tanks pose to human health and the environment. In addition, OUST has submitted a report to OMB that summarizes the findings of the background document,

discusses additional non-technical considerations, and presents recommendations as to whether these tanks should also be regulated under Subtitle I.

IMPLEMENTATION ACTIVITIES

Building State and Local Programs

UST program activity has increased substantially in recent years, as reflected by State legislative and regulatory programs, as well as by State progress in having funding available for cleanups. The number of States with enabling legislation for regulating USTs has grown from three in 1980 to 42 in 1988. In addition, hundreds of counties and municipalities have developed local UST ordinances and programs that often operate independently of the State. Additionally, 54 (of 56) States and Territories have entered into Cooperative Agreements that allow them to take advantage of the LUST Trust Fund, which was established by the 1986 SARA amendments to fund cleanups from leaking USTs under certain conditions. States may use the Trust Fund, which is financed by a 1/10 of a cent per gallon excise tax on motor fuels, to order cleanups of leaks by owners or operators, conduct cleanups, and to recover costs of enforcement activities and cleanups. Overall, EPA expects the current high level of UST program activity to continue to increase rapidly.

OUST, in its role as franchiser, continues to work closely with the Regions and States to assist them in developing strong UST programs. Examples of OUST's efforts to implement this approach include:

- OUST developed a handbook (State Program Approval Handbook, OSWER Directive 9690.8, March 1989) to assist State officials who are building and implementing State UST programs that will be no less stringent than the Federal UST requirements and will operate in lieu of the Federal UST program. This handbook is designed to increase the States' understanding of how EPA intends to implement the regulations for State program approval that were promulgated last year. This handbook seeks to encourage State applications by making the application process as easy and straightforward as possible; describing clearly EPA's expectations and criteria for State program approval; and encouraging a wide range of State UST programs tailored to meet their specific needs while providing for adequate protection of human health and the environment.

- To supplement the State program approval handbook, OUST prepared another document, Suggested Procedures for Review of State UST Application, OSWER Directive 9650.9, March 1989. This document proposes a set of procedures for EPA Regional review of individual State UST applications. Although OUST does not expect the first State applications to be submitted to the EPA Regional offices until next year, it is already directly involved in assisting States with their applications. OUST has worked with New Mexico and Region VI, for example, to assist them in resolving program approval issues.

- OUST, together with a number of representatives of the regulated community and States, developed effective outreach materials that States, trade associations, and suppliers are using to alert owners and operators of the first compliance deadline for leak detection.

OUST provides States with technical assistance and enforcement backup as necessary, and supports them in the development of unique approaches and innovative tools for managing their UST programs. OUST also conducted pilot projects during FY 1989 to assist several States and counties in establishing "expedited" enforcement programs. Expedited enforcement programs have been demonstrated in UST and other environmental programs to enhance compliance using a minimum of resources. Such programs endeavor to reduce the number of costly and time-consuming enforcement efforts by employing a process similar to issuing traffic tickets at the scene of the violation. OUST has developed the tools needed to build and implement expedited enforcement for dissemination to other interested States and localities.

One important role for OUST in a franchise-based program is to serve as a clearinghouse for transferring technologies and ideas developed by other organizations. In one project established to assist States in ensuring compliance with leak detection requirements, OUST studied the methods States and localities have used to achieve compliance and is providing specific help to three pilot States who will be comprehensively enforcing the leak detection requirements. Research on the pilot projects demonstrated that many States and localities are developing innovative approaches to achieving compliance.

OUST employs the principles of continuous improvement in providing technical and implementation assistance to Regions, States, and local governments. For example:

- OUST staff worked with staff of Region I's UST program to identify and analyze ways to improve the Region's process for negotiating its LUST Trust Fund Cooperative Agreements; the newly developed process will result in labor savings of one full-time employee over a two-year period.

- OUST is working with a number of States to identify obstacles to spending LUST Trust Fund monies and reporting their activities. Next steps will include improvement projects to overcome these obstacles and to design processes that are conducive to effective spending and reporting.

- OUST is working with States to study and improve the process used for site investigations. OUST is seeking to assist States and responsible parties to conduct site investigations quicker, faster, cheaper, and better.

- In another project, OUST is studying how consideration of human and environmental health affects the clean-up process and what OUST can do to adequately consider human and environmental health while minimizing disruption to the clean-up process.

- The Office also developed a health and safety training program for UST inspectors, which was presented in all EPA Regions and broadcast via satellite to over 100 additional UST investigators.

EPA Regional Offices continue to work closely with States to enhance their program development capabilities and performance levels. Again this year, the Regional Offices awarded UST grants to the States to assist with program development. OUST has substantially increased its financial support to the Regions to address State problem areas through specific Targeted Improvement Projects (TIPs). FY 1989 TIPs included supporting Connecticut to analyze its UST workload and project future resource needs; assisting New Jersey to develop and implement its UST permitting system; assisting Utah to analyze proposed financial responsibility legislation and liability issues; and providing an UST inspector training course for fire marshals and building inspectors in Alaska. OUST also prepared a compendium covering all the TIPs undertaken to make it easier for States and Regions to exchange information and program tools.

OUST highlighted its efforts to foster strong communication between States by sponsoring the second annual All-States Conference, entitled "Making It Work." The conference brought together over 250 UST program staff from local, State, Regional, and Federal levels to discuss all aspects of UST program management. The major focus was to allow States to share information with each other; most of the sessions at the conference were moderated by Regional representatives and featured presentations by State staff. Discussion topics ranged from the technologies that influenced technical standards to financial responsibility requirements to implementation issues such as program costs. Overall, the conference was a great success, with participants requesting that this type of information exchange continue in the future.

LUST Trust Fund Activities

At the end of FY 1989, the Regions had negotiated cooperative agreements with 54 out of 56 States and Territories. One additional State is currently working toward a cooperative agreement and EPA anticipates that it will be awarded during FY 1990. Cooperative agreements between the States and EPA enable the States to spend trust fund resources for cleanups and associated program costs. During the fiscal year, the Regions awarded approximately $42.5 million from the LUST trust fund.

To date, over 16,000 cleanups have been initiated by responsible parties, and nearly 5,700 have been completed. In addition, States have begun more than 220 corrective actions using trust fund monies. States will continue to encourage owners and operators to conduct corrective actions, and will take appropriate response and enforcement actions where owners and operators are unable or unwilling to perform corrective actions.

This year OUST has worked toward improving the cooperative agreement negotiation and award process. OUST developed a new process for allocating trust fund money designed to encourage States to work toward program goals. In addition to the base allocation and allocations based on need, a third allocation component --"readiness to proceed" -- examines the State's ability to implement a program (e.g., conduct State-lead cleanups and oversee RP-lead cleanups). States therefore have an incentive to develop a strong and active program.

Several Regions have extended the time frame over which awards are granted to three years, thereby reducing the level of effort required to process State applications in subsequent years. In addition, ensuring consistent levels of funding over several years allows States to budget for long-term cleanups. Currently, OUST is conducting a study to analyze LUST trust fund spending and reporting patterns in five States in three EPA Regions to help States improve performance under the trust fund.

Outreach Activities

Because OUST considers "advertising," or making the regulated community aware, to be one of the major responsibilities of a franchiser, the Office has developed an outreach strategy that identifies various potential audiences (e.g., owners and operators, State and local officials, trade associations, Congress) for UST outreach materials and aggressively provided materials to these audiences. Consistent with the principle that UST regulatory activities should occur at the State and local levels, OUST prepares the materials and then, generally, makes them available to States, trade associations, and other groups who, in turn, deliver the materials to the audience of concern. In some cases, OUST provides camera-ready copy to States who can add State-specific information and then reproduce and distribute the materials.

During FY 1989, OUST continued producing materials to help owners and operators understand and comply with the new requirements and help specific audiences, such as inspectors, States, and local officials, to do a better job of implementation. In FY 1989, OUST developed the following materials about the UST Program:

Brochures:

- Musts for USTs -- A simple, easy to understand summary of the technical requirements for USTs;
- Dollars and Sense -- An easy to understand summary of the financial responsibility regulations for USTs;
- Commitment To Cooperation: Franchising the UST Program -- A description of the UST program franchise approach for State UST staff; and
- Oh No! -- A simple, easy to understand summary of how to respond to UST leaks for owners and operators.

Video:

- Tank Closure Without Tears -- Depicting proper closure techniques for inspectors; and
- Doing It Right -- Demonstrating proper tank installation for installers.

Handbooks:

- Tank Tour – A guide to the Federal UST program;
- Financial Assurance Programs – A handbook for State officials;
- UST Work-A-Budget -- A worksheet package for State program officials to help in estimating program costs;
- Petroleum Tank Releases Under Control – a handbook for States and remediation contractors;
- Detecting Leaks -- a handbook for State officials on the leak detection methods allowed in the Federal regulations; and
- Leak Detection Compliance Tool Kit – a compilation of short, easy to understand materials on the Federal leak detection requirements and methods to assist owners and operators to come into compliance.

Bulletin and Newsletter:

- LUSTLINE – A quarterly bulletin aimed at State officials that discusses the latest UST issues and developments; produced under a grant by the New England Water Pollution Control Commission;
- Tank Technology Update – A technical newsletter focusing on technical information exchange; produced under a grant by the University of Wisconsin; and
- Compliance Alliance -- enforcement information for State and Regional staff.

Measuring OUST's Progress

This year OUST undertook a project to define the baseline of performance, track the extent of the leaking UST problem, identify areas where performance could be improved, and measure progress on implementing OUST's strategic plan for the next four years. OUST worked with Regional program managers and workgroup members from seven States to develop meaningful progress measures that minimized costs and difficulty of data collection and to define the measures so that data collection would be consistent across States. Forty-seven measures were developed. Data on 26 of the measures will be collected through Regional reporting or State reporting (i.e., notification data, Trust Fund reporting, and grant reporting). Information on the remaining 21 measures will be collected through special studies using data compiled from pilot States and industry. Although data for some of the reporting measures were collected during FY 1989, formal data collection for all measures will begin during FY 1990. Once collected, the data will be compiled into an OUST annual report to highlight the National UST Program's progress toward meeting the goals of the OUST strategic plan.